

Phactum

The Newsletter and Anti Woo Woo Organ of the
Philadelphia Association for Critical Thinking
April/May/June 2015

**Sergeant Stubby, a World War 1 hero and
descendent of the first GMO**



Stubby, a stray Pit Bull/Terrier mix, enlisted in the U.S. Army in 1917. In February of 1918 Stubby first saw combat and bravely endured wounds from gas and shell eventually to become Sgt. Stubby, the most decorated war dog of World War I and the only dog to be promoted to sergeant through combat. He was awarded a Gold Medal presented personally by General Jack Pershing. In one of Stubby's greatest heroic feats he was solely responsible for capturing a German spy in the Argonne. The spy made the mistake of speaking German when they were alone. Stubby knew he was no ally and attacked him biting and holding on to him by the seat of his pants until his comrades could secure him. Stubby was not only a fearless combat soldier but obviously was an accomplished linguist. What a dog!!

Stubby was a superb descendent of his ancient ancestors who, if one were to loosely define the phrase "genetically modified organism," were possibly the first example of a GMO created by men through selective breeding whether accidental or planned. For more about Sgt. Stubby see: <http://thankyouforyourservice.us/issue/january-2013-happy-new-year/article/sgt-stubby-world-war-1-dog-hero>

Stubby's lineage, scientists think, goes back perhaps as far as 35,000 years when dogs and wolves split on the evolutionary tree. Dogs and wolves can still interbreed and it is thought that the closest living wolf relatives to modern domestic dogs is the European Gray Wolf pictured here.

Reference to dogs as being GMO is a bit facetious but on April 18 toxicologist Dr. David Cragin and journalist Faye Flam will discuss the matter of GMO in a serious way in an effort to explain the pros and cons and the fears of Genetically Modified Organism. Other food fears and myths will also be discussed. See Page 3 for more details.

And speaking of dogs, see Howard Wilk's article about dogs on Page 22.



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Phactum's Roster of I.R.E. (Infamous Rational Errors)

Phactum contributor Paul Schlueter III has accumulated over time a vocabulary listing of many of the egregious flaws of thinking, devious tactics of argument, and some pretty cool Latin phrases that might sound impressive used at a social gathering.

This listing is nowhere near complete, but has been made into a pamphlet that is available free and only at PhACT Meetings. It is a handy little reference booklet that writers of philosophic and political nature might profitably keep by their typewriter. Meeting attendees are invited to take one and are invited to participate in expanding the listing in the next edition as it is intended to be a collaborative project.

Definitions and examples should be short and to the point and may be submitted to the *Phactum* editor at:

phactpublicity@aol.com

New entry - **MEADOWLARKING** - An unfocused mode of thinking (usually without conversation) which randomly flitters about, rather than following a disciplined direction/path. Frequently responsible for the establishment of unsupportable conclusions through reliance on rational errors. (a.k.a.: woolgathering)

UPCOMING 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 garage on 17th Street which is one way south bound. It opens at 1:00 PM and closes at 6:00 PM. This meeting site is handicap accessible. **PhACT Meetings are Free and open to the public unless otherwise noted.**

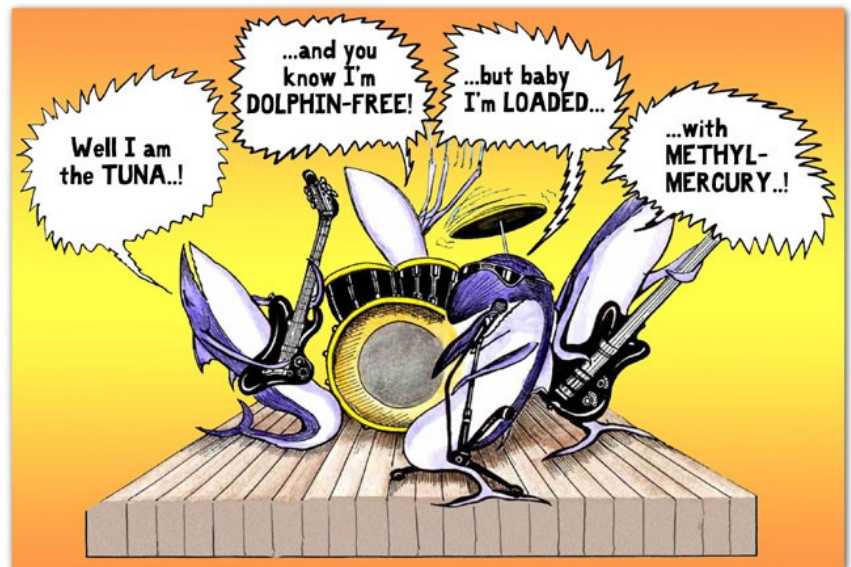
Lectures are generally at Community College of Philadelphia in Lecture Room C2-28 in the Center for Business and Industry at the corner of 18th and Callowhill Streets, at 2:00 PM, unless otherwise noted.



Saturday, April 18, 2015 at 2:00 PM - Lecture

Dr. Dave Cragin, toxicologist, and Faye Flam, a science writer and journalist, will explore perceptions and misperceptions of the modern world and science. Dr. Cragin will explore concerns and perceptions related to food and Ms. Flam will discuss her experiences in communicating science to wide audiences.

Dr. Dave Cragin manages safety and environmental compliance for a large pharmaceutical company. For more than 10 years, he has also taught the graduate course called "Risk assessment, Critical thinking and Health" as an Adjunct Professor of Health Policy and Public Health for the *University of the Sciences*, Philadelphia. Since 2008, he has taught a subset of this class as a Professor of the International Program in Pharmaceutical Engineering Management of *Peking University*, Beijing, China. He speaks Chinese and is knowledgeable in many languages. Previously, he was risk assessment manager and toxicology manager for several companies in the oil, chemical, and pesticide industries. Dr. Cragin is a Past-President of the *Mid-Atlantic Society of Toxicology*, the largest chapter of the *Society of Toxicology*, and a Councilor for the *Philadelphia Association for Critical Thinking*. He received his Ph.D. in Pharmacology and Toxicology from *University of California, Davis*, his B.S. in Zoology from the *University of Rhode Island*, and is a Diplomate of the *American Board of Toxicology*.



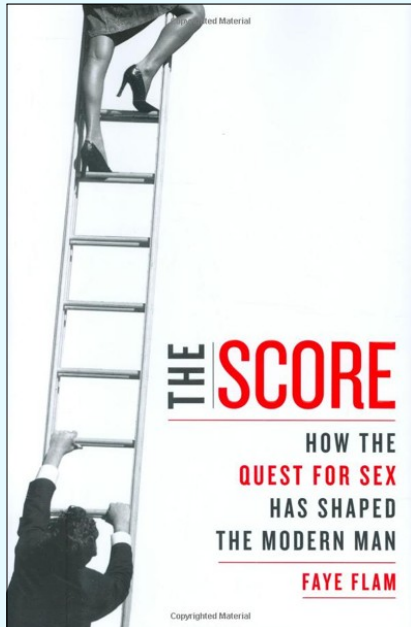
HEAVY METAL IN THE MARINE ENVIRONMENT

Cartoon by Nick D. Kim, <http://www.lab-initio.com>
Used by permission.

Science writer and columnist **Faye Flam** considers her profession a great adventure. She's weathered storms in Greenland, gotten frost-nip at the South Pole, floated weightless aboard NASA's zero-g plane, and traveled on the Amazon. She is a graduate of the California Institute of Technology, and started her writing career with the science and technology section of *The Economist*. She later took on the particle physics and cosmology beat at *Science Magazine*. In 1995 she

became a general science writer for the *Philadelphia Inquirer*, where she's written on everything from the genetics of cancer to nuclear proliferation to the influence of politics on science. In 2004 she won a Knight-Wallace journalism fellowship.

In 2005 she started a new type of science column with a sex theme. Called "Carnal Knowledge," it's despised by people around the region and in many other cities where it's reprinted, but it's well-liked by the *Inquirer* editors, who nominated it for a Pulitzer. Now, she's a science writer for *Forbes*.



The Score: How The Quest For Sex Has Shaped The Modern Man

by Faye Flam

Hardcover: 224 pages Publisher: Avery (June 12, 2008)

ISBN-10: 1583333126

A smart, witty, and fresh look at the male side of the male-female relationship from a science writer and sex columnist at *The Philadelphia Inquirer*.

Beginning with a "boot camp" for wannabe pickup artists—where men pay thousands of dollars for three days of classroom seminars on how to get women into bed—Faye Flam's quest for a deeper understanding of men takes her back through the evolutionary history of the human male.

Sweeping from the birth of the first male and female organisms to the sexual foibles of twenty-first-century humans, Flam shows how a small difference in the size of the first sperm and eggs set off a war between the sexes that we're still fighting today. Since this primordial split, a consistent pattern of behavior has emerged: males use a stunning variety of strategies to make themselves attractive to females, and females put them through the wringer.

By placing the human male in the context of the natural world, Flam highlights some intriguing resemblances among males of all species, but also the unique challenges that men face when courting women—whether for a lifelong partnership or a one-night stand. Flam ultimately reveals that millions of years of evolution have left the love lives of humans suspended somewhere between monogamy and promiscuity, and that it is this eons-old tension between males and females that has created the modern man.

Saturday, May 16, 2015 at 10:00 AM - PhACT Expedition to the Mullica River



The Batsto Mansion in Historic Batsto Village, residence of Batsto ironmasters.
Historic Batsto Village.

James F. McCloy and Ray Miller, Jr in *Phantom of the Pines* (1998) wrote that in 1928 not far from Batsto "William Bozarth encounters the Jersey Devil along the Mullica River". And in 1936 at Batsto he "sees the Jersey Devil again." Henry Charlton Beck in *Jersey Geneses: The Story of the Mullica River* (1945) had noted that the obituary for Fire Warden Bozarth stated that he "was the last man known to have seen The Jersey Devil."

Our guide, Don Nigrone, will trace two folkloric traditions concerning the Jersey Devil, namely, the witch tradition, dating back to at least 1859, and the curse tradition, from at least 1887, to the present day. Accompanying the expedition will be Robb Kerr and Jeff Cooney, who will be providing zoological and botanical information about the Pine Barrens, and professional photographer Ned Levi, who will be photo-documenting the day's activities. We will meet at

the Visitor Center at Historic Batsto Village (<http://www.batstovillage.org/>) at 10:00 AM. After walking through the village, where scenes for *13th Child: Legend of the Jersey Devil* (2002) were filmed, we will hike the Tom's Pond Trail (1.8 miles) which proceeds over the Mullica River. After lunch, participants can take a self-guided tour of Batsto Village.

Although we may not find any monsters, we will learn about the history of the bog iron era in the 18th and 19th centuries in the Pine Barrens and see pink lady's slippers and carnivorous plants like sundews and pitcher plants. Bring insect repellent, sturdy shoes, lunch, and a camera. The event is free and open to the public.



Saturday, July 18, 2015 - PhACT Picnic



10:00 AM to 2:00 PM at Mondauk Common Park (our usual location)

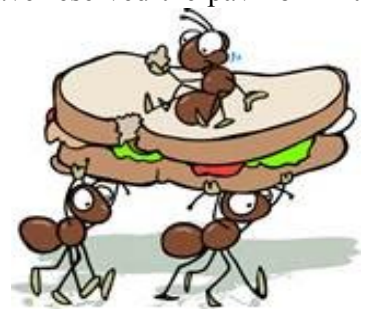
We always have fun visiting, eating, and playing sports. Bring your own food, you can cook on the grill. And bring stuff to throw. We have reserved the pavilion in the woods on the Southeast corner of Mondauk Common park in Upper Dublin. This is good fun for the whole family. We have negotiated with the park ants and they agree to not show up before 1:00 PM.

We will again have a book swap - it can be a great free way to build up a science/skeptic book collection - or help someone else do so.

Broad street runs between Susquehanna and Limekiln roads. From the PA turnpike, go to the Fort Washington exit and take Rt 309 north, take the second exit and turn right onto Susquehanna. Make a left at the second light onto Broad Street, park in the second parking lot on the left, and follow the little sand path up to the pavilion.

For those with a GPS unit, program it for the intersection of Broad Street and Twin Pond Drive in Fort Washington, PA.

All are welcome. Free.



Saturday, September 19, 2015 at 2:00 PM - Lecture

Professor Paul Halpern will discuss his new book *Einstein's Dice and Schrödinger's Cat: How Two Great Minds Battled Quantum Randomness to Create a Unified Theory of Physics*

Is there a Grand Unified Theory in your future. Come to this meeting to get some insights on this matter.

Dr. Halpern is the author of many widely acclaimed popular science books, including *Countdown to Apocalypse*, *The Quest for Alien Planets*, *The Cyclical Serpent*, *The Structure of the Universe*, *Cosmic Wormholes* and *Time Journeys*. He has received accolades and praise from numerous publications, including *Publishers Weekly*, the *San Francisco Chronicle*, *Nature*, *Scientific American*, *Sky & Telescope* and *New Scientist*. The *Cyclical Serpent* was chosen as one of the best Sci-Tech books of 1995 by *Library Journal*, and *Cosmic Wormholes* was chosen as a main selection of the Astronomy and Natural Science Book Club. He has appeared on many television and radio shows, including the PBS series "Future Quest" and the National Public Radio show "Radio Times."

Dr. Halpern was the recipient of a prestigious 2002 John Simon Guggenheim Memorial Foundation Fellowship Award. He was among 184 artists, scholars and scientists nationally selected to receive a fellowship from more than 2,800 applicants for awards totaling \$6,750,000. Guggenheim Fellows are appointed on the basis of distinguished achievement in the past and exceptional promise for future accomplishment. He will use the fellowship award to examine the history of the notion of higher dimensions in science, as well as the impact of this idea upon popular culture. His research, "The Concept of Dimensionality in Science," will cover the period from the mid-19th century, when the idea of

the fourth dimension was first introduced, until the late 20th century, when scientists developed 10 and 11 dimensional models of the universe.

A recipient of the Athenaeum Society Literary Award, he has published numerous research articles in the fields of general relativity, cosmology, chaos theory and complexity. In 1996, he was a Fulbright Scholar to Humboldt University in Berlin, Germany, where he studied evolutionary algorithms.

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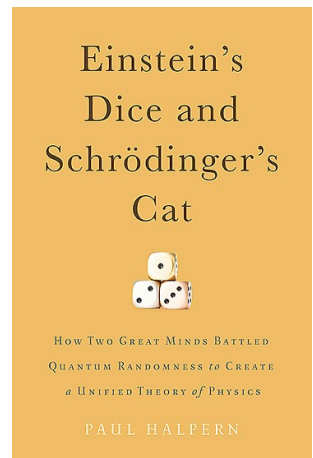
Einstein's Dice and Schrödinger's Cat: How Two Great Minds Battled Quantum Randomness to Create a Unified Theory of Physics

By Paul Halpern

Publisher: Basic Books 4/14/2015

Hardcover \$27.99 / \$31.00 CAN

ISBN 13: 978-0-465-07571-3 ISBN 10: 0465075711



The story of the doomed competition between two of physics' greatest to create a grand unified theory Albert Einstein and Erwin Schrödinger were friends and comrades-in-arms against what they considered the most preposterous aspects of quantum physics: its indeterminacy. Einstein famously quipped that God does not play dice with the universe, and Schrödinger is equally well known for his thought experiment about the cat in the box who ends up "spread out" in a probabilistic state, neither wholly alive nor wholly dead. Both of these famous images arose from these two men's dissatisfaction with quantum weirdness and with their assertion that underneath it all, there must be some essentially deterministic world. Even though it was Einstein's own theories that made quantum mechanics possible, both he and Schrödinger could not bear the idea that the universe was, at its most fundamental level, random.

As the Second World War raged, both men struggled to produce a theory that would describe in full the universe's ultimate design, first as collaborators, then as competitors. They both ultimately failed in their search for a Theory of Everything—not only because quantum mechanics is true, but because Einstein and Schrödinger were also missing a key component: of the four forces we recognize today (gravity, electromagnetism, the weak force, and the strong force), only gravity and electromagnetism were known at the time.

Despite their failures, though, much of modern physics remains focused on the search for a Theory of Everything. As Halpern explains, the recent discovery of the Higgs Boson makes the Standard Model—the closest thing we have to a unified theory—nearly complete. And while Einstein and Schrödinger tried and failed to explain everything in the cosmos through pure geometry, the development of string theory has, in its own quantum way, brought this idea back into vogue. As in so many things, even when he was wrong, Einstein couldn't help but be right.

Paul Halpern is a professor of physics at the University of the Sciences in Philadelphia, and the author of thirteen popular science books, most recently *Edge of the Universe*. He is the recipient of a Guggenheim Fellowship, a Fulbright Scholarship, and an Athenaeum Literary Award. Halpern has appeared on numerous radio and television shows including "Future Quest," "Radio Times," several shows on the History Channel, and "The Simpsons 20th Anniversary Special." He has contributed opinion pieces for the Philadelphia Inquirer, and is also a regular contributor to NOVA's "The Nature of Reality" physics blog.

Letters to the Editor

Editor: In response to letter from Steve Hiscock in *Phactum* January 2015.

I have a copy of Newman's thick white book. Joe Newman has been claiming to have a motor-generator like device that makes electricity out of thin air for about 35 years now. His proof has been things like a car running a few hundred yards on many small batteries or a large motor he claims is hard to stop. I've offered him \$10,000 for the level of proof one should expect for such an astounding claim. His only response is to promise to punch me out if he ever meets me. There is video of him physically assaulting someone who questioned his lacking proof at a "demonstration". His having married an 8 year old girl doesn't add to his credibility.

James Randi described a meeting with Newman where Newman attempted to get Randi to sign that he saw proof of a machine working which obviously didn't. I've not been able to find any credible people willing to still vouch for Newman's work.

PhACT hosted Norm Biss as a speaker years ago. Norm described trying to help Newman make a machine which appeared not to work. Newman stole the poorly designed and assembled machine the day before a demo in the middle of the night and then claimed Norm and his company was trying to "steal" "technology" that didn't work. Skip Hughes is an investor who told me he was strung along with lies and no real proof for 20 years.

As far as I can tell, Newman's devices are no better than a century of similar if not same devices from hundreds of other pathetic losers. Even Free energy believers have told Joe for decades that he could rise above his lunatic reputation with a simple demonstration that closes the loop and uses no batteries or external power sources and still makes undeniable output energy.

Eric Krieg
Maple Glen, PA

Editor's note: Joseph Newman in addition to being an inventor of sorts had run in the 2014 election as a write-in candidate for Florida's 16th Congressional District (Sarasota). He lost. Mr. Newman is 101 years old.

Editor: Last page: "Part of CCP's mission is to serve Philadelphia as a premiere learning institution..." Make that "premier". A "premiere" is the first public performance of something.

Howard J. Wilk
Philadelphia,

Editors's note: Thank you Howard, correction made. Interestingly it took a scientist rather than an English professor to spot the mistake.

Editor: It is with great excitement that I report another academic paper has been accepted at a forthcoming prestigious conference on Tissue Viability and Biobanking for 2015! See: <http://biobanking.conferenceseries.com/index.php>

We received an email from the conference organizers requesting our participation so sent in the following abstract, which I laboured over for at least 2 minutes:



Tissue Preservation in Zombies

This paper will outline a method of witchdoctors casting spells to turn deceased individuals into zombies, and therefore preserving their tissues indefinitely. In experimental trials carried out between 2012-14 (N=50) zombies were analyzed for tissue degradation. In 90% of cases most tissues had survived intact, with minor superficial discoloration and vascular damage. There was evidence of some flesh becoming ischemic and dropping away but major organs and muscle groups remained intact. We feel this offers significant evidence of a novel tissue-preservation technique.

We received this response :

Dear Dr Wen Shortispy

Thank you for submitting your abstract . Your Abstract is reviewed by our QC team and accepted for Oral presentation at Biobanking-2015. Kindly do register to confirm your participation from the following link: <http://biobanking.conferenceseries.com/registration.php>

Feel free to contact for further queries.

Sincerely, Isaac Bruce

Program Manager Biobanking-2015 Immunology Conferences

Phone +1-650-268-9744 Fax +1-650-618-1414 Toll free +1-800-216-6499

E-mail: biobanking@omicsgroup.com and biobanking@conferenceseries.net

I must say, it is gratifying to see their excellent quality control team and Dr. Bruce are such forward thinkers, and open to hearing about our novel techniques (that have caused us the odd spot of bother with some ethical approval committees in the past). We look forward to attending and spreading the word of our great therapies to other such enlightened academics.

Dr. Web Shortispy
CAWD Witchfinder General

Editor's note: The CAWD (Canadian Association of Witch Doctors) website is <http://witchdoctor.ca>

Editor: You put Benjamin Franklin on the cover of the January/February/March 2015 *Phactum* and gave his date of birth as 17 January 1706. You can also look up that his d.o.b. was 06 January 1705. Both dates are correct.

It really bugs me when “science literacy” is measured by knowledge of facts such as that one year is the time it takes for the earth to go once around the sun. Because it’s not. The time it takes for the earth to go around the sun as seen from Tralfamadore and other distant planets and stars, a sidereal year, is 365.2564 days. (What a “day” is is a whole ‘nother subject.) What we almost always mean by a year, what’s more important for agriculture and nearly every other earthly pursuit, is a tropical or solar year, the time it takes for the sun to begin to repeat its course in the sky. That year is 365.2422 days. That the tropical year is shorter than the sidereal year by 0.0142 days (20 minutes) is due to the slowly changing direction of the earth’s tilt, its axial precession, aka precession of the equinoxes, which you can look up for yourself, and which also goes a long way in explaining why astrology is bunk.

Most folks think that leap years are every four years, the years divisible by four. That’s the Julian calendar, introduced by Julius Caesar, which gives an average year of 365.25 days. That’s pretty close to the tropical year of 365.2422 days, but the small difference between the two causes the calendar to be “off” from what we’d like it to be – a guide to sunrise, sunset, hours of sunlight, altitude of the sun above the horizon, climate, etc. – by an accumulating error of one day every 128 years.

The calendar we use now is the Gregorian calendar, in which leap years are every four years, except that the only century (00) years that are leap years are years divisible by 400. So the last time a year divisible by four was not a leap year was 1900, and since 2000 was divisible by 400, the next one will be 2100. None of us has any practical experience of those kinds of years and most people don’t know they exist.

In the Gregorian calendar there are 97, not 100, leap years every 400 years. This calendar gives an average year of 365.2425 days, which is an improvement over the Julian calendar. The Gregorian calendar was introduced by Pope Gregory XIII and was adopted by most Roman Catholic countries in 1582. 10 days had to be added to the calendar to make up for the error that had accumulated since Caesar’s time. The British Empire didn’t adopt the Gregorian calendar until 1752. By then it was necessary to add 11 days to the Julian calendar. This was done by making Thursday 14 September 1752 follow Wednesday 02 September 1752. 03 September through 13 September 1752? The days don’t exist. At least not in Philly.

Oddly, for some time before the switchover in 1752, the year was reckoned as beginning on 25 March. With the two changes, Ben’s Julian-calendar birth date of 06 January 1705 is his Gregorian-calendar birth date of 17 January 1706. The Julian-calendar date is called Old Style, O.S., and the Gregorian calendar date is called New Style, N.S.

If all of the above is boring to you, consider the implications of our Gregorian calendar for this year of 2015:

- 2015 begins and ends on the same day of the week!
- Christmas 2015 and the following New Year’s Day 2016 occur on the same day of the week!
- Every date in February 2015 is the same day of the week as the corresponding date in March!

I mean, is all that happening in the same year rare, or what? It’s so rare it happens only 303 out of every 400 years!

Howard J. Wilk
Philadelphia

Editor: In January 1785 M. Blanchard and Dr. John Jeffries crossed the English Channel from England to France by balloon. They brought with them a letter addressed to Benjamin Franklin. It was the world's first airmail.

BTW, an epitaph he wrote out for himself (not actually intended to be used on his gravestone) is in a letter by me in the July/August 2009 *Phactum*, p. 5. A version of it is on a plaque near his grave. It turns out there's not one "correct" version. Franklin wrote it out various ways. A comprehensive discussion is at

http://posner.library.cmu.edu/Posner/books/pages.cgi?call=808_C71CA_VOL._3&layout=vol0/part0/copy0&file=0015

Howard J. Wilk
Philadelphia

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Various Ruminations of Woo Woo and Real Science and some Gossip Collected/Written by Ray Haupt (with help from others)

Joel Kauffman, RIP

We are sad to report that longtime PhACT member Joel Kauffman passed away on January 5, 2015. Joel, born in 1937, died at Paoli Hospital of natural causes.

Joel was a member of many skeptical and scientific societies, he earned his Bachelor of Science Degree in Chemistry from the Philadelphia College of Pharmacy and Science (now USP) and received his Ph.D. in Organic Chemistry at Massachusetts Institute of Technology. He worked in the Boston area as a researcher in the chemical industry including four years at Massachusetts College of Pharmacy and Health Sciences. He returned to University of the Sciences in Philadelphia where he became Professor of Chemistry until he re-

tired. Joel had published numerous research papers on a wide variety of technical topics.

Joel's obituary may be viewed at:

<http://www.legacy.com/obituaries/philly/obituary.aspx?n=joel-m-kauffman&pid=173893648>

International Dowsing Day is May 5, 2015

Oy vey! Just thought you might like to know.

The American Society of Dowsters will hold its 2015 National Convention from June 3rd to the 8th, 2015 at Lyndon State College in Lyndonville, Vermont. Vendors at the Wellness Corner will offer present a truly unique offering of dowsing and metaphysical products and a variety of modalities for mind, body and spirit including astrological readings, vibrational energy scanning, life coaching, massages, Reiki.

Conference details and fees can be viewed at: <http://dowsers.org/conferences-2/national-convention-2.html>

The International Dowsing Day Facebook Page may be found at: <https://www.facebook.com/pages/International-Dowsing-Day-5-May/358507857501391>

RHABDOMANCY

Rhabdomancy is a word to describe water dowsing. Webster's 1913 dictionary defines rhabdomancy as divination by means of rods or wands.

Samuel Johnson's Dictionary of 1755 defines rhabdomancy: Divination by a wand.

Of peculiar *rhabdomancy* is that which is used in mineral discoveries, with a forked hazel, commonly called Moses's rod, which, freely held forth, will stir and play if any mine be under it. *Brown's Vulgar Errors*.

By Coincidence...

It so happens that on April 18, 1807 Erasmus Darwin, physician, writer, botanist, and grandfather of Charles, died.

Fifty years later, April 18, 1857, Clarence S. Darrow, defense attorney at the Scopes Monkey Trial, was born.

April 18, 1955 was the day that Albert Einstein died and on April 18, 2015 journalist Faye Flam and toxicologist David Cragin, Ph.D. will at a PhACT forum be discussing communication of science to the general public and various food myths and fears from a toxicologist's point of view.

Earth to be Invaded by Mars? Thanks to Don Nigroni for reporting this astounding item.

Mysterious plumes erupt from Mars

12:13 p.m. EST February 16, 2015 <http://www.usatoday.com/story/news/2015/02/16/mars-erupting-plumes/23497289/>

Amateur astronomers have spotted huge cloudlike plumes erupting from Mars – a phenomenon that scientists are at a loss to explain.

The bright flares, which have now died away, towered higher than anything else observed in the Martian atmosphere. Their tops reached some 150 miles in altitude, more than twice as high as the highest Martian clouds, and they sprawled across 300 to 600 miles, researchers report in this week's *Nature*, a science journal.

The War of the Worlds

COLUMBIA BROADCASTING SYSTEM

ORSON WELLES AND MERCURY THEATRE ON THE AIR

SUNDAY, OCTOBER 30, 1938

8:00 TO 9:00 P.M.

ANNOUNCER TWO: Ladies and gentlemen, we interrupt our program of dance music to bring you a special bulletin from the Intercontinental Radio News. At twenty minutes before eight, central time, Professor Farrell of the Mount Jennings Observatory, Chicago, Illinois, reports observing several explosions of incandescent gas, occurring at regular intervals on the planet Mars. The spectroscope indicates the gas to be hydrogen and moving towards the earth with enormous velocity. Professor Pierson of the Observatory at Princeton confirms Farrell's observation, and describes the phenomenon as (quote) like a jet of blue flame shot from a gun (unquote). We now return you to the music of Ramón Raquello, playing for you in the Meridian Room of the Park Plaza Hotel, situated in downtown New York.



Fortunately for Earth Mr. William Dock, a resident of Grovers Mill, NJ, was vigilant and defended our Planet in 1938. But who now will defend us from the likely new invasion? Who now will step forth as our Horatius to repel the attack?

Food Fears and Beaver Butts

With food fears and myths being the topic of PhACT's April lecture, webmaster Wes Powers sent this article from Slate where the "Food Babe" is suggesting that some commercially processed foods contain various unsavory additives including *castorium* which is a vanilla tasting substance derived from anal glands of a beaver. Just think about that time the next time you have an ice cream cone. Where do all those beavers come from? Perhaps from the Interior Kingdom of Hollow Earth?

http://www.slate.com/articles/health_and_science/science/2015/02/

[food_babe_book_and_blog_claims_beaver_ass_coal_tar_and_yoga_mat_in_your.html](http://www.slate.com/articles/health_and_science/science/2015/02/food_babe_book_and_blog_claims_beaver_ass_coal_tar_and_yoga_mat_in_your.html)



Dr. Stephen Barrett reports in Consumer Health Digest

►► **Anti-vaccination objections debunked** (February 8, 2015)

Outbreak News Today, a Web site focused on science-based information about infectious diseases, has interviewed Paul Offit, M.D., Ph.D., about an article called "10 Reasons Not to Vaccinate" that had been posted to an anti-vaccination Web site ([VacTruth.com](http://www.vactruth.com)). The interview was done in response to concerns about recent measles cases that could

have been prevented by vaccination. Offit is director of the Vaccine Education Center and a professor of pediatrics in the Division of Infectious Diseases at The Children's Hospital of Philadelphia. In addition to providing the relevant facts, he lamented that "it is much easier to scare people than to unscare them." The 45-minute interview is available online.

<http://outbreaknewstoday.com/vaccines-an-interview-with-dr-paul-offit-22922/>

►► **"Food Babe" severely criticized (March 1, 2015)**

David Gorski, M.D., has posted a lengthy analysis of the activities of Vani Hari, a 35-year-old North Carolina woman who has developed a large following—including more than a million Facebook followers—despite her lack of relevant scientific training or credentials. Her targets have included flu vaccine, microwave ovens, and various food chemicals she claims are toxic. [Gorski D. Vani Hari, a.k.a. "The Food Babe," finally responds to critics. Science-Based Medicine Blog, Dec 8, 2014]

Editor's note: This includes Beaver Butts as described above.

►► **Australian Government agency blasts homeopathy (March 15, 2015)**

The Australian Government's National Health and Research Council has produced a 40-page report which concludes, essentially, that homeopathic treatment is worthless. [NHMRC Information Paper: Evidence on the effectiveness of homeopathy for treating health conditions. National Health and Medical Research Council. 2015. Canberra: National Health and Medical Research Council, March 2015] After surveying the scientific literature, the authors said: Based on all the evidence considered, there were no health conditions for which there was reliable evidence that homeopathy was effective.

No good-quality, well-designed studies with enough participants for a meaningful result reported either that homeopathy caused greater health improvements than placebo, or caused health improvements equal to those of another treatment.

Homeopathy should not be used to treat conditions that are chronic, serious, or could become serious.

People who choose homeopathy may put their health at risk if they reject or delay treatments for which there is good evidence for safety and effectiveness.

People who are considering whether to use homeopathy should first get advice from a registered health practitioner. Those who use homeopathy should tell their health practitio-

The notion that science does not concern itself with first causes — that it leaves the field to theology or metaphysics, and confines itself to mere effects — this notion has no support in the plain facts. If it could, science would explain the origin of life on earth at once — and there is every reason to believe that it will do so on some not too remote tomorrow. To argue that gaps in knowledge which will confront the seeker must be filled, not by patient inquiry, but by intuition or revelation, is simply to give ignorance a gratuitous and preposterous dignity.

— H L Mencken (1930)

ner and should keep taking any prescribed treatments.

►► **Anti-vaccinationists ridiculed on YouTube (March 3, 2015)**

Television talk-show host Jimmy Kimmel has produced two episodes promoting vaccinations.

<http://outbreaknewstoday.com/jimmy-kimmel-viciously-attacked-by-anti-vaxxers-37026/>

The first one suggests that doctors might know more about vaccines than actress Jenny McCarthy (even with clothes on). The second one discusses the nasty responses to the first video and features the results of a survey in which children were asked whether they would rather get a shot or a lollipop.

►► **FDA will reexamine its homeopathic product regulation (March 28, 2015)**

The U.S. Food and Drug Administration (FDA) has scheduled a public hearing to discuss the homeopathic marketplace and the regulation of homeopathic products. The 1938 Federal Food, Drug, and Cosmetic Act permits all substances included in the Homeopathic Pharmacopeia of the United States to be marketed as drugs, but the FDA has not held homeopathic products to the same standards as other drugs. The FDA is seeking participants for the hearing and written comments from all interested parties. The hearing is sched-

uled for April 20 and 21 from 9 AM to 4 PM at the FDA's White Oak Campus in Silver Spring, Maryland. Registration is free and available on a first-come, first-served basis. Registration to attend or provide oral testimony must be done by April 13th. Comments can also be submitted online. The hearing will be viewable on the Internet, and a transcript will eventually be available. The Federal Register has complete details.

Note: The March 15th issue of *Consumer Health Digest* contained the wrong link to the Australian Government's National Health and Research Council's 40-page information paper titled Evidence on the effectiveness of homeopathy for treating health conditions. The report is relevant to the FDA proceedings because it concludes, essentially, that homeopathic treatment is worthless.

Dr. Barrett's newsletter, *Consumer Health Digest*, is free and available to all who wish to subscribe. To subscribe send a blank email to send a blank message to

chd-subscribe@lists.quackwatch.org

Dr. Barrett's main website is www.quackwatch.org

Bad Faith: When Religious Belief Undermines Modern Medicine by Paul Offit

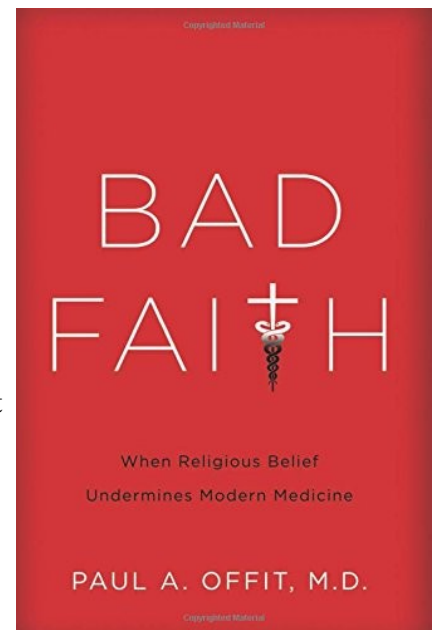
Hardcover: 272 pages Publisher: Basic Books (March 10, 2015)

ISBN-10: 0465082963 ISBN-13: 978-0465082964

In recent years, there have been major outbreaks of whooping cough among children in California, mumps in New York, and measles in Ohio's Amish country—despite the fact that these are all vaccine-preventable diseases. Although America is the most medically advanced place in the world, many people disregard modern medicine in favor of using their faith to fight life threatening illnesses. Christian Scientists pray for healing instead of going to the doctor, Jehovah's Witnesses refuse blood transfusions, and ultra-Orthodox Jewish mohels spread herpes by using a primitive ritual to clean the wound. Tragically, children suffer and die every year from treatable diseases, and in most states it is legal for parents to deny their children care for religious reasons. In twenty-first century America, how could this be happening?

In *Bad Faith*, acclaimed physician and author Dr. Paul Offit gives readers a never-before-seen look into the minds of those who choose to medically martyr themselves, or their children, in the name of religion. Offit chronicles the stories of these faithful and their children, whose devastating experiences highlight the tangled relationship between religion and medicine in America. Religious or not, this issue reaches everyone—whether you are seeking treatment at a Catholic hospital or trying to keep your kids safe from diseases spread by their unvaccinated peers.

Replete with vivid storytelling and complex, compelling characters, *Bad Faith* makes a strenuous case that denying medicine to children in



Human Head Transplant Two Years Away

The Telegraph, a British newspaper, reported in February that an Italian surgeon, Dr Sergio Canavero, explained at a TED talk that he expects to be able to graft a head to a donor body in about two years. *The New Scientist* reported that Dr. Canavero will announce the project at the American Academy of Neurological and Orthopaedic Surgeons conference in Annapolis, Maryland, in June.

This kind of surgery is not unprecedented according to *The Telegraph*. The first successful head transplant - involving moving the head of one monkey on to another - was carried out in 1970 at the Case Western Reserve University in Cleveland, Ohio. The monkey lived for nine days, but its immune system rejected the head.

<http://www.telegraph.co.uk/news/science/science-news/11436319/Frankenstein-style-human-head-transplant-could-happen-in-two-years.html>

This notion is sort of cool but I admit that I am a wee bit skeptical of such a procedure and wonder how donors will be obtained and wonder too what happens to the body donor's head.

I am not alone in my skepticism as Dr. Arthur Caplan, head of medial ethics at NYU Langone Medical Center, is highly disturbed by this and in an articles in *Forbes* entitled "Doctor Seeking To Perform Head Transplant Is Out Of His Mind" explains some of his reservations stating "Ethically the big obstacle is what will happen if I stick an old head on a new body. The brain is not contained in a bucket—it integrates with the chemistry of the body and its nervous system. Would a brain integrate new signals, perceptions, information from a body different from the one it was familiar with? I think the most likely result is insanity or severe mental disability. Brain transplantation is not ready for prime time. To attempt to move a brain to a new body given what is known about the medicine and science involved, one would have to be out of one's mind".

<http://www.forbes.com/sites/arthurcaplan/2015/02/26/doctor-seeking-to-perform-head-transplant-is-out-of-his-mind/>

[seeking-to-perform-head-transplant-is-out-of-his-mind/](http://www.forbes.com/sites/arthurcaplan/2015/02/26/doctor-seeking-to-perform-head-transplant-is-out-of-his-mind/)



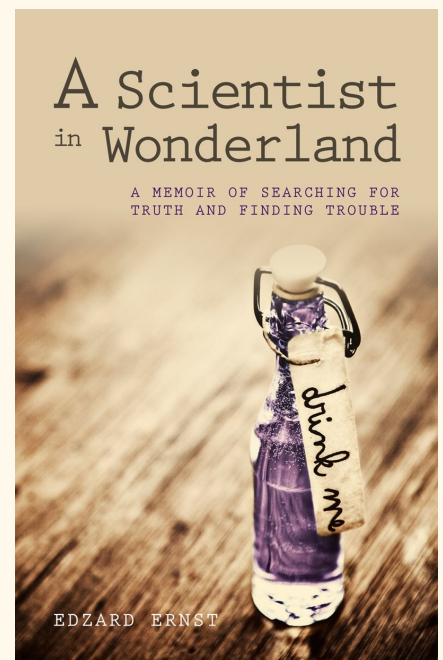
Charles Stanton Ogle was the first person to play the Frankenstein Monster on screen in a 1910 version produced by the Edison Company.

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A Scientist in Wonderland: A Memoir of Searching for Truth and Finding Trouble by Edzard Ernst

**Paperback: 200 pages Publisher: Imprint Academic (February 1, 2015)
ISBN-10: 1845407776 ISBN-13: 978-1845407773**

This is the story of my life as a doctor and a scientist. Despite a youthful ambition to become a jazz musician, I eventually studied medicine and became a medical research scientist, taking up appointments in Germany, Austria and finally in England. My reverence for the pursuit of truth through the application of scientific methods, coupled with a growing interest in the history of medicine during the Nazi era, did not always endear me to my professional colleagues. At the time I was appointed to the world's first chair in alternative medicine, this was an area of health care that had never been studied systematically, and was almost entirely dominated by outspokenly evangelic promoters and enthusiasts among them, famously, HRH Prince Charles many of whom exhibited an overtly hostile, anti-scientific attitude towards the objective study of their favoured therapies. Clashes were inevitable, but the sheer ferocity with which advocates of alternative medicine would go in order to protect their field from scrutiny came as a profound surprise. This memoir provides a unique insight into the cutthroat politics of academic life and offers a sobering reflection on the damage already done by pseudoscience in the field of medicine.



Meeting Reports - January - March 2015

Reported by: Sophia Mayne-DeLuca and Nic Vasquez
who are Physics students of
Dr. David Cattell at Community College of Philadelphia.

The High Cost of Free Energy A lecture by Eric Krieg, an Electrical Engineer Saturday, January 17, 2015

Reported by Sophia Mayne-DeLuca

January's lecture for the Philadelphia Association of Critical Thinking (PhACT) was given by electrical engineer Eric Krieg. It was about Krieg's work in debunking several people's claims at having found a source of "free" energy. It is called "free" energy because the people marketing it claim to have invented or discovered ways to get more energy out of their device or method than is put in. Any undergraduate or high school physics student would question such a wild claim, given the law of conservation of energy, which states that energy can neither be created nor destroyed. However, not everyone is fortunate enough to receive a good science education and millions of dollars have been invested in these claims of "free" energy. Krieg has made it a mission to put a stop to this waste of people's time and money.

Several people that Krieg spoke of in particular were Dennis Lee, Patrick Kelly, and Carl Tilley. Lee claims to have an anti-gravity machine and other free energy devices that were discovered by Nikola Tesla a century ago. He says he communicates with God and the main reason he cannot reveal all his secrets is that God has told him it is not the right time. Kelly is the founder of Genesis World Energy and published a book on various supposed free energy devices. He was convicted of defrauding investors in 2006. Carl Tilley claimed to have invented an electric vehicle that runs on a battery that does not need charging. He was convicted of fraud in 2006 as well. More recently Dr. Randell Mills founded BlackLight Power and claims to have found a boundless new source of energy by squeezing electrons on hydrogen atoms down to their lowest energy state. The math and physics behind Mills research has been debunked by many prominent physicists and Mills has yet to deliver a working product. According to Krieg the reason most "free-energy inventors" rebut him by saying that the energy control is a huge conspiracy and Krieg is on a payroll for the big oil and energy companies.

What was most interesting and unclear is whether or not these people were deluded enough to believe their lies or if they were sociopathic frauds. That is up to speculation. Krieg ended by highlighting the real need for better energy sources and encouraging all those present to make the search for legitimate renewable energy a priority in scientific spending.



The Dennis Lee Free Energy Machine

The generator does produce electrical output as long as somewhat more electric power input is applied to the motor.

A Non-Stop Skeptic in a Believer's World

A lecture by Dr. Deborah Berebichez, a Physicist

Saturday, March 21, 2015

Reported by Nik Vasquez

Dr. Deborah Berebichez grew up being told that the world didn't expect much from her. She didn't get the encouragement children in the United States get now to nurture their intellectual curiosity. No, Dr. Berebichez was told to abscond that part of her mind for the sake of fulfilling a more suitable role for a woman in her swirl of Mexican and Jewish culture. But as is true in many a case similar to hers, that voracious desire to learn, to discover, to question grew to loud for her to hide, and Dr. Berebichez found herself leaving her lunch at Harvard Yard one day and on her way to becoming the first Mexican woman to obtain a Ph.D. in physics from Stanford University the next.

In her lecture titled "A Non-Stop Skeptic in a Believer's World," Dr. Berebichez elaborated on the implications of skepticism that being a scientist has. She led us through a series of colorful anecdotes to explain the three most popular rejections of skepticism found today: the "convenience store" approach in which a person accepts all opinions without question, the singularity approach where a person stand by a unilateral belief and reproaches those who think otherwise, and lastly the avoidance approach where a person deliberately refuses to question to avoid receiving any answer at all.

She concluded that each of the approaches to reject skepticism come from an inherent fear of uncertainty. Dr. Berebichez talks to the anxiety that doubt and a lack of understanding and its overwhelming ability to steer people towards easier and more tangible answers to their questions at the cost of intellectual integrity. This same mentality had been the one among her family members that didn't want a young Deborah to stare in the face of uncertainty for fear of the "existential angst" it could stir up in her.

Dr. Berebichez came to share with us how she inevitably leaned into the angst; she realized how "science is being comfortable with uncertainty." She has dedicated her life to introducing science and apropos skepticism in a refreshing way that doesn't deter people from the messier answer, or lack thereof, to the questions of the universe. Through starting a nonprofit organization called "Technovation" to provide the resources for young women to code and develop web applications that help counter societal problems to convincing a woman that microwave radiation will not, in fact, put cancer in her food, Dr. Berebichez is one among many scientists today that are changing the way people fundamentally think. It is by following her example that I hope to contribute to the acceptance of uncertainty, bringing in one skeptic at a time.

Reported by Sophia Mayne-DeLuca

March's lecture for the Philadelphia Association for Critical Thinking was given by Dr. Debbie Berebichez. Dr. Berebichez is notable for being the first Mexican woman to graduate from Stanford with a PhD in physics. Her research work has been on cell phone technology and she has invented a new technique for localizing wireless signals within a building. This lecture, however, was all about being a "non-stop skeptic in a believer's world."

She identified several different types of "believers" she comes across and the fallacies in their reasoning. Her main point was that for every skeptic and a scientist it is an ethical duty to provide reasoning and education against falsehoods that people believe because of religion, tradition, comfort, or ignorance. She gave several examples of how non-skeptic thinking as well as magical thinking is harmful to humans and how people develop these notions in the first place. One example of how her mother uses prescription strength antibiotics every time she comes down with a cold because at one time in the past she had a bacterial cold and a doctor recommended she take erythromycin. This not only will not help her mother if any cold is viral, but also contributes to the issue of antibiotic resistance.

She also spoke specifically about the film *What the Bleep Do We Know!?* and the self-help book *The Secret*. Both of those make the assertion that our reality is in some way a manifestation of our thoughts and that negative thinking brings about our problems, even health problems. Dr. Berebichez pointed out that there is no scientific basis for these assertions. People simply want to believe them because it makes them feel they have more power over their lives. Ultimately, Dr. Berebichez affirmed the goal of the Philadelphia Association of Critical Thinking: to promote scientific investigation and critical thinking of everything that affects our lives.

PhACT Participates in School Science Fairs in Philadelphia and in Bucks County, PA

Notes on the Bucks County Science Fair by Eric Krieg

On March 10th, Tom Napier and Eric Krieg converged on Delaware Valley College to judge for special category PhACT prizes for the middle school portion of the Bucks County Science Fair. We have been doing this for around 10 years and focus on middle school in the hope that tween age kids are at a critical point potentially picking what direction they want to head towards in life. We think it is an important opportunity to encourage kids to embrace real Science. Obviously, we have to manage our quality expectations for students in grades 6 - 8. We have noticed common mistakes from year to year. But we are pleasantly surprised with innovative ideas.

Our first place winner went to a young lady, Sandhura Siddapureddy who investigated the effect of placebo on memory. She used reasonably good controls to measure a wide range of subjects' ability to recall a sequence of characters both before and after getting a drink of colored water said to increase memory. As she expected from prior research, almost every subject had better scores. She seemed aware of possible sources of error and understood what is statistically significant.

The second place winner was Casey Koochangian who noticed her mother buying organic food. She expected that she could prove that organic food tasted better and would last longer - it turned out that the only thing she could prove was that organic food was more expensive (another near as good entry on organic foods produced similar findings). We let Casey know we were impressed she had the proper methods and integrity to invalidate her own hypothesis.

Our third place prize went to a team of girls who performed experiments into the rolling of dice - they seemed to have a good grasp of statistics for middle

school students and had good prosaic theories for what could explain an apparent anomaly.

Again this year Al Erpel's company, Compucraft Fabricators Inc. [<http://metalwork.com>] was kind enough to manufacture stainless steel medallions to go with a cash prize for both the Bucks County and Philadelphia Science fairs. After reading dreary negative news with stories about young people and bad decisions, it was encouraging to walk down aisles of young people with examples of decent Scientific Investigations.



PhACT Supports the 2015 Carver Science Fair—notes by Doreva Belfiore, PhACT treasurer

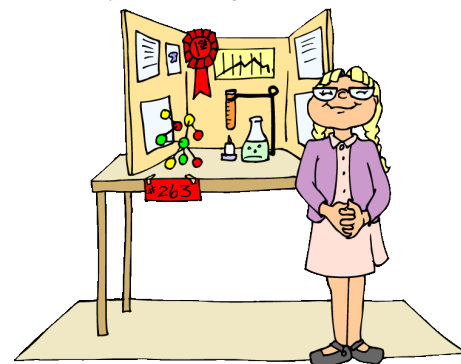
On March 3, 2015 PhACT judged the George Washington Carver Science Fair for Junior High and High School students at Temple University (<http://www.temple.edu/carversciencefair/>). Dr. David Langdon, Dr. Catherine Fiorello, Dr. Peter Smith and Doreva Belfiore volunteered to be judges for the day. We awarded three prizes of \$50 based upon the criteria of developing a clear hypothesis, testing it using the scientific method, and demonstrating critical thinking in evaluating the outcome. Medallions custom designed and made by Al Erpel, owner of Compucraft Fabricators Inc., were part of the prize.

Alexandra Fiol-Mahon, an 11th-grader at Springside-Chestnut Hill Academy, won for her project "Comparing Antioxidant Levels in Various Beverages". She examined various popular beverages such as Honest Tea and Vitamin Water to determine the levels of various antioxidants in the beverage as compared to the stated values on the drink labels, and exhibited critical thinking in considering the true value of antioxidants for health beyond consumer marketing and hype.

Lillian Forrest, an 8th grader at Penn-Alexander School, won for her comparison of "Commercial versus Natural Dyes" with regard to durability after washing. She employed digital measurement of color values to compare percentages of fading for each type of dye, and concluded that commercial dyes were more durable than dyes made from naturally-occurring substances.

Mikaela Watson, an 11th-grader at Springside-Chestnut Hill Academy, investigated the potential connection between joint flexibility and the hormonal effects of menstruation in her winning project "The Effects of the Menstrual Cycle on Various Women's Joints". She interviewed young women about the state of their menstrual cycle and took various measurements of the laxity of the participants' wrist, elbow and knee joints in an effort to test a hypothesis that sports injuries might be more common at specific points in a woman's cycle.

PhACT is pleased to support the Carver and the Bucks County Science Fairs. Please consider making a donation for science fair prizes by including an amount with your membership renewal. For more information, please contact treasurer@phact.org.





At the Wagner Free Institute of Science

1700 W. Montgomery Ave., Philadelphia, PA 19121 215-763-6529 Tuesday-Friday 9am-4pm

<http://www.wagnerfreeinstitute.org>

Sunday, April 26, 2015 12:00-4:00 PM
EXPLORER SUNDAY - Lights, Camera, Wagner!

Abandon your camera phone and travel back to the Victorian-era when you visit the Wagner Free Institute of Science for a day filled with yesteryear's technology. Learn about historic 'selfies' by cutting silhouette portraits and utilize the illumination of the sun to create a solar photogram. Then, tie it all to today's technology with mechanical arts projects led by local engineer and artist Adolphe Alexander.

This event is part of the 2015 Philadelphia Science Festival, a citywide collaboration taking place April 24-May 2, 2015, filled with events that showcase science and technology in everyday life. Part of a national movement to inspire the next generation of scientists and engineers, it builds on Philadelphia's rich history of innovation with more than 100 events and 175 partner organizations around the Philadelphia area. Learn more at www.PhilaScienceFestival.org.

Wednesday, May 20, 2015 Lecture at 6:00 PM

Philadelphia 1865: A City on the Edge

An Illustrated Presentation By

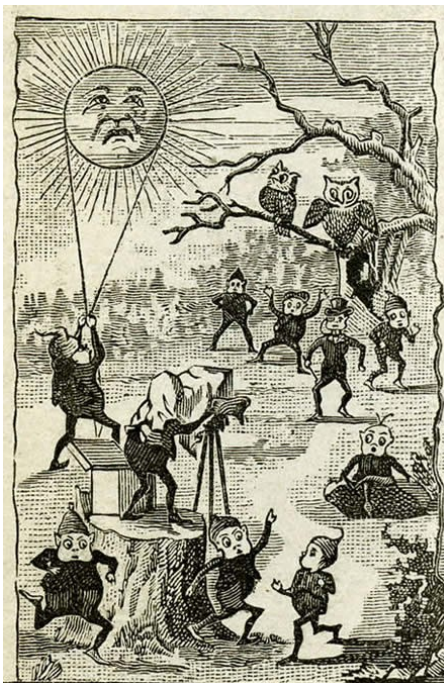
Bruce Laverty, Athenaeum of Philadelphia

The museum will be open prior to the lecture.

Followed by the Annual Members' Reception

In 1865 Philadelphia was a city on the edge; a city on the edge of grief; a city on the edge of growth; and a city on the edge of genius. That year saw Philadelphia's joy of Northern victory dashed by the overwhelming shock and grief brought on by the assassination of Abraham Lincoln. Less acute, but even more sobering, was the growing realization in 1865 that Union victory and the abolition of slavery were by no means the end of race problems in the City of Brotherly Love. In 1865 Philadelphia commenced the most rapid physical

growth in its history; by century's end the built portion of the city had more than doubled in size. Finally, 1865 was the year when the genius of local entrepreneurs, both individually and collectively, through the efforts of scientific, benevolent, and educational associations, achieved the critical mass that launched Philadelphia into modernity. As part of the commemoration of the 150th anniversary of the Wagner Free Institute's landmark building, Bruce Laverty, Gladys Brooks Curator of Architecture at the Athenaeum of Philadelphia, will present an illustrated talk on the Quaker City in this pivotal year.



grew from 30,000 to more than 220,000 drawings and he oversaw the creation of nearly 8,000 Visual Materials records documenting them. He has served as curator for more than a dozen exhibitions at the Athenaeum and in 1998 he received the Preservation Achievement Award for his work as curator, editor and co-author of "Monument to Philanthropy: The Design and Building of Girard College, 1832-1848."

The Wagner Free Institute of Science provides an educational experience for over 20,000 school children each year for no charge what-so-ever. All programs at the Wagner are free, paid for by a dwindling endowment, by grants, and donations. All Wagner programs are free to the public, but obviously are not "free" of cost. Donations are appreciated.

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Off the Beaten Path

By Kim A. Sheridan



Fleeting Beauty

Every woodland spring is a new beginning. The day lengthens; the sun shines a little more strongly. Snow melts and the ground warms. Plants begin to awaken. Many of them are in a big hurry!

Life above ground is short for the herbaceous understory plants known as spring ephemeral wildflowers. The sun will reach the forest floor unimpeded by the tree canopy for only a brief while. Once the trees have leafed out, the understory is shaded, and small plants and shrubs can no longer



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One of the many Trilliums in Mt. Cuba's fantastic Trillium garden. May, 2014

get the energy they need to grow and reproduce. Fortunately, everything spring ephemerals need to thrive is available in that narrow window of time between snow melt and leaf-out: the soil is warm, moisture from snow melt and rain is abundant, and the full force of the strong spring sun is theirs for the taking.

Spring ephemerals spend much of their life dormant underground, as rhizomes, roots or bulbs. In April and May, wildflowers such as spring beauty, yellow trout lily, Virginia bluebell, trillium and

wild columbine awaken. Drawing on last year's reserves of energy, they send up stems and leaves while gathering and storing as much fresh energy as they can. They bloom, and set and disperse seeds. Feeding and reproduction complete, the flowers, stems and leaves wither and die, leaving the strong roots and rhizomes below the soil to enter dormancy until the next year. All of this activity is in just a few short weeks!

While the plants are taking advantage of the sun to grow and bloom, insects hurry to take advantage of the flowers' nectar. Many bees and flies emerge in early spring, and the wildflowers are waiting for them. In return for food, the insects pollinate the flowers and spread their seed. One way many spring ephemerals disperse seed is *myrmecochory*, seed dispersal by ants. The seeds have a fatty protuberance called an *elaiosome*, which the ants carry off to their nests to feed their offspring. The seed is left behind in a moisture-rich environment to germinate.

The benefits of wildflowers are many; spring ephemerals stabilize the soil, support native bees and please the human eye. They are not without



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Wild Columbine attracts hummingbirds as well as bees. Mt. Cuba, May 2014.

their challenges, however. Invasive non-native plants like lesser celandine compete for resources. Norway maples leaf out early and shade the forest floor before the wildflowers are finished blooming. Habitat fragmentation and even poaching are serious problems. Profiteers dig up entire wild patches to meet high demand in the horticulturalist trade. With a limited dispersal range, wildflowers struggle to overcome the destruction of even a single patch. Their loss is our loss, for what would a woodland spring be without these fleeting beauties?

IF YOU GO: The best time to see spring ephemeral wildflowers is in April and May.

For a beautiful wildflower display in a natural setting, try Shenk's Ferry Wildflower Preserve. This nationally recognized preserve covers 50 acres of wooded hillsides and deep ravines along the Susquehanna River in Lancaster County. The topography of the preserve comprises a protected microclimate where a wide variety of plants and flowers thrive.

Shenk's Ferry is *way* off the beaten path. Visitors park along the side of a gravel road, and walk down the road to a trail perched on the side of a ravine. The site can be muddy, so wear sturdy shoes you don't mind getting dirty. Wildflower enthusiasts will be rewarded with Virginia bluebells, columbines and trilliums, squirrel corn, trout lilies and Dutchman's breeches.

There are other, more accessible places to see wildflowers, in more carefully tended settings. The



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Spring Beauty's potato-like tuber earns it the nickname "Fairy Spud". Shenk's Ferry, May 2014.

trillium display at Mt. Cuba Center in Delaware is particularly beautiful. Jenkins Arboretum in Devon is a small hillside arboretum with a fantastic display of wildflowers and ferns, and the azaleas are not to be missed.

Shenks Ferry Wildflower Preserve
Green Hill Rd, Conestoga, PA 17516
There is no website for the Preserve.



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Virginia Bluebells come in shades of blue, lavender and pink, Shenk's Ferry, May 2014.

From the intersection of River Road and Shenks Ferry Road in Conestoga PA, turn south on Shenks Ferry Rd. Turn left onto Green Hill Rd. Continue right on Green Hill Rd. After a short distance, Green Hill Rd. will reach the river and bear left into the Preserve.

Holtwood Environmental Preserve

9 New Village Road, Holtwood, PA 17532

PPL's Holtwood Environmental Preserve oversees Shenk's Ferry Preserve; their office is a good source of information and directions. PPL no longer maintains a website, so office hours are unknown.

Mt. Cuba Center

3120 Barley Mill Road, Hockessin, Delaware 19707
302-239-4244

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

General Admission April 1 - November 1
Fri-Sat-Sun Only 10 AM-4PM

Jenkins Arboretum

631 Berwyn Baptist Rd, Devon, PA 19333

610-647-8870

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

Daily, 8 AM to sunset

Office: Mon-Fri 9 AM-4PM

Mea Culpa: In my last article, *Cold Duck*, I incorrectly stated that Barnegat Lighthouse is only open for climbing in the summer. In fact, the Lighthouse is open weekends *year-round* from 9 AM to 3:30 PM (weather permitting); a fee is charged from Memorial Day to Labor Day. The State Park is open daily from 8 AM to 4 PM year-round. My apologies!

Kim Sheridan is an ardent amateur naturalist and wildlife observer based in Havertown, Pennsylvania.. She may often be found in forest or marsh with camera in hand. Her blog site is dedicated mainly to nature photography at:

<http://thewildededge.net/>

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At the John Heinz National Wildlife Refuge

Spring is a busy time at John Heinz National Wildlife Refuge at Tinicum! Warblers are migrating through, wearing their bright breeding plumage. Our Bald Eagles are raising another family. Frogs are calling, birds are nesting and the fish are jumping. There's a lot going on!

Heinz Refuge hosts Astronomy Night on **Friday, April 24 at 7:30 PM**; gaze at stars, take a hike or go frog watching. Part of the **Philadelphia Science Festival**.

International Migratory Bird Day is **Saturday, May 9**. Starting at 7 AM, there are 3 bird walks, a photo walk, a butterfly walk and a family Bald Eagle walk. There's also a chance to give back to the Refuge by joining a volunteer work group removing invasive plants at 9 AM.

Every weekend, enthusiastic and knowledgeable volunteers lead bird walks at the Refuge. There are also butterfly, plant and photography walks, and Story Time for youngsters.

All events are open to the public. Spring is the time when many young critters are exploring their new world at Heinz Refuge. Come join the adventure!

**John Heinz NWR:
8601 Lindbergh Boulevard
Philadelphia, PA 19153
215-365-3118**

For a schedule of nature walks and other programs:

<http://www.fws.gov/heinz/Walks%20and%20Programs.html>

NDE Research Resuscitated in the U.K.

by Paul Schlueter III

The popular press has long had difficulty in turning its back on a great story, including one with a pseudoscientific spin. Here's one that comes from The Daily Telegraph, in the U.K., which was given undue mention on the Week's Health & Science page, Nov. 21, 2014.

Sam Parnia, from Britain's University of Southampton, authored a study detailing over four years' worth of effort, more than 2,000 cardiac arrest patients in the U.S., the U.K., and Australia, and 15 different hospitals. It's characterized as "the largest ever study of near-death and out-of-body experiences." The breathlessly stated finding: "Consciousness often continues for at least a brief time after death."

"Researchers noted that nearly 40 percent of those who survived described some form of 'awareness' during the period that their hearts had stopped beating." Parnia told the DT that one patient who described an OBE during which he observed medical staff saving his life "seemed very credible," and that "[t]hese experiences warrant further investigation."

In all fairness, I haven't read Parnia's actual report, so I can't honestly say whether the credulity was his or that of the press

who took up the hue and cry. But seriously, folks, are we really surprised that people who DIDN'T DIE have some sort of mental experience of at least some portion of their distressed period? NDEs are well researched, and I need not repeat the sound explanations evidence-based medical scientists have offered, since this group of readers are probably familiar with the ordinary, non-magical neurological processes that occur in a brain experiencing oxygen deprivation. Also, I'm not opposed to a large-scale study reviewing the experiences of people in a sample size large enough to have statistical significance, when sample size is often the cause of spurious findings.

What DOES annoy me is the framing of this particular topic, as if some great medical advance has occurred, and pseudo-science has won a victory. My inference (based on nothing more than personal bias) is that the Press is most likely to blame for the framing problem. By presenting this study's results in a light favorable to the woo-woo crowd's favored interpretations of the NDE phenomena, the hopes of the credulous have been whipped up beyond reason once again, and now megabucks will surely flow toward the "further investigation" every wack job of a practitioner can dream up. Why? Because the



Parnia study, and/or the reporting given it, have made such experiences sound more like voodoo than medicine. This is part of the larger problem with Complementary Alternative Medicine (CAM) and the questionable collegiate programs purporting to teach such claptrap; the more support we allow it to garner, the harder it becomes to defeat the irrationality upon which it relies.

In case you haven't heard, once a brain is actually dead, it no longer processes "experiences," and it will not recover to report those interpretations of stressed neuronal firings. However, sometimes a person recovers from deep oxygen deprivation (NOT "death"), and the stories such people relate tend to fall into similar patterns (not surprising, since we tend to have similar brains, which malfunction in similar manner). The varying states of "consciousness" or "awareness" which one might experience under such conditions (and remember that few cardiac arrest patients are actually anaesthetized - their "unconsciousness" is the result of failing brain oxygenation!) are quite reasonably likely to allow a person to "remember" some portion of what is going on, in various states of distortion (including observational perspective, which likely explains the OBEs).

What might reasonably be called for is further study into the perceptive, subjective experiences of people who have

survived life-threatening oxygen deprivation. Perhaps gaining better understanding of this dangerous state of existence can help us learn to seek medical assistance earlier, or more effectively. What we DON'T need is more of the same old semi-Spiritualist baloney about glimpsing "the other side" and "life after death" double talk. Shame on the editors who propagate such nonsense in the course of reporting scientific studies. And, where the scientists themselves might not be quite so careful about their statements and conclusions as they ought to be, maybe some crank mail from wacko true believers will help them to realize the nonsense such carelessness feeds.

I'd dearly appreciate a response or explanation from Parnia or the Daily Telegraph - I wonder if they'll have the nerve?

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

www.jaylbird.org

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© Mike Baldwin / Cornered

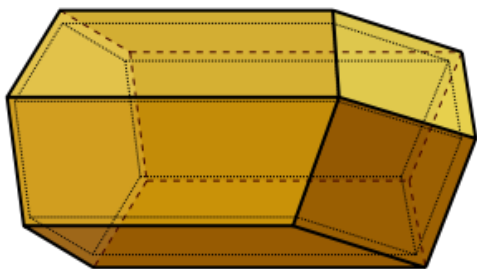


On the Theory of Intelligent Design, etc.

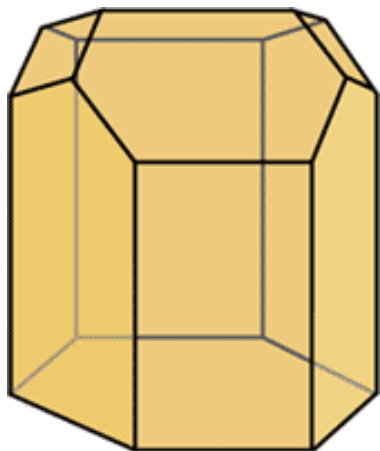
by Howard J. Wilk

I was going to write an article for THIS JOURNAL entitled “A Short Proof of the Falsity of the Theory of Intelligent Design”. The proof was based on the design of the honeycomb, which seems to be a marvel of engineering, something in which the Hand of God is clearly evident.

Honeycombs are constructed such that there are two layers of hexagonal cells, with the surface of the closed ends of one layer fitting into the surface of the closed ends of the other layer (the hexagons are staggered, layer-to-layer), with the open ends facing outward. The wax at the closed ends is shared between the two layers of cells. The question is, what is the most efficient design for the closed ends, the design that minimizes the amount of wax needed? This is how honeybees do it, with each closed end constructed of three rhombi (in this picture, open end to the left, closed end to the right):



For a long time this was thought to be the optimal solution. But in 1965, the Hungarian mathematician László Fejes Tóth proved there's a better solution, with the closed end constructed of two hexagons and two smaller rhombi (in this picture, open end down, closed end up):



The Tóth design uses 0.035% less wax! That honeybees waste wax is clearly an error no Intelligent Designer would make. *Q.E.D.*, or so I thought.

Because that's in the ideal mathematically-based world, where planes have zero thickness. In the reality-based world in which most of us live, experiments with soap bubbles have shown that if the bubble walls are thick enough, the bubbles assume the honeybee's honeycomb geometry. Score that God 1, Howard 0.

But remember that all the honeycomb building, pollen gathering, honey making, enemy stinging, larvae nursing, undertaking, etc. is done by the female worker bees. The male drones have no duties to perform other than to service the queen. Nice work if you can get it. *I* like the system, but objectively, it's not very fair to the females. Score that a point for me. So God and I are tied, 1-1. Stay tuned.

While we're on the subject of insects, consider the unsolved mathematical puzzle called Moser's worm problem. It's also known as mother worm's blanket. We'll make that worm an inchworm, a geometer moth in the making.

Here's the problem: You have an inchworm one inch long. This being a mathematical caterpillar it has zero thickness, and we're going to confine it to the plane. What is the size and shape of the blanket that will cover the inchworm no matter how it curves? Obviously a disk blanket with a one-inch diameter will work (its area is $\pi/4$, or about 0.785398 square inches), but how and by how much can you trim the blanket and still have one that will always keep baby inchworm warm?

Wikipedia has a reference to a paper that says the area of the smallest blanket is no more than 0.260437 square inches. The abstract to the paper is open access and starts out “A worm ω is a continuous rectifiable arc of unit length in the Cartesian plane. Let W denote the class of all worms.” I kid you not.

Wikipedia also has a reference to another paper that says the area is no less than 0.232239 square inches.

What's the answer? God knows.

Howard J. Wilk is a chemist, a competitive weight lifter, and a long-time skeptic living in Philadelphia.

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Uncommon Dog Breeds for Critical Thinkers

*PhACT? or Phiction? Can you separate the truth from the bs?
Answers on page 27, but read it through before you look it up!*

by Howard J. Wilk

If you think there can't possibly be a dog breed you've never heard of, keep in mind that the Fédération Cynologique Internationale recognizes 343 different breeds.

The Albanian Goatherd Dog

The Albanian Goatherd Dog is an ancient breed. Both Herodotus and Thucydides described what are recognizably Albanian Goatherd Dogs among the Illyrians in what is present-day Albania. Aristotle, who was wont to wild speculation, believed the dogs were the result of crosses between lionesses and Carpathian wolves. That's absurd, but in Aristotle's defense, there were lions in Europe in historical times.

The Albanian Goatherd Dog actually prospered during the dictatorship of Enver Hoxha. Pets were, of course, strictly forbidden, but these were good Leninist-Stalinist working dogs. Whenever the Shpilki (the Albanian secret police) would come around, it appeared that all the dogs were gainfully employed herding sheep, including dogs that in reality wouldn't know sheep from Shinola. The Shpilki, half of whom probably owned Albanian Goatherds themselves, generally looked the other way, especially for a little *tunxh* ("brass").

Albanian Goatherds have an acute sense of smell. Hoxha truly believed that they could sniff out counter-revolutionaries and the bourgeoisie, on the basis of demonstrations made before him whose results were undoubtedly due to the Clever Hans effect. But during the various 1990s wars in the Balkans between the unspellables and the unpronounceables, the dogs' sense of smell was put to good use, because they could be trained to distinguish friend from foe by the foods the soldiers ate (e.g., pork indicated non-Muslims) and by the body and waste-product odors produced thereby.



A white Albanian Goatherd Dog. The breed standard recognizes a range of coat colors from fawn or tan to roan to white.

The Frisian Shepherd Dog

Friesland (sometimes pronounced "freeze land", though etymologically the name is unrelated to the word, the following notwithstanding) is a coastal region along the northwest corner of continental Europe bordering the North Sea. During what is called the Little Ice Age, from about 1350 to about 1850, most of Northern Europe was glaciated, and in Friesland, polar bears were the major predators of sheep.



HRI Glacier

Polar bears don't scare. No number of dogs of whatever size can chase off a polar bear; the bear must be fought off. The Frisian Shepherd Dog was bred to be all white for the same reason the polar bear evolved to be all white, to be camouflaged against the snow, to get the jump on its enemies or its prey. The dogs' white underfur, is, however, highly absorbent in the infrared, which helps keep them warm even in sub-zero temperatures.

The bloodlines of the Frisian Shepherd Dog are zealously guarded. My dog Glacier (His Royal Iceness Glacier to you), he of the Jesus fish (*Phactum* Oct/Nov/Dec 2014 p. 10), is a Frisian Shepherd; I had to go through a lengthy, arduous, and expensive process to get him authenticated as such by both the Nederlands Fries Herdershond Vereniging in Groningen, the Netherlands, and the Friesisch Schäferhund Verein Ostfriesland in Emden, Germany. That's how come he gets to be styled "His Royal Iceness". (OK, I just made up the HRI thing.)

The Hudson Bay Retriever

As used by the Inuit and the First Nations (indigenous Canadian) peoples around Hudson Bay, just another name for the Newfoundland Dog, although some HBRs are considerably larger, *v.i.*

Molosser dogs are a category of large, solidly built dogs such as the Newfoundland and the various mastiffs that all descend from the same common ancestor. The name is derived from Molossia, an area of ancient Greece, where the large shepherd dog was known as the Molossus. One Hudson Bay Retriever who lives among the Inuit in Arviat in the Kivalliq Region of Nunavut is a solid 262 pounds of muscle and is known as “The Colossus of Molossus”. At least that’s what I call him.



The Malayan Jungle Dog



There are *two* Malayan Jungle Dogs in this photo. Can you spot them?

The origins of the Malayan Jungle Dog (also known as the Mandalay Snake Hound, especially in Burma) lay in the Second World War. Japan invaded British-held Malaya and Burma. The Japanese military had their dogs, the British theirs, and both sides also recruited so-called “comfort bitches” locally. Some of the canines escaped into the jungle and reproduced. (The Japanese and British dogs didn’t know they were supposed to be enemies.)

After the war, the dogs were gradually redomesticated in a process that was probably similar to the way dogs were domesticated in the first place: Dogs would guard families from snakes and would get table scraps in return. It was found that by natural selection the dogs had evolved considerable resistance to the zootoxins of the local venomous snakes. The IM (intramuscular injection) LD50 of *Ophiophagus hannah* (king cobra) venom in the Malayan Jungle Dog is estimated to be 12-15 times that of other dogs, expressed as milligrams venom per kilogram of body weight.

The Mimosa Inu

Japanese for “Mimosa Dog”. The Mimosa Inu has nothing to do with the touch-sensitive plant but rather is named after Mimosa, Hokkaido, Japan. Hokkaido is the northernmost large Japanese island and it’s where most of the Ainu people live. The Ainu are an ethnic minority in Japan and have suffered from discrimination even though they’re the indigenous people of the Japanese islands. (An Ainu legend has it, “The Ainu lived in this place a hundred thousand years before the Children of the Sun came.”) The Mimosa Inu has been bred by the Ainu from a time long before Hokkaido was settled by ethnic Japanese.

The Mimosa Inu is also known as the Gojira Inu. Not to be confused with the Hokkaido Dog, aka the Ainu Dog, a different breed!

In northern Japan, the Mimosa Inu is known as “the fisherman’s friend”. It’s a large, powerful dog with a short but thick double coat well suited to the icy waters off the coast of Hokkaido. Now a popular “house dog” of the ski lodges in Hokkaido, these days it’s more likely to rescue a lost, confused, hypothermic off-trail skier than an overboard fisherman.



Mimosa Inu puppies in training.
Photo courtesy of the Sapporo Ski Chalet.
“There’s always snow in Sapporo!®”

The Ocracoke Pirate Dog

The Ocracoke Pirate Dog is a now-feral dog descended from dogs left on Portsmouth Island, North Carolina (across Ocracoke Inlet from Ocracoke Island) when the island was abandoned in 1971. Its unusual name stems from the legend that Edward Teach, better known as Blackbeard the Pirate, used



The National Park Service administers Portsmouth Island and forbids interaction with the dogs, which are shy anyway, so it's hard to get good photos of them.

ancestors of the dogs to guard buried treasure thereabouts. Given that such duty would only draw attention to the location of the loot, the legend is almost certainly groundless. The most likely origin of the breed is that it is simply a mongrelization of the various pet and working dogs of the Outer Banks.

Ocracoke Pirate Dogs are excellent swimmers. It's known that one of the ancestors of the dogs is "Beedat", a dog owned by Henry Beebe of Buxton, on Hatteras Island, in the 19th century. Cape Hatteras is known as the "Graveyard of the Atlantic": the Diamond Shoals, frequent hurricanes, and treacherous currents there have claimed many ships, including the replica *Bounty*, which I wrote about previously (*Phactum* March 2013 p. 5). Beedat became famous for rescuing at least two dozen sailors during the 1830s and 1840s. There is a statue of Beedat near the British cemetery on Ocracoke Island, where four British sailors from the *HMT Bedfordshire* are buried. Their bodies washed ashore after their ship was sunk by a German U-boat in 1942.

The San Roque Dog

San Roque (in Spanish; Saint Roch in English and French, San Rocco in Italian, São Roque in Portuguese, etc.) (ca. 1295-1327) is the patron saint of dogs, so it's not surprising that there's a dog breed named after him. That the saint (and by extension the dog) is not better known is due to the Jesuitical Suppressions of the Rochian movement – some would say cult – in the late-14th to mid-16th centuries. The Rochians have never fully recovered, to the point that although there are several dozen churches named after the saint around the world (see Wikipedia for the list) there is only one monastery, the Monastery of San Roque in the town of Desaguadero in the Andes at the Bolivian-Peruvian border. At 12,556 feet it's probably the highest Roman Catholic monastery in the world. (A number of Buddhist monasteries are considerably higher, topped off by the Rongbuk Monastery near the base of the north side of Mount Everest at 16,340 feet.)

The Monks of San Roque occupy themselves by – you guessed it – breeding dogs. In what might be called (and maybe is – I don't know what the proper term is) "convergent breeding", the San Roque Dog is very similar to the St. Bernard Dog. But given that the Alps have an Alpine climate under the Köppen system and Desaguadero has a tropical subalpine climate, a San Roque never blows its coat, unlike a St. Bernard.

In Bolivia, San Roque's Day, 16 August, is considered the "birthday of all dogs", on which the dogs around town can be seen with colorful ribbons tied to them.



Two San Roque Dogs on the grounds of the San Roque Monastery in Desaguadero in the Andes.

The Tehuelche Dog



The Tehuelche Dog was traditionally used by the Tehuelche people of Patagonia to hunt rheas – large, flightless birds related to ostriches and emus. The origin of the Tehuelche Dog is a matter of dispute. Some authorities believe the dogs are directly and entirely descended from the pre-Columbian dogs of the Mapuche and Tehuelche peoples; others hold that the dogs are the result of native dogs interbreeding with Andalusian Hounds, Portuguese Podengo Pequenos, and other European dogs.

Tehuelche Dogs “don’t play well with others” (strangers or other dogs) and are generally unsuitable as pets except in sparsely populated areas. Their numbers have declined in recent years and their export is prohibited by the Argentine government.

The Windhoek Löwenhund

Windhoek is the capital of Namibia, which used to be a German colony (German South-West Africa). Löwenhund means “lion dog”, and there are lions in Namibia, known as desert lions, but there is nothing leonine about the appearance of the Windhoek Löwenhund, nor has it ever been used to guard against or hunt lions. The late 19th-early 20th century breeders of the dog simply coined a catchy name in an effort to increase the popularity of the breed.

The Windhoek Löwenhund was developed when Basenjis, a breed developed from stock originating in central Africa, were crossbred with Oldenburger Dogs, and, controversially, African Wolves. Like the Basenji, the Windhoek Löwenhund produces an unusual yodel-like sound called a “barroo” because of its unusually shaped larynx. Also like the Basenji, Windhoek Löwenhund bitches come into estrus only once a year. Fortunately, unlike the Basenji, the Windhoek Löwenhund rarely suffers from Fanconi syndrome.

Swimming comes naturally to Windhoek Löwenhunds, as it does to all dogs, but they are loath to swim of their own volition; they’re like most cats in that regard. This is not much of a problem in Namibia, which is mostly desert – it’s the driest African country south of the Sahara and has almost no surface water.



For **Key to Uncommon Dog Breeds for Critical Thinkers** see Page 26.

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“Heaven goes by favor; if it went by merit, you would stay out and your dog would go in.”

~ **Mark Twain**

Answer Key to Uncommon Dog Breeds for Critical Thinkers

The Fédération Cynologique Internationale (www.fci.be), the world's largest K9 organization, does indeed recognize 343 different breeds.

The Albanian Goatherd Dog

No such dog. Herodotus and Thucydides were Ancient Greek historians, the Illyrians did live in Albania, there are wolves called Carpathian wolves, and there really were lions in Europe in historical times.

Enver Hoxha was the Stalinist dictator of Albania. I have no idea what his attitude towards dogs was, working or otherwise. I just made up the Shpilki secret police. *Tunxh* really is the Albanian word for "brass", but if that's what Albanians call a bribe, it was a lucky guess on my part.

If you don't know what the Clever Hans effect is, look it up. Props to P. J. O'Rourke for the wars between the unspellables and the unpronounceables.

The Frisian Shepherd Dog

There really is a breed called the Frisian Shepherd Dog, although it's not recognized by the FCI. My dog Glacier is a Frisian Shepherd, the only one of his kind in the world. The hell with what the FCI says. Glacier did stretch a key ring into a Jesus fish:

I made up the "Nederlands Fries Herdershond Vereniging" and the "Friesisch Schäferhund Verein Ostfriesland" which are, respectively, Dutch for "Netherlands Frisian Shepherd Dog Club" and German for "Frisian Shepherd Dog Club of East Friesland", more or less. Groningen is a large Dutch city and Emden, Germany, is about 20 miles away; both are in the area of historical Frisian settlement.

The geography and pronunciation of Friesland are correct, and there was a Little Ice Age from about 1350 to about 1850, but neither Friesland nor most of Northern Europe were glaciated, and polar bears were not the major predators of Frisian

sheep.

I wouldn't exactly say polar bears "don't scare", but Wikipedia teaches that they're "fearless towards people and are known to kill and sometimes eat humans." In fact I can show you long and deep claw marks on the *inside* of my car door (the window was open). I made up the part about white underfur absorbing IR light, but read "Is Polar Bear Hair Fiber Optic?" (*Applied Optics*, 37(15), 3198-3200 (1998)).

The Hudson Bay Retriever

No such dog. There really is an Inuit (Eskimo) village called Arviat in the Kivalliq Region of Nunavut.

Molossor dogs, the Molossus shepherd dog, and the region of Molossia are all real. Any dog I call "The Colossus of Molossus" is "The Colossus of Molossus", on my say-so (even if the grammar doesn't make sense).

The Malayan Jungle Dog

No such dog. There are no dogs in the photo; in fact I think the photo was taken in the Amazon, and the snake is a boa constrictor, which is native only to Mexico and Central and South America.

I have no idea if either or both militaries had dogs when the Japanese invaded British Malaya and Burma.

Ophiophagus hannah is the scientific name of the king cobra.

The Mimosa Inu

No such dog. The only "Mimosa, Japan" google maps could find are a couple of restaurants. As a Japanese word *mimosa* means "conduct; behavior". "Gojira" is the original, Japanese name for God-

zilla (a Japanese monster). *Inu* does mean "dog" in Japanese.

The info about Hokkaido and the Ainu is true, and there is a breed called the Hokkaido Dog, aka the Ainu Dog.

There's no "Sapporo Ski Chalet" but there's no reason there couldn't be. There's always snow in Stowe!

The Ocracoke Pirate Dog

No such dog. All the Outer Banks geography, oceanography, the *Bounty*, etc. is true. Portsmouth Island was abandoned in 1971, but I doubt any dogs were left behind. At least I didn't see any when I was there. But then again, they are shy, if pigs could fly.

Blackbeard's buried treasure has never been found. His body isn't buried; he was killed and beheaded in 1718 by Lieutenant Robert Maynard and sailors of the Royal Navy, and it's said that after being thrown overboard his headless body swam seven times around Maynard's ship before sinking. Some say it swims around still, looking for its head, which is ridiculous.

Beebe is a common family name in the Outer Banks (as is Howard). "Beedat" is what I called my grandfather when I first began to talk.

There is a British cemetery (property of the Commonwealth War Graves Commission) on Ocracoke Island as described, except there's no dog statue nearby.

The San Roque Dog

No such dog. There is a San Roque and he is the patron saint of dogs, but I don't know of any Rochian movement, much less its suppression by the Jesuits.

There are several dozen churches named after San Roque but there's no San Roque monastery or monks. There is a town called Desaguadero at 12,556 feet with a Köppen classification of tropical subalpine climate, but there's no monastery there. There is a Rongbuk Monastery (Buddhist) at 16,340 feet near the base of the north side of Mount Everest.

A St. Bernard blows its coat (seasonally sheds its undercoat) twice a year.

"In Bolivia, San Roque's Day, 16 August, is considered the 'birthday of all dogs', on which the dogs around town can be seen with colorful ribbons tied to them" is all true!

The Tehuelche Dog

No such dog. There are the Tehuelche and Mapuche peoples in Patagonia, which is the southernmost part of South America, "a dagger pointed straight at the heart of Antarctica", as Henry Kissinger put it.

Rheas are as described, and there are dog breeds called the Andalusian Hound and the Portuguese Podengo Pequeno.

There is no law in Argentina prohibiting the export of Tehuelche Dogs, and since "that which is not forbidden is permitted", one *may* export the dogs from the country.

The Windhoek Löwenhund

No such dog. The history, geography, and climate of Namibia and its capital Windhoek are as described, and there are Namibian "desert lions".

All the information about Basenjis is true: their origin, their "barroo", their fertility, and their common affliction with Fanconi's Syndrome, which is an inherited but treatable kidney disease.

There is no Oldenburger Dog but there is an Oldenburg Horse. The African Wolf, *Xenocyon*, went extinct 126,006 years ago. (Wikipedia says 126,000 years ago, but that was written in 2009.)

How'd you do?

Growing Old in “the World of William Penn”

by Clarissa F. Dillon, Ph.D.



There are many myths about life in the 18th century. A common one claims that everyone died young. It is true that the mortality rate among children under the age of two was around fifty per cent, but those who survived, barring accidents and epidemics, might live to a ripe old age.

It is not easy to find the individuals who continued beyond the Biblical life span of three score years and ten. Statistical tables as we know them did not exist. Newspaper reports and cemetery records of deaths/burials gave numbers, sometimes causes, but not ages. It is necessary to comb diaries, correspondence, and various miscellaneous materials to find some names, ages, and occasionally causes of death.

There are certain conditions associated with aging. Decreased mobility is one. It is almost impossible to determine the cause (s) in colonial references. They are not necessarily afflictions of old age. One reason for possible confusion or misunderstanding today is the casual nature of their names. Naming the problem was evidently not as important to people at that time. One example can be found in a letter from Jane Mecom to her brother, Benjamin Franklin: “My Daughters Gout, or Rhumitism or what Ever it is, has not Left hr yet; but She can Just hobble about the Chamber.”¹ We know today that these are two entirely different conditions because we can determine the causes while they only observed the effects.

Another area involved vision. There are two problems associated with aging. One is glaucoma, the build-up of fluid inside the eyeball, leading to pressure and finally blindness, if left untreated. The other is cataracts which are films that spread across the front of the eyeball, blurring and restricting vision and leading, again if untreated, to loss of sight. In the 18th century, these two very different conditions were viewed as the same problem: “...we must understand the words *cataract* and *glaucoma* as synonymous terms.”² There were home remedies that could be tried.

Films

Dry *Zibethum Occidentale*, i.e. *Stercut umanum* slowly, powder it fine, and blow it into the Eye twice or thrice a Day;

Or, take the white Part of *Hen’s-Dung*, carefully dried, with an equal Quantity of *burnt Alum* and double refined Sugar; sift them and blow a little into the Eye at going to bed.

Or, mix Juice of *Ground-ivy* with a little *Honey*, and two or three Grains of Bay-Salt. Drop it in Morning and evening.³

From A Dictionary of the English Language by Samuel Johnson (1755)

Glaucoma - A fault in the eye, which changes the crystalline humour into a greyish colour, without detriment of sight, and therein differs from what is commonly understood by suffusion.

Cataract - [In medicine] A suffusion of the eye, when little clouds, motes, and flies, seem to float about in the air; when confirmed, the pupil of the eye is either wholly. or in part, covered, and shut up with a little thin skin, so that the light has no admittance.

Suffusion - 1. The act of overspreading with any thing. 2. That which is overspread or spread. "A drop serene that quench'd their orbs, Or dim suffusion veil'd." Milton.

A medical book, written by a physician and available in Philadelphia, said that beginning cataracts could be treated with laxative mercury pills, cupping or scarification on the head, neck, and behind the ears, and preparations to cause the nose to run. If these did not work, a further treatment involved purging the patient with calomel, keeping a fresh hemlock poultice on the eye, and a constant blister on the neck.⁴ If these non-invasive treatments failed, there was an alternative: surgery.

...having placed your patient in a convenient light, and in a chair suitable to the height of that you yourself sit in, let a pillow or two be placed behind the back, in such a manner, that the body bending forward, the head may approach near to you; then inclining the head a little backward upon the breast of your assistant, and covering the other eye so as to prevent its rolling, let the assistant lift up the superior eye-lid, and yourself depress a little the inferior one: This done, strike the needle through the *tunica conjunctiva*; something less than one tenth of an inch from the *cornea*, even with the middle of the pupil, into the posterior chamber, and gently endeavour to depress the cataract with the flat surface of it. If, after it is dislodged, it rises again, though not with much elasticity, it must again and again be pushed down. If it is membranous, after the discharge of the fluid, the pellicle must be more broke and depressed: if it is uniformly fluid, or exceedingly elastick, we must not continue to endanger a terrible inflammation, by a vain attempt to succeed. If a cataract of the right eye is to be couched, and the surgeon cannot use his left hand so dexterously as his right, he may place himself behind the patient, and use his right hand.

We have not recommended the *speculum oculi*, because, upon the discharge of the aqueous humour through the puncture, the eye, being somewhat emptied, more readily admits of the depression of the chrystalline humour, than when pressed upon by the instrument.⁵

“Aqueous humour” makes it sound as if the operation was for what we call glaucoma. If this couching operation did not work, there was another 18th-century procedures for cases

...where the cataract is from its adhesion immovable...The adhesion of the cataract has been considered as a species of blindness not be relieved...

In doing this operation, the patient must be placed as for couching, and the eye kept open and fixed by the *speculum oculi*, which is absolutely necessary here; then introducing the knife on the same part of the *conjunctiva* you would in couching, insinuate it with the blade held horizontally, and the back of it towards you, between the *ligamentum ciliare* and circumference of the eye, into the anterior chamber of the eye, and after it is advanced to the farther side of it, make your incision quite through the membrane; and if the operation succeeds, it will upon wounding fly open, and appear a large orifice, though not so wide as it becomes afterwards.⁶

This sounds more like what we think of as a cataract. Both operations would have been MOST unpleasant! These treatments could have been considered an acceptable alternative to blindness, but not always.

[27 Jan. 1800] James Logan [junior, born 1728] came to, I was going to say, see us, poor man, that he cannot do, he has got a new hand to direct his steps, a molalo [sic] man, whom he thinks does better than Dan--...

[14 May 1800] James Logan and his guide were here before dinner, he appears rather wavering, and timorous respecting the operation on his eyes: poor Man! I pity him.

[27 May 1800] James Logan was here this Afternoon with a new guide--he seems to have droped [sic] the idea of having his eye couched.⁷

Today, the condition is called dementia or Alzheimer's; it is characterized by loss of memory and mental faculties, and requires the care of others. In the 18th century, they didn't name this state, but there were descriptions of its presence. Benjamin Franklin's son wrote, on 3 August 1771: “I could wish...that my Mother had some clever Body to take care of her in Sally's Absence; as her Memory has failed her much, and she becomes every Day more and more unfit to be left alone.”⁸ A diary entry was more specific: “[1 Feb. 1790] ...Betty Humphrey Dead this Month She verry old & Childiish a Long while.”⁹ There were also what would probably be called a “senior moment” today.

[1790] The hat of £ 1-15 for his [Thomas Sugart] prentice he turned over for Samuel Cope to pay me and I called on him for the money and he said he had sent it to me but I could not Remember any thing of it tho

Rather agreed to allow it as I could not trust much to my memory of late¹⁰

Not everyone suffered from failing memory or confusion in old age: “[Jan. 1750] ...Mary Lightfoot Relict [widow] of Michael Lightfoot a worthy Minister of the Gospel among friends [Quakers], agreeably surprised us by a Visit. she is upwards of 80, yet of a sound mind and memory of good things...”¹¹

There were people physically active and “harty” when old. A Margaret Jones “...[died] in her 86 year American Born has made to Meeting this summer horseback...”¹² A Chester County farmer recorded some of his activities on his birthday: at 77, digging potatoes; at 79 and 80, planting various things.¹³ A midwife, Mary Bradway, died “...aged just One Hundred Years and a Day. Her Constitution wore well to the last, and she could see to read without Spectacles a few Months since.”¹⁴ There were others: “...old Jacob Jones here to get Polly Walter to Cuths here, he told me he was now 84 years old Rides Mount & dismount Quite Brisk very light on foot.”¹⁵ In 1741, a Sarah Furman, aged 97 died in Trenton¹⁶ and in 1798, Adam Poth died at the age of 103 years, 6 months, and 3 days.¹⁷

Like people today, those living long could become concerned about their safety; their friends and relatives could share these concerns.

[21 Nov. 1799] ...S. Swett was bemoaning herself, yesterday on account of her lonely, and as she now thinks dangerous situation--being quite alone and near 78 years of age, she yet does all her housework, she grows infirm compar'd to some years ago, she is fearfull she may fall in the fire, or down her cellar stairs bringing up wood &c and lay there without help, she is a little panic struck, and no wonder,...¹⁸

My investigations into aging in the “world of William Penn” could continue indefinitely. The only conclusion I can draw is that each individual must be considered unique and there was as much variation in life-spans then as there is today. At least, we can put to rest the myth that everyone died young.

Attempts to Hold Back the Signs of Aging

As we age, our appearance changes. Some people, today and in the past, accepted their altered looks as inevitable; other took steps, hoping to hold back aging.

Greying and hair loss can be hard to evaluate. In the 18th century, many people wore wigs, shaving their heads to facilitate this. Wigs were white, grey, or silvery in color, so grey or white hair was not always a sign of aging. When it was, it might have been accepted: “...my auburn hair is grey but my person is as erect, my step as light and hand as steady as ever they were.”¹⁹ Natural hair could also be powdered to achieve the fashionable color.

Baldness could be undesirable. Age, illness, poor diet, and heredity could all lead to this condition. There were home treatments--with questionable efficacy.

A Powder to Prevent Baldness

POWDER your head with Powdered Parsley Seed, three nights every year, and the hair will never fall off.²⁰

To quicken the Growth of Hair.

DIP the teeth of your comb every morning in the expressed juice of Nettles, and comb the hair the wrong way. It will surprisingly quicken the growth of hair.²¹

Another symptom of advancing years is found on the face. Wrinkles, exacerbated by smiling, laughing, frowning, poor diet, illness, exposure to the sun and wind, as well as the passing years, will appear, along with brown or age-spots. We could spend ENORMOUS sums today to hide or “remove” them. They had treatments, too, like this one.

To make the Face look Youthful.

Take two Ounces of Aqua-vitae, Bean-flower-water, and Rose-water, each four Ounces, Water of Water-lillies six ounces, mix them all, and add to them one Dram of the whitest Tragacanth, set it in the Sun six days, then strain it through a fine Linnen Cloath; wash your Face with it in the Morning, and do not wipe it off.²²

Today, yellowed, discolored, or missing teeth are often associated with aging. People of all ages are encouraged to use whitening products. Replacement of any lost or broken teeth is possible with dentures or implants. Problems with teeth were



18th Century Dental Tools

the others, then rub'd them with dentifrice for which he was paid 5 Dollars--if what he does will tend to preserve the teeth, 'tis a trifle well laid out.²⁵

For those without the money to spend on dental care, such preventive measures would not have been available.

As we age, our eyes change. It becomes necessary to hold reading material or handwork farther and farther away. Eventually, our arms are not long enough. Spectacles help. If there is a need for lenses for distance, we then need two sets. Benjamin Franklin solved that problem by inventing bifocals. They take some getting used to, but are easier to deal with than two pairs of glasses.

Unless bleared from illness, accident, poor diet, or over-indulgence, youthful eyes are bright and clear. This changes over time. Home treatments could be attempted.

Eyes blear'd.

Drop into them Juice of *Crab Apples*.

Eyes dim or decay'd.

Use *Eye-bright* Tea daily.

Or, powder'd *Eye-bright*, both in Meat and Drink.

Dull Sight.

Drop in two or three Drops of Juice of *rotten Apples* often.²⁶

Such applications would have been of questionable efficacy.

In spite of treatments at home or at the hands of professionals, whether physicians or cosmeticians, aging inexorably continues. This was as true in the "world of William Penn" as it is for us today.

Footnotes

¹ *Letters of Benjamin Franklin & Jane Mecom*, ed. by Carl Van Doren (Princeton: Published for The American Philosophical Society by Princeton University Press, 1950), p. 288.

not associated with aging in the 18th century; they presented problems to everybody. We can find references to broken teeth, "stumps," and extractions for people not even middle-aged. Elizabeth Drinker was twenty-four years old when she recorded: "[25 Feb. 1759] ...had one Tooth drawn in the morning, and another attempted; suffer'd much thereby." and less than a week later, wrote: "[1 Mar. 1759] ...pull'd out a Tooth in the Evening which the Tooth-drawer had drawn, before and replaced."²³

By the end of the century, "dentists" were being employed by some for preventive care, like cleaning, as well as treatment for decay, etc.: "...Doctor Spence dentist cleaned my teeth, fixed one in, that had dropped out, cost £ 1"10..."²⁴ This diarist was 38 years old. Preservation of teeth was seen as both possible and desirable.

[12 July 1796] ...Js. Gardette Dentist was here forenoon cleaning Williams teeth--they were not foul, he extracted one, and scraped

Dr. RICHARD ROCK'S Tincture for Curing the TEETH.

Tooth-Ach Cure'd Without

WHICH makes the foulest Teeth most beautifully white at once or twice using; and speedily cures all Disorders of the Gums or Teeth whatever. It gives immediate Ease in the most violent Pain, and prevents its Return; it preserves the Teeth from growing rotten, and fastens those that are loose; it perfectly cures the Scurvy in the Gums, causing them to grow up to the Teeth again to Admiration, and is exceeding good for an ill-scented Breath.

It is likewise a most excellent Beautifier of the Face, that infallibly kills Worms, takes away Freckles, Spots, Wrinkles, Pits or Marks of the Small Pox, &c. and speedily clears, plumps, nourishes and whitens the Skin to a Miracle. To be had at the Hand and Face near Black-Fryars Stairs, at Mr. Bagshaw's at the Piazza, Billingsgate, at Mr. Barr's, a Stocking-maker by Leicester-Gate, Leicester-Fields, at Mr. Brooks's the Essex Serpent in Kingstreet, Covent Garden, and at the Rainbow Coffee-House at Fleet-Bridge. Price One Shilling, with Directions.

N. B. At the same Places is to be had the Chymical Liquor for Curing the ITCH. Price 1s. 6d. the Bottle, with Directions. Likewise Pkcar's Purging Elixir. Price 1s. the Bottle, with Directions.

N. B. Advice will be given gratis, in most difficult Distempers, from One o' Clock till Five and from Eight till Ten at Night.

Wellcome Images

Mid-18thC ad for Dr Richard Rock's Tincture for Curing the Teeth, from Wellcome Images. Courtesy of the Quack Doctor.

E u p h r a s i a **(Eyebright)**

is a genus of about 450 species of herbaceous flowering plants in the family *Orobanchaceae*. They are semi-parasitic on grasses and other plants. The common name refers to the plant's use in treating eye infections.

The **CVS Pharmacy** website has this to say about Eyebright:



The herb eyebright has been used since the Middle Ages as an eyewash for infection or inflammation of the eye. However, as much as one would like to believe that all traditions are wise, eyebright appears to have been selected for treating eye diseases not because it works particularly well, but because its petals look bloodshot.¹ This follows from the classic medieval philosophical attitude known as the Doctrine of Signatures, which states that herbs show their proper use by their appearance.

Like many herbs, eyebright contains astringent substances and volatile oils that are probably at least slightly antibacterial. But there's no evidence that eyebright is particularly effective for treating conjunctivitis (pink eye) or any other eye disease; Germany's Commission E recommends against using it. Warm compresses consisting of nothing but water (or ordinary black tea) are probably equally effective under the same conditions.

<http://health.cvs.com/GetContent.aspx?token=f75979d3-9c7c-4b16-af56-3e122a3f19e3&chunkid=21707>

² *Encyclopaedia Britannica*:... in 3 vols (Edinburgh: Printed for A. Bell and C. Macfarquhar...1771; facsimile reprint by Encyclopaedia Britannica, Inc., Chicago, 1979), Vol. III, p. 667.

³ John Wesley, *Primitive Physick*:... 14th ed. (Bristol: Printed by William Pine...1770), p. 69.

⁴ William Buchan, M.D., *Domestic Medicine*:... [orig. pub. 1769; Phila ed. 1771] New Ed. (Boston: Joseph Bumblestead...1809), p. 309.

⁵ *Encyclopaedia*..., op. cit., Vol. III, p. 667.

⁶ *Ibid.*, Vol. III, pp.: 667-668.

⁷ *The Diary of Elizabeth Drinker*, ed. by Elaine Forman Crane (Boston: Northeastern University Press, 1991), p. 1271; p. 1300; p. 1303.

⁸ *The Papers of Benjamin Franklin*, ed. by Leonard W. Labaree et al (New Haven: Yale University Press, Vol. 18, p. 195.

⁹ Joseph Price, "Diary 1788-1828" transcribed by Mary Keim (Manuscript in The Lower Merion Historical Society, available on-line: <http://lowermerionhistory.org/texts/price/index.html>), 1790, p. 4.

¹⁰ Samuel Trimble, "Accounts 1771-1794" (Unpublished manuscript in The Chester County Historical Society, West Chester, PA), n.p.

¹¹ *The Diary of Hannah Callender Sansom*, ed. by Susan B. Klepp and Karin Wolf (Ithaca and London: Cornell University Press, 2010), p. 87.

¹² Price, op. cit., 1797, p. 13.

¹³ Benjamin Hawley, "Diary 1769-1782" (Unpublished manuscript/typescript in The Chester County Historical Society, West Chester, PA), p. 224; p. 243; p. 252; p. 253.

¹⁴ *The Pennsylvania Gazette*, 6 January 1730.

¹⁵ Price, op. cit., 1797, p. 10.

¹⁶ Peter Kalm, *Travels Into North America* [1-vol. abridged ed.], trans. by William Reinhold Forster (Barre, MA: The Imprint Society, 1972), p. 59.

¹⁷ *Extracts from the Diary of Jacob Hiltzheimer, of Philadelphia 1765-1798*, ed. by Jacob Cox Parsons (Philadelphia: Press of Wm. F. Fell & Co., 1893), p. 257.

¹⁸ Drinker, op. cit., pp. 1239-1240,

¹⁹ "Abigail Roberts," in Richard S. Harrison, *A Biographical Dictionary of Irish Quakers* (Dublin: Four Courts Press Ltd, 1997 & 2008), p. 88.

²⁰ *The Toilet of Flora*... [M. Buicholz,, M.D.] (London: Printed for W. Nichol...1772; Xerox from The British Library, London), p. 46.

²¹ *Ibid.*, p. 45.

²² Hannah Woolley, *The Accomplish'd Lady's Delight*... (London: Printed for S. Harris...1675; facsimile reprint by University Microfilms International, Ann Arbor, MI), pp. 177-178.

²³ Drinker, op. cit., p. 195.

²⁴ Sansom, op. cit., p. 301.

²⁵ Drinker, op. cit., p. 821.

²⁶ Wesley, op. cit., pp. 68-69.

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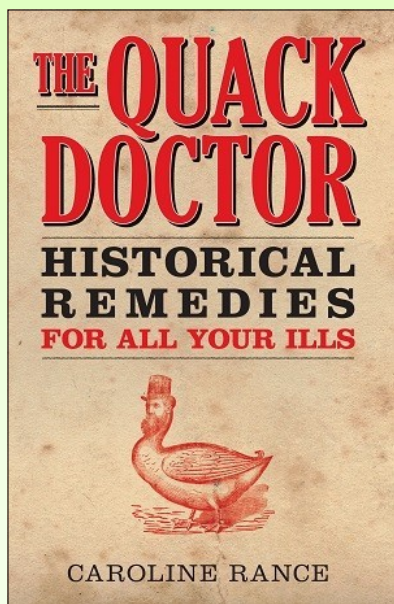
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About the author

Clarissa F. Dillon received her doctorate in History from Bryn Mawr College and has been involved in "living history" since 1973. She has long tried to dispel the myth about tomatoes being considered poisonous. She designed and interpreted a display, "They did too eat Tomatoes" for the John Bartram Association at the Pennsylvania Horticultural Society's Harvest Show in September 1990. She had an article, "Exploding a Historical Myth About Tomatoes," published in *Living History*, Vol. 1, No. 2, Summer 1991. Its original title was "They Did Too Eat Tomatoes" but the editor insisted that it be changed. She also wrote an article, "Tomatoes, also called Love Apples, " for a column entitled "Mythbustherth" in *PAST Masters' News*, Vol. 8, No. 3, Summer 2005. She was delighted to receive a documentation for tomatoes as food from Joel Fry at Bartram's; that meant she could include tomatoes in the revised dissertation she makes available to historic gardeners and cooks.

Ω Ω Ω



The Quack Doctor: Historical Remedies for all your Ills by Caroline Rance

Paperback Published: 2013-10-15 ISBN: 9780752487731

From the harangues of charlatans to the sophisticated advertising of the Victorian era, quackery sports a colourful history. Featuring entertaining advertisements from the nineteenth and early twentieth centuries, this book investigates the inventive ways in which quack remedies were promoted – and suggests that the people who bought them should not be written off as gullible after all. There's the Methodist minister and his museum of intestinal worms, the obesity cure that turned fat into sweat, and the device that brought the fresh air of Italy into British homes. The story of quack advertising is bawdy, gruesome, funny and sometimes moving – and in this book it takes to the stage to promote itself as a fascinating part of the history of medicine.

This book may be purchased at Amazon.com

What Are The Ethics Of Cloning?

by Paul Schlueter III

Over the holidays I rewatched "Star Trek X: Nemesis," an installment in the extensive Star Trek film/tv multiverse. In it, a Reman (from Remus, the sister planet of Romulus) adoptee named Xinzahn (I spell it phonetically) has a primary character role as the leader of his warlike planet. He also has a very interesting characteristic that throws a plot twist into the film: he is the clone of Federation Starship Enterprise's Captain, Jean Luc Picard. Picard knew nothing of his DNA being used to create a clone, nor of the human child raised to manhood in a society which has been an enemy to the Federation. The devious Xinzahn, on the other hand, appears to have been aware of his genetic heritage from the beginning.

One thing Xinzahn wants from Picard is a cure for a genetic disease; Picard is uncertain whether it is in the best performance of his Federation duty to provide this cure, which is to be derived from Picard's own cellular material. This situation suggests one of the scenarios which may soon become a practical motivation for us, out here in the Real

World: Perhaps cloning ourselves will provide a resource for organs (and/or other cellular material) intended as a hedge against potential future injuries or disease.

There have been numerous sci fi flicks which address this question, in one form or another. It seems to be an amusing way for us to begin our debates on the ethics of any potential scientific/technological advances we anticipate. Each screenwriter and director develops his own opinion, and develops a straw man argument in opposition to his desired outcome, which the film then destructs in a (more or less) predictable manner. We credulous viewers (do we not love to suspend our disbelief for a good flick?) tend to identify with the protagonist in such a way as to lead us to root for the outcome the filmmaker has chosen for us. In some level of our minds, perhaps such films are guiding us in how our future opinions on such matters should develop. True to recent sci fi tradition (which, incidentally, is almost diametrically opposite to the

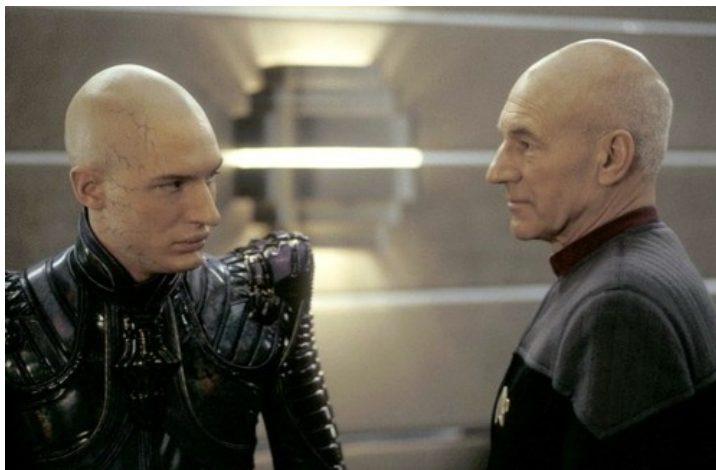
older, B&W sci fi tradition), emotional, intuitive, and (dare I say it?) religious thinking is viewed as superior to the invariably "inhuman" logic of the scientist who causes the dramatic conundrum in the first place. In sci fi films today, science is bad, and the human "heart" is the only source of goodness. Through the "votes" of our ticket purchases, viewers have demanded that films support the pseudo-scientific garbage, and defeat the actual rationality of science; when such films tell their audiences "how to think," they are only inviting further "group-think" in conformity to popular opinion.

Let's step outside of the Hollywood propaganda, and look for a moment at what might actually come up in the near future, once humans actually manage to reliably clone advanced animals (including ourselves).

Why would we clone an entire person, rather than simply a collection of skin, hearts, kidneys, and other likely replacement parts? The myth (perhaps not as medically plausible as it is emotionally important) suggests that "holistic"

considerations would make it more likely that a complete, functioning life form, with all its complex internal interactions, will produce more precisely equivalent organs than simply growing individual organs in bottles. For example, a heart that is accustomed to pumping blood through the entire body of a running, playing, loving person would somehow better replace my own infarcted cardiac unit upon its imminent failure. It would experience good endorphines, react to positive hormonal messages, and benefit from an exercise regimen I can't bother myself to adopt. My clone (presumably my property, even my slave?) could readily be forced to live a healthy lifestyle, eat a healthy diet, and avoid stress and diseases. A bit more problematically, such a cloned person would want (exactly as much as I) to live a full life, to experience and learn and try, and worst of all, to think and choose its own fate.

Here comes the question, then: Would my clone have its



Captain Picard on the right facing his malevolent clone, Shinzon.

own legitimate expectation of the right to life, liberty, and the pursuit of happiness? Can it demand of me the equivalent self-sacrifice I expect of it, in matters of life-or-death organ donation? And, if the clone happens to be something created without my own knowledge/consent, does that change the picture?

To put the questions in a more personal perspective, one of my several parents (birth-, adopted, and step-) feels strongly opposed to my enjoyment of motorcycling, which is admittedly a dangerous activity; should that parent be entitled to prevent me from pursuing one of the most invigorating and enjoyable pastimes I know, simply because it might cause my injury and/or death? Another parent would, if proselytization makes it possible, love to see me make the "free will" choice to become a Jehovah's Witness, and thus be guaranteed a life AFTER this one, in a "Paradise" that strikes me as similar to an endless Disneyworld ride. A variety of parental imperatives might be forcibly imposed on any child, if s/he were not protected by certain legal rights of self-determination.

Alternatively, when one has children, it is arguable that the parental obligation to live responsibly (and thereby, to be around to properly raise and support one's children) might override those same rights of self-determination. Not many parents entirely devote themselves to their offspring, but most will sacrifice some measure of their personal desires in favor of the best interests of their children. Many parents won't ride a motorcycle, for instance, due to the risk of injury/death the activity entails, and thus its potential for leaving their children without parental support. Other parents, arguably, should go ahead and ride a cycle, preferably without a helmet, so as to ensure the soonest possible emancipation of that child from various abuses and depredations (not all parents SHOULD BE parents). The child has certain rights to the expectation of physical and emotional support, perhaps even intellectual and/or religious guidance, and yet those rights must reasonably be balanced against that child's other rights to safety in the home, the perpetuation of familial traditions, social and financial inheritance, and freedom to make (and hopefully learn from) one's own mistakes.

Yet, a clone is not one's child. There are substantial similarities, perhaps, but the most notable difference is that one's clone is entirely one's own, without the contribution of any OTHER parentage. Also, even the poorest, least-educated among us is most likely going to have children, but clones are most likely only going to be brought into existence by the wealthiest of us.

In the case of Xinzahn, we see a clone which was created simply because its cellular donor was a highly formidable and accomplished personage of great racial value as "brood stock" (I mean Picard, here); what government wouldn't reach out and clone the best of humanity, then raise them in controlled, secret conditions, in order to breed itself a race of uber-citizens?

Wouldn't your own corporation benefit hugely if you could create for yourselves an Einstein, a Franklin, or even a Ted Turner? Would your neighborhood benefit from pooling funding in order to create and raise their own Martin Luther King Jr.? What about re-creating Mahatma Ghandi (hmm... could THIS one resolve the Indian/Pakistani conflict?) But

would you want the next community over to be cloning Charles Manson, or Adolf Hitler (rest assured, SOMEONE out there would raise the funding to try BOTH!)

Because the issues are so potentially controversial, somebody will most likely begin making rules about cloning before it can actually be done. But who would YOU want making those rules? THIS Congress? What about President Obama, via an executive order? Wouldn't such rules end up best serving the interests of the Koch brothers, and similar wealthy patrons?

Perhaps we should leave it up to our religious institutions to make the rules. Shall it be the top echelon of religious authority (such as His Holiness, the Pope), or should the decisions be based more locally (such as the local priest, who may or may not be a pedophile on re-assignment from a parish he has previously victimized)? What rules might we expect from a Rabbi, and from his counterpart at the other end of the tunnel, the Imam? Shall we trust such "reproductive rights" decisions to the likes of David Koresh (the Branch Davidian pastor whose compound was destroyed by fire in Waco, TX) or Jim Jones (the preacher who adopted the Kool-Aid solution to his congregation's difficulties)?

We could always leave the decisions up to celebrities: Let's start with Jenny McCarthy, who is at least a self-proclaimed expert on the threats of immunization. How about the combined fashion sense and social leadership of the Kardashian family? I wouldn't be strenuously opposed to Neil Degrasse Tyson, but then again, who among us would have opposed Bill Cosby, say about one year ago*? Remember, once the rules are established, we're going to be stuck with them for a while, so finding out about (alleged) secrets from The Decider's distant past might make us wish we'd chosen differently.



**Adolf Hitler clones from the 1978 movie thriller
"The Boys From Brazil"
with Gregory Peck as Dr. Josef Mengele.**

What if we just leave it up to the Courts? The courts have been known to be helpful in interpreting the laws of our land, but they've also come down on some issues with opinions we disliked! In one old federal case, some prisoners formed a religion called The Church of the New Song, hoping to change some prison conditions with the force of religious legal protections; the Courts held that prisons would not be restrained by inmates' invention of a religion designed to subvert state authority. A likely disruption in the delicate balance between prison restrictions and inmates' religious rights was thus averted (for better or for worse, depending primarily upon your viewpoint).

Yet, one can only wonder how the Courts would rule if a few of the country's largest multinational corporations devised a religion of their own, intended primarily to protect corporate rights by proclaiming religious authority. The U.S. Supreme Court has already held that corporations have the 1st amendment right to "Free Speech," in the form of unlimited political donations.

Are we ready for Richard Branson's version of Christ Reborn? Imagine the religious potential of a mythology based on a conception aboard Virgin Airlines, at the null-gravity apogee of a sub-orbital excursion timed to coincide with some auspicious celestial event! A robotic test-tube insemination event might be "unsullied by human sin," but what if Branson were simply to have Linda Carter (you know... Wonder Woman!) cloned up there, instead? Any of a variety of schemes might obtain her samples, with or without her knowledge/consent; who determines the ethical restraints, there? Yet, who wouldn't be thrilled by the concept of Wonder Woman's clone ushering in a new utopian era of Truth and Justice (as mediated, of course, by the Branson Corporation)? Do the interests of Society (or the Branson Corp.) outweigh Linda Carter's personal wishes? Give Bransonism a few generations to become a "venerable tradition," and such a new mythology could take over the world!

At the end of the movie, Picard slew his Nemesis (in self-defense, of course); you could say that he heroically took responsibility for his evil progeny. Perhaps we're best advised by the old pagan religions, which insist that we destroy all our offal (esp. hair clippings, skin flakes, fingernail trimmings, etc.) so that witches will be unable to make

use of them in magical spells designed to enslave us! If the gal down at Quicke Cutts, in the mall, intends to clone us by using the hair follicles she plucked from our scalps during our latest monthly trim, we should by all means take preventive measures! Not that we're so fastidious about the brats we'd unintentionally sire upon her the old fashioned way, after dinner and drinks...

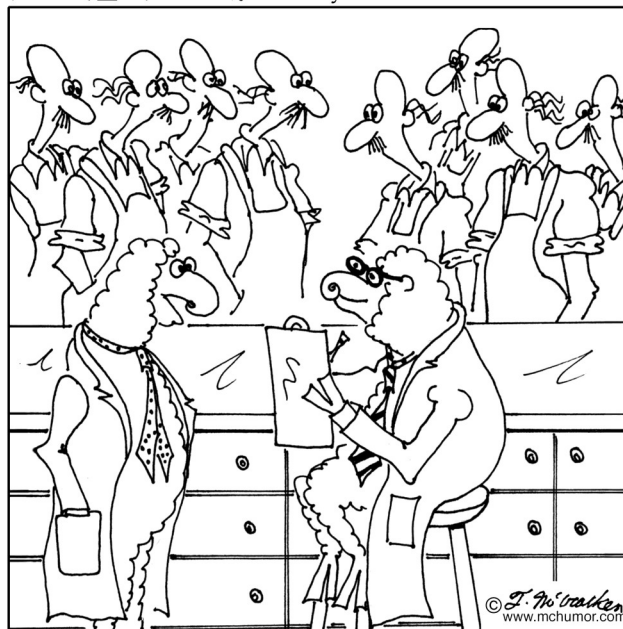
All satire aside, the most likely outcome of the real science is that we will, eventually, come up with more efficient (and less dramatic) ways to "build" human replacement tissue for specific functions long before we manage to clone entire human doppelgangers. We're already close to usable pancreatic tissue for the treatment of Type 1 diabetes, and we can already grow pretty much as much human skin (in any color) as needed, provided we give our poor patient some preparatory time in advance of their need. Recent advances in the storage and transport of human organs have great promise for improving transplants from willing donors (God bless 'em, ev'ry one!), and we're making strides in controlling immune system rejection of foreign organ transplants on the receiving end, too.

By the time we reach the capability of creating viable human clones, we will hopefully have reached a sufficient level of medical ability to provide equivalent benefits without the need for living clones, and we'll look back on this issue as just some quaint plot from old-school sci fi cinema.

I'm glad that we're unlikely to need rules regarding cloning anytime soon, because I don't see that we're prepared (as a society) to establish such rules in a fair or reasonable manner. Humanity is not yet mature enough for such responsibility, and recent history has shown that our technological reach is already far beyond our ethical grasp.

*For the record, I'm skeptical of the multiple accusations against Coz (a wealthy and famous man, and thus a tempting target), brought years/decades after the alleged events, and entirely lacking substantiating evidence. Let us not be unduly swayed by the media's blind acceptance and propagation of heinous criminal allegations, brought by bandwagon committee against a celeb known for his intelligence, philanthropy, and bon homme attitude.

MCHUMOR.COM by T. McCracken



"How are the cloning experiments of shepherds going?"

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

PHACT CALENDAR

Upcoming 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 on the free parking garage on 17th street on the left hand side before Callowhill Street. It opens at 1:00 PM and closes at 6:00 PM. 17th Street 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 18, 2015 at 2:00 PM - Lecture

Dr. Dave Cragin, toxicologist, and Faye Flam, a science writer and journalist, will explore perceptions and misperceptions of the modern world and science. Dr. Cragin will explore concerns and perceptions related to food and Ms. Flam will discuss her experiences in communicating sciences to wide audiences. See Page 3 for more details.

Saturday, May 16, 2015 at 10:00 AM - PhACT Expedition to the Mullica River to search for the Jersey Devil. See Page 4 for details.

Saturday, July 18, 2015 at 10:00 AM to 2:00 PM at Mondauk Common Park (our usual location). See Page 5 for more details.

September 19, 2015 at 2:00 PM - Lecture

Professor Paul Halpern will discuss his new book *Einstein's Dice and Schrödinger's Cat: How Two Great Minds Battled Quantum Randomness to Create a Unified Theory of Physics* See Page 5 for details.

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.



The Philadelphia Area Center for the History of Science (PACHS) maintains an extensive calendar of events about the history of science, technology and medicine that may contain some interesting events not listed in the *Phactum* Calendar. Check out their website at:

<http://www.pachs.net/events>

Saturday, April 11, 2015 - workshop at The 1696 Thomas Massey House, Broomall, PA

"Preparing some 18th-Century Beverages"
There will be 2 sessions, identical in the beverages being made **session 1:** 9:30-12:30 **session 2:** 1:00-4:00

Two alcoholic drinks will be prepared along with a nonalcoholic drink, made with fresh fruit and also made with jam, as it would have been made out-of-season.

Attendees must be 21 or older

COST: \$35.00 Limited number of participants

Samples may be taken home
FOR MORE INFORMATION or TO REGISTER Contact Clarissa Dillon at (610) 642-4269

Sunday, April 12, 2015 at 1:00pm at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA 19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

SURRENDER AT APPOMATTOX: THE END OF THE CIVIL WAR

With General Robert E. Lee's men surrounded and fatigued, the Confederate General had little choice but to consider surrendering his troops to General Grant. The events that followed at the Appomattox Courthouse on April 9, 1865 triggered a series of surrenders across the south, and set the stage for the conclusion of America's bloodiest war. This walking tour will focus on those individuals who were principally engaged in the events that led to the surrender of the Confederate forces 150 years ago.

The cost is \$12/person; or \$10/students and seniors. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Guides: Russ Dodge and Andy Waskie, Ph.D.

Sunday, April 12, 2015 at 1:00 PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

<http://www.penn.museum/events-calendar>

Beneath the Surface Lecture Series

Animals at Sitio Conte: Beneath the Surface and the Living World All Around

The human burials at Sitio Conte were found with the remains of many different kinds of

animals, from whales and sharks to birds and rodents. Most of these animal parts were fastened to jewelry and clothing, including the teeth of more than 70 dogs sewn to one belt. The fabulous gold plaques and pottery are also covered with images of fierce and powerful animals, but different animals than the ones used to make things or to eat. Dr. Katherine Moore, Zooarchaeologist and Mainwaring Teaching Specialist, considers the evidence to answer some questions: What animals lived around the site? How did people use animals in their daily lives? What supernatural features of animals can we see in their art?

Free with Museum admission.

Monday, April 13, 2015 at 6:00 PM at **National Mechanics, 22 S. Third Street, Philadelphia, PA 19106**

Science on Tap

A monthly gathering that features a brief, informal presentation by a scientist or other expert followed by lively conversation. Good food and beer.

Must be 21 or accompanied by parent. Free and open to the Public.

<http://scienceontapphilly.com/>

Hosted by the American Philosophical Society Museum

Tuesday, April 14, 2015 at Noon at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org>

Brown Bag Lecture: Nandini Bhattacharya

Free and Open to the Public

Tuesday, April 14, 2015 at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

<http://www.collphyphil.org>

Vivitur Ingenio: the Vesalian Spirit

SPEAKER: Sachiko Kusukawa, PhD

'Vivitur ingenio, caeteris mortis erunt', roughly translated as 'one lives on by the spirit, the rest shall belong to death' is a motto that accompanied one of the remarkable images in Andreas Vesalius's Seven books on the fabric of

the human body (1543). 'Ingenium' in the sixteenth century could mean 'spirit' (as opposed to death of the body) as well as talent, or ingenuity. This talk will illustrate both points – the ingenuity that went into Vesalius's landmark publication in medical history, and the reception, beyond Vesalius's death, of the spirit of first-hand observation embodied in that book.

Pre-registration for all programs and events is strongly urged. For further information regarding events and registration, see website.

Wednesday, April 15, 2015 at 12:00 noon 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 Lecture: "Health System Chess: The Changes That Have Occurred, Those That May, and the Implications for Patients"

SPEAKER: George W. Gephart, Jr, President & CEO, The Academy of Natural Sciences of Drexel University.

Pre-registration for all programs and events is strongly urged. For further information regarding events and registration see website.

Thursday Apr 16, 2015 at 7:00 PM-10:00 PM **Philadelphia at Mausoleum of Contemporary Art, 531 North 12th St., Philadelphia, PA 19123**

This is an Academy of Natural Sciences of Drexel University event.
www.ansp.org 215-299-1108

Mega-Bad Movie Night On Tour: Mega-Shark vs Giant Octopus

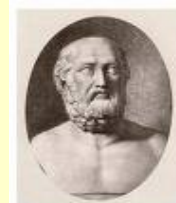
Join the Academy of Natural Sciences and PhilMOCA for Mega-Bad Movie Night: On Tour!

That's right—the Academy is on location with its famous Thursday-night event—complete with quippy scientists, witty commentary, live animals, specimens, snacks and, of course, a terrible "science" movie.

Enjoy drinks and complimentary snacks, then take a seat to watch the film and take in the hilarious commentary on the movie's many

SOCRATES CAFE is nationwide network of philosophical discussion groups. Free and open to the Public. All are welcome.

- 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.
- At 2 PM on the first Thursday of each month and at 7 PM on the third Thursday of each month at Glenside Free Library, 215 S. Keswick Avenue, Glenside, PA.
- At 10:30 AM to Noon on the second Wednesday of each month at Abington Free Library, 1030 Old York Road, Abington, PA.



scientific absurdities—Mystery Science Theater 3000 style.

In addition to the movie, this special Mega-Bad Movie Night includes complimentary snacks courtesy of PhilaMOCA.

Stick around after the event for a FREE installment of MOVIE MOVIE LIVE!, Philadelphia's premiere, movie-themed, trivia-based, high-octane, interactive, comedy game show that is based on the podcast I Like to Movie Movie.

A panel of comedians will join hosts Garrett Smith and Dan Scully in guiding you, the audience, through a series of movie-based trivia games - and the theme? KILLER ANIMAL MOVIES!

Open to the Public. \$12 advance, \$15 door
To make reservations: <http://www.brownpapertickets.com/event/1215186>

Thursday, April 16, 2015 at 7PM at Commonwealth Chateau, Chestnut Hill College, 9230 Germantown Avenue, Philadelphia, PA 19118

The Institute for Science and Religion

Emergent Mind: What Brains and Cognition Tell Us about Faith

Phil Clayton, PhD, Ingraham Professor, Claremont School of Theology <http://www.irands.org>

Free and Open to the Public. A free will donation is requested.

Saturday, April 18, 2015 at 1:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

PATRIOTS, POLITICIANS and PLAYWRIGHTS: PHILADELPHIA LAWYERS at LAUREL HILL

For over 200 years, the term "Philadelphia lawyer" has been an iconic description of an attorney who goes the extra mile, maintains the highest ethical standards and, like Rocky Balboa stepping up to Apollo Creed; takes on challenges that lesser lawyers stay away from. Laurel Hill is home to a number of the first "Philadelphia lawyers" as well as others whose courtroom skills and colorful personalities made them among the most talked-about attorneys of their day. Meet the man who investigated Benedict Arnold before he turned traitor, the attorney who

Tapping Our Watershed—The Academy of Natural Sciences

The Academy's environmental programs focus on a variety of critical topics, including watershed science, environmental policy, and sustainability.

Join the Academy of Natural Sciences of Drexel University for Tapping our Watershed, a monthly science café in Philadelphia that brings lovers of water science together for conversations with top experts in the field.

Formerly known as the Delaware River Watershed Initiative Seminar Series, these talks are sophisticated enough for the experienced scientist but formatted for the casual guest who is interested in tapping into watershed issues on a deeper level. You can expect to hear engaging talks ranging from water policy and management to indicator species and pollutants, with a stimulating Q&A to follow each presentation.

Tapping our Watershed is held the **third Monday of the month at National Mechanics at 6 p.m.** The talks are intended for individuals 21 or older, but those under 21 can come with a chaperone who is at least 25. Tapping our Watershed is sponsored by the William Penn Foundation.

<http://www.ansp.org/get-involved/cep/tapping-our-watershed/>



was involved in the Court's first argument concerning slave rebellions, and the prosecutors who found second lives as novelists and poets. They may have made their final arguments, but you can ensure their stories live on during this spirited walking tour of their final place of rest. The cost is \$12/person; or \$10/students and seniors. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

PhACT Lecture

April 18, 2015

Dr. Dave Cragin, toxicologist, and Faye Flam, a science writer and journalist, will explore perceptions and misperceptions of the modern world and science.

See Page 3 for more details.

Sunday, April 19, 2015 at 4:00PM at the Free Library of Philadelphia, 1901 Vine Street, 19103

<http://libwww.freelibrary.org/authorevents/>

Chris Hadfield | An Astronaut's Guide to Life on Earth: What Going to Space Taught Me About Ingenuity, Determination, and Being Prepared for Anything

One of the world's most accomplished astronauts, Chris Hadfield logged more than 4,000 hours in space and served as commander of the International Space Station. In a stellar 35-year career that included flying fighter jets, experimental aircraft, and the space shuttle, the colorful Canadian colonel was the first from his country to spacewalk, once broke into a space station with a Swiss army knife, and while in space built a worldwide social media following with his blog and cover of David Bowie's Space Oddity. Hadfield's many special honors include appointment to the Order of Canada, the NASA Exceptional Service Medal, and two schools and an airport named after him. His new book harnesses the wonder and wisdom of his far out experiences to change the way we see life on Earth.

Free and Open to the Public.

Sunday, April 19 at 1:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

LIBERTY or DEATH:

REVOLUTIONARY WAR HEROES of LAUREL HILL

The American Revolution began with the first exchange of fire between British and American forces at Lexington on April 19. Tensions building between the colonists and the British authorities had finally boiled over. "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

at Eastern State Penitentiary, 2027 Fairmount Avenue Philadelphia, PA 19130

Phone: (215) 236-3300



The Searchlight Series: Conversations About Crime, Justice, and the American Prison System

Eastern State Penitentiary Historic Site partners with nationally recognized penologists and educators to present an ongoing discussion series about crime, justice, and the American prison system. The Searchlight Series discussions take place the first Tuesday of every month, free and open to the public. No reservations required. See website at:

<http://www.easternstate.org/searchlight-series>

places of rest here at Laurel Hill.

The cost is \$12/person; or \$10/students and seniors. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Guide: Russ Dodge

Monday, April 20, 2015 at 6:00 PM-7:00 PM at National Mechanics, 22 S. 3rd Street Philadelphia, PA 19106

Tapping our Watershed: The Tookany/Tacony Frankford Watershed Partnership: From the Headwaters to...

At this edition of Tapping our Watershed, Julie Slavet, Executive Director of the Tookany/Tacony Frankford Watershed Partnership, presents, "The Tookany/Tacony Frankford Watershed Partnership: From the Headwaters to the Delaware via Streets and Tweets."

Tapping our Watershed is a monthly science café in Philadelphia that brings lovers of water science together for conversations with top experts in the field. Formerly known as the Delaware River Watershed Initiative Seminar Series, these talks are sophisticated enough for the experienced scientist but formatted for the casual guest who is interested in tapping into watershed issues on a deeper level. You can expect to hear engaging talks ranging from water policy and management to indicator species and pollutants, with a stimulating Q&A to follow each presentation.

Free and Open to the Public.

Tuesday, April 21, 2015 at Noon at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org>

Brown Bag Lecture: Meredith Farmer

Free and Open to the Public

Tuesday, April 21, 2015 at 6:15 PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

<http://www.penn.museum/events-calendar>

Archaeological Institute of America Lecture
How Did She Get that Hair? The Symbolism and Significance of the Hairstyles Worn by Roman Empresses

Celebrating Rome's Birthday

Lecture given by Lee Ann Ricardi, College of New Jersey

Tuesday, April 21, 2015 at 7:30PM at the Free Library of Philadelphia, 1901 Vine Street, 19103

<http://libwww.freelibrary.org/authorevents/>

Freeman Dyson | Dreams of Earth and Sky

Embodying "the ideal of the scientist as iconoclast" (Wired), Dr. Freeman Dyson is one of the world's most intriguing and accomplished theoretical physicists and mathematicians, renowned for his work in quantum electrodynamics, solid-state physics, nuclear engineering, futurism, metaphysics, and astronomy. In addition to a decades-long career in academia and scientific publishing, he is a member of the Board of Sponsors of the Bulletin of the Atomic Scientists, a Fellow of the Royal Society, and is the winner of the Enrico Fermi Award, among dozens of other honors. Ranging

in time from the seventeenth-century scientific revolution to the future of the human race, Dyson's new collection of essays explores and celebrates the unconventional ideas that have changed the world.

In conversation with Dave Goldberg, professor and director of undergraduate studies in the Department of Physics at Drexel University
Cost: \$15 General Admission, \$7 Students
Buy tickets online. See website.

Tuesday, April 21, 2015 - PENN SCIENCE CAFÉ at World Cafe Live, 3025 Walnut Street, Philadelphia

<http://www.upenn.edu/pennnews/sciencecafe>

Free and Open to the Public

Wednesday, April 22, 2015 at 6:00 PM

at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

<http://www.penn.museum/events-calendar>

Evening Lecture

El Caño: Excavations of an Elite Precolumbian Cemetery in Panama

Dr. Julia Mayo, Panamanian archaeologist leading excavations at the site of El Caño, speaks on exciting recent research about the Coclé Culture. Situated two miles from Sitio Conte, El Caño is known for its unique stone sculptural style and stone structures. Recently, archaeologists excavated four lavish burials, ca. 700 to 1000 CE, broadly contemporary with similar burials at nearby Sitio Conte—where the first archaeological evidence for the sumptuous wealth of Panamanian chiefdoms was unearthed more than 80 years ago. The new finds at El Caño, and similarities between the two sites, tell a richer story about ancient funerary practices and patterns in Central America.

Free.

Friday, April 24, 2015 at 10:00am at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

MONTHLY FOURTH FRIDAY TOUR SERIES:

HOT SPOTS and STORIED PLOTS

In life and in death, we all have stories to tell. Join Laurel Hill Cemetery for an 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. \$8/person general admission. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Guide: Kristie Bergey

Friday, April 24, 2015 at 6:00pm at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

WHAT'S YOUR SIGN? ASTROLOGY WITH A SENSE OF HUMORS

Originating in Ancient Greece and continuing well into the 1800s, the theory of the four bodily humors has influenced medical practices for centuries. The Greeks believed that internal

fluids (blood, phlegm, yellow bile and black bile) could be used to describe human temperament, psyche and psychology. These fluids were in turn connected to the four seasons, and astrology's essential elements of air, water, earth and fire. Maintaining a good balance of the humors was vital for maintaining a healthy body, mind and spirit. From the internal body to the celestial bodies above, meet the residents who exemplify traits of each humor and corresponding astrological sign.

Afterwards, take a scientific tour of the cosmos with local astronomers at Laurel Hill. 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. Stargazing in the Cemetery is free and open to the public.

The cost is \$12/person; or \$10/students and seniors. Tickets can be purchased at the door, in advance by phone (215) 228-8200, or online.

Guides: Sonia Krutzke and Terri Greenberg

Friday, April 24, 2015 at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

ASTRONOMY NIGHT: STARGAZING from the CEMETERY

(a Philadelphia Science Festival Event)

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. If you have your own telescope or binoculars, bring them along! Don't forget to bring your own blankets, beach chairs, beverages and/or snacks! Laurel Hill will also offer a raffle, and an array of merchandise for sale. Relaxing and stargazing from Philly's most ethereal site = a perfect way to end the week!

Admission to the event is FREE and open to the public.

Sunday, April 26, 2015 at 12:00-4:00 PM at the **Wagner Free Institute of Science**, 1700 West Montgomery Avenue, Philadelphia, PA 19121

www.wagnerfreeinstitute.org ph 215-763-6529

EXPLORER SUNDAY at the Wagner Free Institute of Science

Lights, Camera, Wagner!

See Page 16 for details.

Free and Open to the Public

Sunday, April 26, 2015 at 2:30 PM at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

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

Murder at the Mütter™: Preconceptions

Join us for an afternoon of interactive activities and forensic investigation at The College of Physicians of Philadelphia.

A body has been found in the Library during a gala event honoring renowned sixteenth century anatomist Andreas Vesalius. It seems like a horrible accident, but is it? Looks can be deceiving. Is there a killer on the loose at the Mütter Museum? Can anyone be trusted? Participants will work with investigators and forensic experts at different evidence stations to experience the science of criminal investigation and solve the mystery.

The afternoon includes two hours of programming (including some walking and standing) followed by a cocktail reception and light hors d'oeuvres.

Ages: 16 and up (ages 16 and 17 must be accompanied by an adult 21 years or over)

Ticket price includes same day admission to the Mütter Museum any time from 12:30 pm to 5:00 pm. Attendees are encouraged to visit the Museum before 2:30 pm, as time will be limited once the Program commences.

Program will begin promptly at 2:30 pm.

This program is produced for the Philadelphia Science Festival.

Pre-registration for all programs and events is strongly urged. For further information see website.

Sunday, April 26, 2015 at 1:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

BONES BELLS and WHISTLES: A HISTORY OF PHILLY'S SCIENTIFIC MEN and WOMEN

(a Philadelphia Science Festival Event)

Who was the physician who extracted a bullet from Andrew Jackson's shoulder after a duel? The civil engineer who designed the first wire-cable suspension bridge in the United States? Philadelphia has long been on the "cutting edge"



of some of our greatest advances in history and the science field is no exception. Join us as we visit the final resting places of these important men and women and hear their stories of pioneering scientific discovery and practice. Along the way, we'll build an astrolabe near David Rittenhouse and conduct an experiment to identify the differences between marble, granite and metal headstones.

The cost is \$5/person at the door; or FREE for

those who register in advance. Reservations may be made in advance by phone (215) 228-8200, or through e-mail.

Guide: Russ Dodge

Monday April 27, 2015 at 7:00 PM at MaGerks Pub and Grill, 582 South Bethlehem Pike, Fort Washington, Pennsylvania 19034.

American Revolution Round Table of Philadelphia, <http://arrtop.com/>

"Christ Church and the Interpretation of a National Shrine"

A talk by Neil Ronk, Chief Historian at Christ Church, Philadelphia.

Free and open to the Public.

Monday, April 27, 2015 at 7:30PM at the Free Library of Philadelphia, 1901 Vine Street, 19103

<http://libwww.freelibrary.org/authorevents/>

Cokie Roberts | Colonial Dames: The Civil War and the Women of Washington, 1848-1868

Covering politics, Congress, and public policy, Cokie Roberts is a senior news analyst for National Public Radio, a political commentator for ABC News, and co-writes a popular syndicated weekly newspaper with her husband. She is the author of several bestselling books, including *We Are Our Mothers' Daughters*, *Founding Mothers*, and *Ladies of Liberty*. Roberts has earned the Edward R. Murrow Award, three Emmys, and in 2008 the Library of Congress honored her with the rare title of "Living Legend." In *Capital Dames*, Roberts marks the sesquicentennial of the Civil War by exploring the contributions of Washington D.C.'s women during this watershed American epoch.

Cost: \$15 General Admission, \$7 Students

Buy tickets online. See website.

Monday, April 27, 2015 at 6:00 PM at **National Mechanics**, 22 S. Third Street, Philadelphia, PA 19106

Science on Tap

Science on Tap Quizzo (part of the Philadelphia Science Festival)

A monthly gathering that features a brief, informal presentation by a scientist or other expert followed by lively conversation. Good food and beer.

Must be 21 or accompanied by parent. Free and open to the Public.

<http://scienceontapphilly.com/>

Tuesday, April 28, 2015 at Noon at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org>

Brown Bag Lecture: Michael Worboys

Free and Open to the Public

Tuesday, April 28, 2015 at 6:30 to 8:30 PM at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org>

An Alchemist's Toast to Health, Wealth, and Longevity

Raise your goblets and toast the alchemists, who

promised that their philosophers' stone could transmute lead into gold, heal a multitude of diseases, and provide an exceptionally long, youthful life. Come explore the fascinating world of alchemy, its surprising importance in the history of science and medicine, and the way alchemy's values are carried on by modern scientific research.

Open to the Public. Admission \$10. See the website for details of registration.

Saturday, May 2, 2015 at 1:00pm at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

THE PEN IS MIGHTIER THAN THE SWORD: WRITERS, EDITORS and PUBLISHERS of LAUREL HILL

Louis Godey was America's first true "media mogul." His editor, Sarah Josepha Hale, lobbied Abraham Lincoln until he finally acquiesced and made Thanksgiving a national holiday. Historian and author Henry Charles Lea knew better than the Monty Python Troupe why nobody ever expects the Spanish Inquisition. The Elversons changed the face of the city using nothing but newsprint and a Sunday edition of *The Philadelphia Inquirer*. These stories are all part of the publishing history of Philadelphia. Join us as we visit Laurel Hill's writers, editors, and publishers whose influence is still felt; even from the grave.

The cost is \$12/person; or \$10/students and seniors. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Guide: Patsy Stringer

Tuesday, May 5, 2015 at Noon at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org> **Brown Bag Lecture: "Meth Labs, Material Culture, and Industrial Geography"**

A lecture by Jason Pine.

Free and Open to the Public

Tuesday, May 5, 2015 at 6:00PM - 7:00PM at Eastern State Penitentiary, 2027 Fairmount Avenue, Philadelphia, PA 19130 phone: (215) 236-3300

<http://www.easternstate.org/home>

The Searchlight Series: Conversations About Crime, Justice, and the American Prison System

Discussion Topic TBA. See website for details.

Free and Open to the Public. Reception to follow

Tuesday, May 5, 2015 at 7:00 PM at the Visitor Center at Valley Forge Park Friends of Valley Forge Park

<http://www.friendsofvalleyforge.org/speaker-series.shtml>

"We Disagreed as Rational Friends"

A debate between John Adams & Thomas Jefferson

Join us for an evening with JOHN ADAMS (portrayed by Peyton Dixon) and THOMAS JEFFERSON (portrayed by Steve Edenbo) as



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/

they discuss, debate, and sometimes decry the revolutionary storms they weathered throughout their 50 year relationship as bitter political rivals and close personal friends.

Free and Open to the Public.

Wednesday, May 6, 2015 at 7:00 PM at Frankford Hall on Frankford Avenue just north of Girard Avenue.

Philadelphia Nerd Nite ... be there and be square, yo.

Science discussions, good food, good company, and plenty of beer!

For more information see the website at

<http://philadelphia.nerdnite.com/updates/>

Open to the Public. Admission \$5.00

Email us at: nerdnitephilly@gmail.com

Wednesday, May 6, 2015 at 6:00 PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

<http://www.penn.museum/events-calendar>

Great Wonders Lecture Series

The Mausoleum of Halicarnassus and its Successors

Lecture given by C. Brian Rose, Ph.D., Peter C. Ferry Curator-in-Charge, Mediterranean Section Each of the "wonders" in the ancient world was intended to symbolize the builder's political and economic power, and to serve as a template for future monuments to such power. In most cases they succeeded: the statue of Olympian Zeus was used as a model for portraits of Napoleon and George Washington, while the Colossus of Rhodes influenced the design of the Statue of Liberty. This was no less true for the Mausoleum of Halicarnassus, constructed for King Mausolus during the mid fourth century BC in southwestern Turkey (modern Bodrum). Created by the leading sculptors and architects of the Late Classical period, the design of the mausoleum was so successful that it was repeatedly used for buildings commemorating the burials of famous politicians, such as Grant's Tomb, while the word for a monumental tomb in most languages is "mausoleum", named after King Mausolus.

Lecture with advance payment- \$5 General Admission, \$2 Penn Museum Members. \$10 At-the-door

Thursday, May 7, 2015 at 7:30 PM at the Free Library of Philadelphia, 1901 Vine Street, 19103

<http://libwww.freelibrary.org/authorevents/>

Beth Shapiro | How to Clone a Mammoth: The Science of De-Extinction

Evolutionary molecular biologist Beth Shapiro's meteoric career has centered on the analysis of ancient DNA, genetic material recovered from frozen, mummified, or otherwise preserved animals and plants. A Rhodes Scholar, winner of a MacArthur "Genius Grant," and an Oxford University research fellow, Shapiro has written about ecology for a number of academic journals, including *Science*, *Molecular Biology and Evolution*, and *PLoS Biology*. Her new book examines the incredible and controversial process of de-extinction, the means through which mammoths, passenger pigeons, dodos, and other extinct species can truly be resurrected, reintroduced to the wild, and conserved for future generations.

Free and Open to the Public.

Thursday, May 7, 2015 at 6:00pm at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

CRYPTIC CRYPTS: EGYPTIAN SYMBOLISM at LAUREL HILL

Hades, Heaven, Valhalla, She'ol, Xibalba—

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The cost is \$20/person. Tickets can be purchased at the door, in advance by phone (215) 228-8200, or online.

Guide: Beth Savastana

Saturday, May 9, 2015 at 10:00am at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

YOGA in the CEMETERY

The cost is \$20/person. Purchasing advance tickets is suggested. Tickets can be purchased at the door, by phone (215) 228-8200, or online.

Instructor: Emily Golomb

Saturday, May 9, 2015 at 11:00am at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

LAUREL HILL: THE HOT SPOTS and STORIED PLOTS

The cost is \$8/person general admission. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Guide: Nancy Wright

Sunday, May 10, 2015 at 1:00 PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

<http://www.penn.museum/events-calendar>

Beneath the Surface Lecture Series

Beneath the Skin: The Skeleton Within

Mortuary prac at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

<http://www.penn.museum/events-calendar>

Free with Museum admission.

Monday, May 11, 2015 at 6:00 PM at **National Mechanics, 22 S. Third Street, Philadelphia, PA 19106**

Science on Tap

A monthly gathering that features a brief, informal presentation by a scientist or other expert followed by lively conversation. Good food and beer.

Must be 21 or accompanied by parent. Free and open to the Public.

<http://scienceontapphilly.com/>

Hosted by the Wagner Free Institute of Science

Tuesday, May 12, 2015 at Noon at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org>

Brown Bag Lecture: "Roger Bacon's Experimental Science"

A lecture by Emily Truitt

Free and Open to the Public



Tuesday, May 12, 2015 at 6:00 PM at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org>

An Evening with Deborah Harkness

In the All Souls Trilogy vampires, witches, daemons, and humans embark on an adventure driven by books rife with mystery and buried secrets. Along the way intrigue, alchemy, and encounters with real historical figures collide. But what of the actual world these figures inhabited hundreds of years ago and the books that alchemists used in their experimental and often secretive enterprise?

Scholar, author, and historian of science and medicine Deborah Harkness brings her impeccable blend of the academic and the fantastical to the Chemical Heritage Foundation for an unforgettable evening. Based on a trove of newly acquired 15th-century alchemical manuscripts featured in CHF's Books of Secrets exhibit and touching on both her scholarly and popular work, this talk provides a unique opportunity to explore the realms of history and science and our human desire to make sense of the world.

Doors open at 5:00 PM. Books of Secrets: Writing and Reading Alchemy will be open for viewing before and after the talk.

The talk will be followed by a book signing.

Open to the Public. Cost: \$10.00. See website for registration details.

Wednesday, May 13, 2015 at 7:15 PM at the Fels Planetarium, The Franklin Institute, 222 North 20th Street,

Philadelphia, PA 19103

The Rittenhouse Astronomical Society

Astronomy lecture open to the General Public. See website for more details:

www.rittenhouseastronomicalsociety.org/

Thursday, May 14, 2015 at 6:30 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

Vaccination and the State: A Panel Discussion on Ending the Personal Belief Exemption in Pennsylvania

In light of recent measles outbreaks and Pennsylvania's relatively low rate of measles immunization coverage, several lawmakers are sponsoring legislation to end the Commonwealth's philosophical and moral exemption to vaccination. Moderated by Judge James G. Collins, Senator Daylin Leach will present his rationale for introducing the legislation, with Paul A. Offit, MD, FCPP, and Jason L. Schwartz, PhD, examining the arguments for and against the personal belief immunization exemption.

PARTICIPANTS:

Pre-registration for all programs and events is strongly urged. For further information regarding events and registration, please e-mail info@collegeofphysicians.org or call 215-399-

2341.

Thursday, May 14, 2015 - 7:00pm to 10:00pm at The Franklin Institute Science Museum, located in Center City Philadelphia, at the intersection of 20th Street and the Benjamin Franklin Parkway.

<http://www.fi.edu>

Night Skies in the Observatory

Open to the Public.

\$5.00 Non-Members, Free for Members

Friday, May 15 at 8:00pm at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

LUNAR STROLL: PHOTOGRAPHING LAUREL HILL AFTER HOURS

The cost is \$20/person general admission. Advance reservations are required. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Guides: Emma Stern and Frank Rausch

May 16, 2015 at 10:00

PhACT Expedition to the Mullica River to Capture the Jersey Devil

See Page 4 for more details

Saturday, May 16, 2015 at 9:30 AM to 2:30 PM at The 1696 Thomas Massey House, Broomall, PA

Workshop: "Preparing a Mid-Spring Meal" in the 18th Century

Participants will help prepare and then sit down and enjoy a seasonally appropriate meal. COST; \$35.00 FOR MORE INFORMATION or TO REGISTER; Contact Clarissa Dillon at (610) 642-4269

Saturday, May 16, 2015 at 8:00pm at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

A GHOSTLY CIRCUS: FIRE ARTS PERFORMANCE in the CEMETERY

From the Anastenaria performed in villages in Northern Greece and Southern Bulgaria, to the Native American healing ceremony of the Sacred Fire, to Letuli Olo Misilagi and the Samoan Fire Knife dance; the addition of fire to performances and ceremonies has been a part of many different cultures for centuries. Fire dancing became popular in the United States in the mid-nineties and now this unique art form is coming to Laurel Hill Cemetery.

On Saturday, May 16th, fire-arts performers will bring a ghostly circus to life. Somewhere

between the clouds, the tombs, and Dante's rings, the artists will find their stage evoking and encompassing the spirit of Laurel Hill with a dance on fire and in the air. This unique, other-worldly show will include: fire dancing, aerial performers, theatrical side-show, and a Dance with the Dead After-Party with DJ Michael Nighttime. Bring your own blankets or beach chairs, snack, and/or beverages and enjoy a picnic under the stars.

The cost is \$20/person general admission. Advance reservations are requested. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Sunday, May 17, 2015 at 1:00pm at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

1865: LINCOLN'S ASSASSINATION and the END of the CIVIL WAR (Veteran Flag Placement followed by a 150th Anniversary Exhibit Tour)

See webpage for more details.

Free and Open to the Public..

Monday, May 18, 2015 at 7:00 PM at MaGerks Pub and Grill, 582 South Bethlehem Pike, Fort Washington, Pennsylvania 19034.

American Revolution Round Table of Philadelphia, <http://arrtop.com/>

Program to be announced. Check website

Free and open to the Public.

Monday, May 18, 2015 at 6:00 PM-7:00 PM at National Mechanics, 22 S. 3rd Street Philadelphia, PA 19106

Tapping our Watershed: Green Cities, Clean Waters: What's Been Achieved and What's to Come...

At this edition of Tapping our Watershed, Christopher Crockett, Deputy Commissioner of Planning and Environmental Services Philadelphia Water Department, presents "Green Cities, Clean Waters: What's Been Achieved and What's to Come in the Future."

Tapping our Watershed is held the third Monday of the month at National Mechanics at 6 p.m. The talks are intended for individuals 21 or older, but those under 21 can come with a chaperone who is at least 25. Tapping our Watershed is sponsored by the William Penn Foundation.

Free and Open to the Public.

Tuesday, May 19, 2015 at Noon at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

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

Brown Bag Lecture: "Bringing Science Down to the Level of Boys: Chemistry Sets, the American Future, and Making Meaning out of Science Using the Technological Systems of Toys"

A talk by Deanna Day

Free and Open to the Public

Wednesday, May 20, 2015 at 12:00 noon 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 Lecture: "Caring for Million-Dollar Athletes"

Dr. Gary Dorshimer, the Team Physician for both the Philadelphia "Eagles" and the Philadelphia "Flyers," will discuss just how different professional athletes are from you and me and just how different (but similar) their medical treatment is.

In addition, Dr. Dorshimer will discuss ethical issues which a team physician faces and compare / contrast them with the ethical issues other physicians face on a regular basis.

Pre-registration for all programs and events is strongly urged. For further information regarding events and registration, please e-mail info@collegeofphysicians.org or call 215-399-2341.

Wednesday, May 20, 2015 at 6:00 PM at the **Wagner Free Institute of Science**, 1700 West Montgomery Avenue, Philadelphia, PA 19121
www.wagnerfreeinstitute.org ph 215-763-6529

Philadelphia 1865: A City on the Edge

An Illustrated Presentation By Bruce Laverty, Athenaeum of Philadelphia

See Page 16 for details. Free and Open to the Public.

Thursday, May 21, 2015 at 5:30 PM at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

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

Cain Conference Public Lecture

Iwan Morus and Jeremy Brooker discuss science and spectacle in the 19th century, featuring electrical experiments and magic-lantern demonstrations.

Free and Open to the Public. Registration required. See website for registration details.

Friday, May 22, 2015 at 10:00am at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

LAUREL HILL: THE HOT SPOTS and STORIED PLOTS

The cost is \$8/person general admission. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Guide: Steve Chawaga

Saturday, May 23, 2015 at 3:30 PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

<http://www.penn.museum/events-calendar>

Anthro Room 345, Penn Museum

ARCE Lecture

"The Red Monastery Church: Beauty and Asceticism in Upper Egypt"

Dr. Elizabeth S. Bolman, Professor of Medieval Art, Department of Art History, Tyler School of Art, Temple UniversityThe results of a 10-year

conservation project at the Red Monastery church have revealed a fabulously dynamic, painted interior with close aesthetic and iconographic ties to major early Byzantine monuments. The church dates to the late 5th century CE, a formative period in the history of monasticism. It illustrates one of the earliest conjunctions of spectacular monumental architecture and asceticism, a fusion that has become so familiar that it seems natural. Initially, however, the choice to deploy such tools in a desert community of men who had chosen to leave the world behind was a contentious one. Dr. Elizabeth S. Bolman, Professor of Medieval Art, Temple University, speaks.

Presented by the American Research Center in Egypt—Pennsylvania Chapter. Free admission.

Sunday, May 24, 2015 at 12pm sharp at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

MEMORIAL DAY PARADE, SERVICE and RECEPTION

The traditional Decoration Day service of the Grand Army Meade Post #1 will be recreated at



General George G. Meade

historic Laurel Hill Cemetery, the site of the first Memorial Day Observance in Philadelphia in 1868. The entourage will gather at the resting place of General George Gordon Meade, hero of the Battle of Gettysburg, to perform the traditional

service honoring all veterans who fell defending the nation. A wreath-laying, speeches and honor guards will enhance the ceremony. The event is co-sponsored by the General Meade Society of Philadelphia, the Friends of Laurel Hill Cemetery, American Legion Post #405, Post #1 Society, Union League, and Anna M. Ross Camp #1, Sons of Union Veterans. Complimentary beer and refreshments will be served after the service. The event will take place on Sunday, May 24 at 12pm sharp. Visitors can enter through Laurel Hill's Gatehouse at 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse.

Admission to the event is FREE and open to the public; a \$10 donation in support of Laurel Hill Cemetery's work and preservation is suggested and would be much appreciated. For additional information, phone (215) 228-8200 or email us.

Wednesday, May 27, 2015 at 6:30pm at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

YOGA in the CEMETERY

The cost is \$20/person. Purchasing advance tickets is suggested.

Wednesday, May 27, 2015 at 6:30pm at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

Bernard Behrend, MD Lecture: Abraham Lincoln's Secret Depression and Effect on Civil War, Slavery

We will discuss how our 16th United States President interacted with American leaders throughout his young life in political campaigns and as President. How were his interactions with his Cabinet and Congress during The Civil War influenced by his Melancholia? How were Slavery, Secession, Civil War, Assassination interwoven?

We will discuss the influence of Lincoln's earlier family tragedies, deaths of the women in his life: mother, sister, fiancé and illnesses of his immediate White House family. Who were Booth's Co-conspirators?

The audience will be engaged to ask questions and discuss the historic events.

SPEAKER: Allan B. Schwartz, MD, FACP, FASN, FASH, Professor of Medicine, Drexel University College of Medicine, Philadelphia, Division of Nephrology and Hypertension

This lecture is the second in the College's new series honoring former Fellow Bernard Behrend and is made possible by a generous donation from his family. Beyond his own medical career, Dr. Behrend was interested in Civil War medicine, Napoleon, industrial and occupational health, music, and aerospace and naval medicine, and the lecture series will reflect these interests.

Pre-registration for all programs and events is strongly urged. For further information regarding events and registration, please e-mail info@collegeofphysicians.org or call 215-399-2341.

Sunday, May 31, 2015 at 10:00am at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

The ART of LAUREL HILL CEMETERY

Presented in conjunction with the Violette de Mazia Foundation, this unique walking tour will explore the art and aesthetics of historic Laurel Hill. We will look beyond surnames, dates, history and symbolism, and focus instead on the designed landscape as an aesthetic statement. Along the way, we will examine the art found in the architecture of the original gatehouse entrance, as well as in the surrounding monuments and mausoleums.

The walking tour will take place on Sunday, May 31 at 10:00am, departing from Laurel Hill Cemetery's Gatehouse entrance at 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse.

The cost is \$15/person general admission. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Sunday, May 31, 2015 at 4:00 PM at the

Ethical Society at 1906 South Rittenhouse Square Philadelphia, Pennsylvania 19103

Freethought Society. <http://www.ftociety.org>

Paul H. Halpern, speaker.

Halpern's presentation "Einstein's Dice and Schrödinger's Cat: How Two Great Minds Battled Quantum Randomness to Create a Unified Theory of Physics" is based on Halpern's new book of the same name.

Albert Einstein dedicated the final decades of his life to a fruitless search for unification. Even on his deathbed he asked for pencil and paper in a vain attempt to complete his calculations. Less familiar, but similarly intriguing, are the efforts of Austrian physicist Erwin Schrödinger to solve the same riddle and beat Einstein, with whom he had collaborated, to the answer. The relationship between the two extraordinary physicists offers a riveting tale about a deep friendship challenged by the temptations of scientific glory.

Free and Open to the Public.

Tuesday, June 2, 2015 at 6:00PM - 7:00PM at Eastern State Penitentiary, 2027 Fairmount Avenue, Philadelphia, PA 19130 phone: (215) 236-3300

<http://www.easternstate.org/home>

The Searchlight Series: Conversations About Crime, Justice, and the American Prison System

Discussion Topic TBA. See website for details.

Free and Open to the Public. Reception to follow

Wednesday, June 3, 2015 at 7:00 PM at Frankford Hall on Frankford Avenue just north of Girard Avenue.

Philadelphia Nerd Nite ... be there and be square, yo.

Science discussions, good food, good company, and plenty of beer!

For more information see the website at

<http://philadelphia.nerdnite.com/updates/>

Open to the Public. Admission \$5.00

Email us at: nerdnitephilly@gmail.com

Wednesday, June 3, 2015 at 6:00 PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

<http://www.penn.museum/events-calendar>

Great Wonders Lecture Series

The Great Walls of China

Lecture given by Adam Smith, Ph.D., Assistant Curator, Asian Section

The Great Wall is most familiar to us as the massive masonry fortifications snaking dramatically over the mountains north of Beijing. These were constructed in the sixteenth and seventeenth centuries by the Ming Dynasty to protect their capital from invasion by Mongol cavalry. The Ming walls are the pinnacle of a two-thousand-year tradition of ambitious constructions for border defense in northern China, built by both Chinese and non-Chinese states, and using a diversity of techniques. This talk will examine these Great Chinese Walls from the perspectives of their contemporary and later observers, foreign and Chinese, advocates and critics.

Lecture with advance payment

\$5 General Admission, \$2 Penn Museum Members, \$10 At-the-door

Saturday, June 6, 2015 at 8:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Gothic Americana Folk and Blues Concert (presented by The Bailey Hounds)

Philadelphia-based band, The Bailey Hounds, released their first full-length album, *Along the Gallows*, in 2011 to much critical acclaim. Since then, their unique sound – mixing acoustic and electric, folk and rock – have earned them a loyal and deserved following. They gained significant international attention after their live acoustic cover of Pantera's "The Great Southern Trendkill" was shared by Pantera on Facebook. XPN's The Key describes their latest album, *All the Blood in the World*, as "steeped in the rumbling amps and pensive pace of Crazy Horse." The music of The Bailey Hounds has been described as Gothic Americana, influenced by folk and blues, but inspired by the macabre and melancholy, rendering a cemetery the most fitting of venues. Join us for this summer concert under the stars at Laurel Hill. Bring your own blankets or beach chairs, picnics, and/or beverages.

The concert will take place on Saturday, June 6 at 8:00pm, (with a prescheduled rain date of Saturday, June 13 at 8:00pm.) Ticket holders can check in at Laurel Hill Cemetery's Gatehouse entrance, 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot directly across the street from the Gatehouse.

The cost is \$12/person general admission. Purchasing advance tickets is suggested. Tickets can be purchased at the door, by phone (215) 228-8200, or online.

Sunday, June 7, 2015 at 10:00 AM at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Nature in the Necropolis

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 morning 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 grounds. Bring binoculars if you wish

The cost is \$12/person general admission. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Guide: Steve Maurer

Monday, June 8, 2015 at 6:00 PM at National Mechanics, 22 S. Third Street, Philadelphia, PA 19106

Science on Tap

A monthly gathering that features a brief, informal presentation by a scientist or other expert followed

by lively conversation. Good food and beer.

Must be 21 or accompanied by parent. Free and open to the Public.

<http://scienceontapphilly.com/>

Hosted by the Academy of Natural Sciences of Drexel University

Wednesday, June 10, 2015 at 6:00 PM at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

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

Synthesis Lecture Series: Joseph Gabriel, "Medical Monopoly: Intellectual Property Rights and the Origins of the Modern Pharmaceutical Industry"

Free and Open to the Public. Registration required. See website for registration details.

Wednesday, June 10, 2015 at 7:15 PM at the Fels Planetarium, The Franklin Institute, 222 North 20th Street,

Philadelphia, PA 19103

The Rittenhouse Astronomical Society

Astronomy lecture open to the General Public. See website for more details:

www.rittenhouseastronomicalsociety.org/

Thursday, June 11, 2015 - 7:00pm to 10:00pm at The Franklin Institute Science Museum, located in Center City Philadelphia, at the intersection of 20th Street and the Benjamin Franklin Parkway.

<http://www.fi.edu>

Night Skies in the Observatory

Hosted by Franklin Institute Chief Astronomer Derrick Pitts, Night Skies in the Observatory is a monthly stargazing event held in the Joel N. Bloom Observatory. View celestial objects in the night sky, including stars, planets, nebulae, and if conditions are right, a galaxy or two, from 5 different rooftop telescopes in the Observatory. The evening includes two Fels Planetarium shows and a lecture or presentation (appropriate for ages 8 and up) on an astronomical or space science topic. The Observatory is staffed with knowledgeable observers and free star maps are provided.

Open to the Public.

\$5.00 Non-Members, Free for Members

Saturday, June 13, 2015 at 10:00am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Yoga in the Cemetery

The cost is \$20/person. Purchasing advance tickets is suggested. Tickets can be purchased at the door, by phone (215) 228-8200, or online.

Instructor: Emily Golomb

Saturday, June 13, 2015 at 11:00am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Laurel Hill: The Hot Spots and Storied Plots

The cost is \$8/person general admission. Tickets can be purchased at the door, in advance by phone (215) 228-8200 or online.

Guide: Nancy Wright

Sunday, June 14, 2015 at 1:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Lovers of Learning: The 200th Anniversary of the Athenaeum

DETAILS FORTHCOMING. See website.
Guide: Kerry Bryan

Friday, June 19, 2015 at 8:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Lunar Stroll: Photographing Laurel Hill After Hours

Photo enthusiasts: grab your cameras, tripods and flashlights, and capture the ethereal wonders of Laurel Hill Cemetery after the sun goes down. During this guided stroll through the site's picturesque landscape, participants will visit some of its most photogenic spots and evocative statuary, while learning to paint with light using only a flashlight and ambient iridescence. You will be over the moon with excitement once you see your unique images! You will also have experiences to share from this rare and intimate exploration of the cemetery long after its gates close for the night. Photography experience is recommended. Lunar Strolls will occur on the third Friday of every month from May through August.

The cost is \$20/person general admission. Advance reservations are required. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Guides: Emma Stern and Frank Rausch

June 20, 2015 at 7:00 pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

The Soulstice

The weekend of June 20th officially marks the start of summer and Laurel Hill Cemetery's Young Friends group, The Antemortem Society, is putting the soul in solstice with a midsummer night's celebration and fundraiser. The Antemortem Society is hosting a unique preservation party that will raise much needed funds to restore the historic site.

The Soulstice will take place on June 20th at 7:00pm in the southernmost section of Laurel Hill Cemetery at 3822 Ridge Avenue, Philadelphia, PA 19132. Cascades of fun activities await attendees as they enjoy the other-worldly aura of the Cemetery after dark.

All funds raised from the event support the preservation of Laurel Hill Cemetery, a National Historic Landmark. Since its founding in 1836, Laurel Hill Cemetery has been a place for the living as well as for the dead. Its 78 acres provide green space for the East Falls community and a place of respite and recreation for the citizens of Philadelphia.

Tickets for the event are \$50 general admission/\$35 for members and include wine, beer and cocktails at our open bar; fare from a local food truck vendor; a "Make Your Own S'mores"

dessert station, and more!

Purchasing advance tickets is required. Tickets can be purchased by phone (215) 228-8200 or online. For additional information, phone (215) 228-8200 or visit us online at www.facebook.com/lhcsoulstice

Wednesday, June 24 at 6:30pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Yoga in the Cemetery

The cost is \$20/person. Purchasing advance tickets is suggested. Tickets can be purchased at the door, by phone (215) 228-8200, or online.
Instructor: Emily Golomb

Friday, June 26, 2015 at 10:00am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Laurel Hill: The Hot Spots and Storied Plots

The cost is \$8/person general admission. Tickets can be purchased at the door, in advance by phone (215) 228-8200 or online.

Guide: Jerry McCormick

Saturday, June 27, 2015 at 9:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Cinema in the Cemetery

Sit back and relax with a drink, some popcorn and some friends on this summer movie night under the stars. After the sun sets, the grainy joys of the film experience will be brought to audiences amid the historic tombs of Laurel Hill Cemetery. Bring your own blankets or beach chairs, picnics, and/or beverages.

The cost is \$10/person general admission. Purchasing advance tickets is suggested. Tickets can be purchased at the door, by phone (215) 228-8200 or online.

Monday, June 29, 2015 at 7:00 PM at MaGerks Pub and Grill, 582 South Bethlehem Pike, Fort Washington, Pennsylvania 19034.

American Revolution Round Table of Philadelphia, <http://arrtop.com/>

Benjamin J. Goldman will perform as Lafayette

Free and open to the Public.

Tuesday, July 7, 2015 at 6:00PM - 7:00PM at Eastern State Penitentiary, 2027 Fairmount Avenue, Philadelphia, PA 19130 phone: (215) 236-3300

<http://www.easternstate.org/home>

The Searchlight Series: Conversations About Crime, Justice, and the American Prison System

Jennifer Storm: Protecting Victims' Rights

The rights of crime victims are sometimes overlooked in our criminal justice system. What is their role? How has that role been changing? What challenges face these families who, after all, have been pulled into the legal system by the violent or unlawful actions of others?

Jennifer Storm is Commonwealth Victim Advocate. She represents the rights and interests

of crime victims generally throughout the Commonwealth and specifically regarding post-sentencing rights before the Board of Probation and Parole, Department of Corrections. Her office oversees notification to crime victims of the potential for inmate release and provides input to the board regarding all paroling decisions.

Free and Open to the Public. Reception to follow

Thursday, July 9, 2015 - 7:00pm to 10:00pm at The Franklin Institute Science Museum, located in Center City Philadelphia, at the intersection of 20th Street and the Benjamin Franklin Parkway.

<http://www.fi.edu>

Night Skies in the Observatory

Hosted by Franklin Institute Chief Astronomer Derrick Pitts, Night Skies in the Observatory is a monthly stargazing event held in the Joel N. Bloom Observatory. Open to the Public.
\$5.00 Non-Members, Free for Members

Saturday, July 11, 2015 at 10:00am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Yoga in the Cemetery

The cost is \$20/person. Purchasing advance tickets is suggested. Tickets can be purchased at the door, by phone (215) 228-8200, or online.

Instructor: Emily Golomb

Saturday, July 11, 2015 at 11:00am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Laurel Hill: The Hot Spots and Storied Plots

The cost is \$8/person general admission. Tickets can be purchased at the door, in advance by phone (215) 228-8200 or online.

Guide: Nancy Wright

Friday, July 17, 2015 at 8:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Lunar Stroll: Photographing Laurel Hill After Hours

The cost is \$20/person general admission. Advance reservations are required. Tickets can be



purchased at the door, or in advance by phone (215) 228-8200 or online.

Guide: Emma Stern

Saturday, July 18, 2015

PhACT Picnic

See Page 5

**All are welcome. Bring your Aunts
but not your Ants.**

those veterans will be offered.

The Open House and Illumination will take place on Saturday, August 1 from 7:00pm to 10:00pm, with check-in at Laurel Hill Cemetery's Gatehouse entrance at 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse.

The cost is \$12/person. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online

Guide: Russ Dodge

Tuesday, August 4, 2015 at 6:00PM - 7:00PM at Eastern State Penitentiary, 2027 Fairmount Avenue, Philadelphia, PA 19130 phone: (215) 236-3300

<http://www.easternstate.org/home>

The Searchlight Series: Conversations About Crime, Justice, and the American Prison System

Discussion Topic TBA. See website for details. Free and Open to the Public. Reception to follow

Saturday, August 8, 2015 at 10:00am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillcemetery.org>

7TH ANNUAL HEARSE and PROFESSIONAL VEHICLE SHOW PRESENTED by the MOHNTON PROFESSIONAL CAR CLUB

Mohnton Professional Car Club (MPCC) welcomes owners of any and all hearses, ambulances, flower cars, limousines and other service vehicles to participate in its 7th Annual Service Car and Hearse Show to appropriately take place on the grounds of Laurel Hill Cemetery. Join an eclectic collection of rare cars that include FYNLRYD, a 1947 modified Pontiac Superior, which is believed to be one of just two known street rod hearses on the East Coast! Country music band, Friends with Murder (<http://www.stereokiller.com/friendswithmurder>), and high energy Hard Rock power trio, Somebody's Circus (<https://www.facebook.com/SomebodysCircus>) will provide festive entertainment. Bring your cameras, as this will be a Car Show unlike any other!

MPCC's 7th Annual Hearse and Professional Vehicle Show will take place on Saturday, August 8 at 10:00am, rain or shine. Vehicles will be on display until 4:00pm. Refreshments will be available. Visitors can enter through Laurel Hill's Gatehouse at 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse.

Admission to the event is FREE and open to the public. For additional information, phone (215) 228-8200 or visit the MPCC Facebook page at <http://www.facebook.com/mohntonprocars>

If you are the owner of a professional car, contact Shawn Koenig, MPCC President at MPCC08@live.com, or Russ Slegel at FYNLRYD@who2c.com to register your vehicle (s).

Saturday, August 8, 2015 at 10:00am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillcemetery.org>

Yoga in the Cemetery

The cost is \$20/person. Purchasing advance tickets is suggested. Tickets can be purchased at the door, by phone (215) 228-8200, or online.

Instructor: Emily Golomb

Saturday, August 8, 2015 at 11:00am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillcemetery.org>

Laurel Hill: The Hot Spots and Storied Plots

In life and in death, we all have stories to tell and what better place to hear tales of wonder than Philadelphia's most famous home of the dead? The cost is \$8/person general admission. Tickets can be purchased at the door, in advance by phone (215) 228-8200 or online.

Guide: Nancy Wright

Thursday, August 13, 2015 at 6:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillcemetery.org>

THE STREETS of PHILADELPHIA: PHILLY STREETS FOLLOWED BY PHILLY TREATS

Philadelphia's streets are as varied as her residents. Whether big and busy boulevards, quiet tree-lined lanes, or gray back alleys with asphalt as weathered as the old brick row homes that line them, each of our city's streets bears a story all its own. Many of those stories end at the same figurative stop sign, however. From Shippen Lane to Gratz Street, Rittenhouse Square to Wayne Avenue, their namesake and extended family origins now rest at Laurel Hill Cemetery. The cost is \$20/person; or \$18/students and seniors. Reservations are suggested. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online

Guide: Pete Hoskins

PhACT Lecture

September 19, 2015 at 2:00 PM

Professor Paul Halpern will discuss his new book *Einstein's Dice and Schrödinger's Cat: How Two Great Minds Battled Quantum Randomness to Create a Unified Theory of Physics*

See Page 5

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Wednesday, July 22, 2015 at 6:30pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillcemetery.org>

Yoga in the Cemetery

The cost is \$20/person. Purchasing advance tickets is suggested. Tickets can be purchased at the door, by phone (215) 228-8200, or online.

Instructor: Emily Golomb

Friday, July 24, 2015 at 10:00am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillcemetery.org>

Laurel Hill: The Hot Spots and Storied Plots

The cost is \$8/person general admission. Tickets can be purchased at the door, in advance by phone (215) 228-8200 or online.

Guide: Dave Horwitz

Saturday, August 1, 2015 from 7:00pm to 10:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillcemetery.org>

UNDER A CRESCENT MOON: SUMMER OPEN HOUSE and VETERANS' NIGHT OF ILLUMINATION

Laurel Hill Cemetery takes on another aura as the sun sets and nighttime envelopes the grounds. Though the Cemetery is often open for evening tours and special events, the opportunity for a general visit and exploration is rare. Join us for our first Summer Open House where we will open the gates after-hours and invite you to simply enjoy the Cemetery grounds. Have a BYOB picnic, peruse our gift shop, take-in some night photography or simply walk around. Visitors can also view our special illumination display for veterans buried at Laurel Hill.

About the Illumination: Laurel Hill Cemetery contains over 1,400 known men and women who gave service to our nation, ranging from the Revolutionary War to Desert Storm. During our Summer Open House, we will honor those veterans with a candle lit at their gravesides. For many this will be the first time they are honored since the day they were buried. Visitors will have an opportunity to stroll through the grounds as the sun wanes in the sky, and give tribute and thanks to each of those who took up arms to defend the United States. A general tour detailing some of

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 **premier** learning institution and PhACT is pleased to support this goal by having talks on wide ranging, engaging, and educational topics. Students and faculty are invited to be active participants in our activities.

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The PhACT website is: www.phact.org

Phactum is distributed 4 times a year beginning January 2014 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. 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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Phactum Editor, Ray Haupt
phactpublicity@aol.com



I expect to pass through this world but once. Any good therefore that I can do, or any kindness that I can show to my fellow-creature, let me do it now. Let me not defer or neglect it, for I shall not pass this way again.

~ **William Penn (1644 - 1718),
Founder of the Province of Pennsylvania**