

No experiment is failure until  
last experiment is success.

~ Charlie Chan, (Dark Alibi)

# *Phactum*

The Newsletter and Anti Woo Woo Organ of the  
Philadelphia Association for Critical Thinking  
January/February/March 2016

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## *Tiktaalik* is Darwinist Plot!

**Not a transitional species!**

**Needs to be removed from textbooks  
and museum displays!**



In 2004, Dr. Ted Daeschler and his colleagues at the Academy of Natural Sciences in Philadelphia and at the University of Chicago discovered a puzzling fossil on Ellsmere Island, far north in Canada. That fossil, upon analysis, was determined to be a creature having many characteristics of a fish and also characteristics of an amphibian. In other words, a transition fossil had been discovered that might aptly be called a “missing link”. The scientific world was ecstatic.

Scientific joy was met head on with some considerable skepticism, more correctly identified as faith-based hostility, from some portions of various religious communities, the Creationist and the Intelligent Design factions.

One interesting attack upon the veracity of *Tiktaalik*'s transitional fossil status was the discovery of fossilized footprints at a paleontology site in Poland. Those footprints were determined, by real scientists, to have been the tracks of a four legged creature in the Devonian Age, about 390 million years ago, and that fact according to some Creationists is proof of the fraudulent claims of Evolutionists about the scientific nature of *Tiktaalik* which dates back a mere 375 million years although still in the Devonian Ep-

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och. Thus, Creationists concluded, *Tiktaalik* was not the first tetrapod and therefore is not a transitional species, it should be discarded as a scientific finding, and of course, references removed from school text books.

This link: [http://www.evolutionnews.org/2010/01/tiktaalik\\_blow\\_n\\_out\\_of\\_the\\_wat030621.html](http://www.evolutionnews.org/2010/01/tiktaalik_blow_n_out_of_the_wat030621.html) from a website called Evolution News, which in reality is a communications organ of a Christian Intelligent Design organization, does a pretty good job of explaining the Creationist/ID view points and objections to the scientific assertions that *Tiktaalik* is very likely an early example of a transition fossil.

Adding fuel to the Intelligent Design fire is this very well done Turkish based Islamic web site: <http://www.harunyahya.com/en/Darwinism-Watch/147734/The-Evolutionist-Claim-Of-A-Transition-From-Water-To-Land-Is-A-Lie;-Tiktaalik-Roseae-Another-Missing-Link-Myth> which is fiercely opposed to notions of Evolution and very pointedly denounces claims about *Tiktaalik* as a transition species.

PhACT invites you to join us on Saturday, January 16, 2016 for a lecture by the very denounced professor Ted Daeschler who co-discovered *Tiktaalik*. It will be a great opportunity to learn more about what is new in the world of old bones and a splendid opportunity for Community College students to hang out with a highly significant scientist.

*Tiktaalik* certainly does raise the hackles of Creationists and Intelligent Designers, but *Tiktaalik* was a fish or amphibian or something in between. To really get them agitated and hyperventilating on overdrive one turns to Human Evolution. Like *Tiktaalik* humans have transitional species in our ancestry, *Homo rudolfensis*, *Homo habilis*, *Australopithecus africanus*, and of course, the *Neanderthal* ..... and us. Perhaps Creationists can be forgiven somewhat for objecting to the notion that our ancestors were not human as we see ourselves today, but we can not pick our relatives and sometimes unpleasant realities must be faced. We share to this day characteristics of our ancestors, early humans and humanoids and other primates, but although there is some considerable denial of that fact, nonetheless it

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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](mailto:phactpublicity@aol.com)

New entry: **DAISY HOPPING** - A tactic of argument by which one leaps from point to point faster than one's opponent can sufficiently address/refute the preceding point(s). A promiscuous pursuit of "talking points," as opposed to the responsible propagation of ideas which are each followed through to their mature development, in discussion/debate.

**William Jennings Bryan**  
(1860 - 1925)



Bryan led the charge against Evolution in the Scopes Monkey Trial. A few days after the trial had ended with a conviction soon to be overturned, Bryan died in his sleep while still at Dayton, Tennessee. Bryan was known as a great orator and he used that skill to campaign for the Presidency of the United States in 1896, in 1900, and again in 1908.

He was appointed Secretary of State by President Wilson from 1913 to 1915 when he resigned. From about 1915 to his death in 1925 Bryan was an ardent anti-evolutionist and even more distressing was a **Prohibitionist**.

is a fact and will remain so despite the bluster of religious fanatics.

The most famous denial of human evolution was the Scopes Trial, also known as the Scopes Monkey Trial, in Dayton, Tennessee in 1925. It was fought passionately by the defense and prosecution, the final outcome being that John Scopes, a school teacher, was fined \$100. That decision was eventually overturned in an appeals court.

The Evolution vs. Creation battle has raged ever since the Scopes Trial and it appears that it will continue despite all the knowledge that scientists have patiently accumulated and openly disseminated.

On Saturday, February 20, 2016 Professor Alan Mann, an expert in human evolution will be PhACT's speaker and will discuss some of the flaws in the evolution process that afflict humans to this day. Why, oh why, are they called Wisdom Teeth? And what is the purpose of painful childbirth whether through Evolution or by Divine Design?

This will be another splendid opportunity for Community College students to hobnob with a major scientist in his field and to learn about the mechanisms of evolution that define the human species for better or worse.

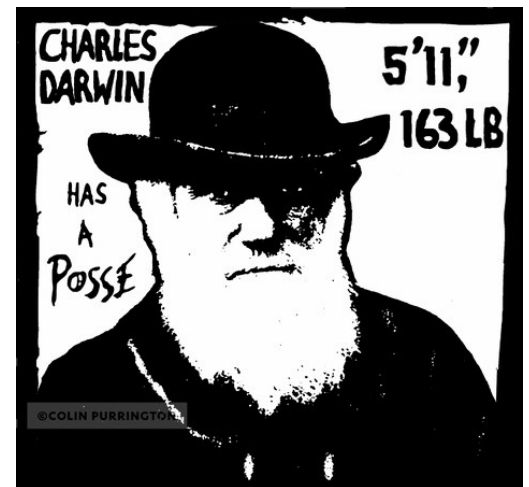
Unfortunately, timing was off by a few days for Professor Mann's lecture, as Charles Darwin's 207th Birthday is a week earlier, on February 12th which also happens to be Abraham Lincoln's 207th birthday. The planets and stars must have been well aligned on that day in February of 1809.

On Saturday, March 19, 2016 the PhACT lecture series

will change pace from Evolution to Critical Thinking in other areas of human life. Professor Bob Blaskiewicz who teaches Critical Thinking at Stockton University in New Jersey will discuss topics such as the paranormal, conspiracies, and medical quackery. A major topic will be cancer and the quackery too often associated with that disease. Cancer, by the way, is surely one of the tragic flaws that illustrates how the relentlessly moving process of evolution may not always yield a favorable situation for the evolving species.

See Page 4 for the calendar of upcoming PhACT events.

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**“Your honor, I feel that I have been convicted of violating an unjust statute. I will continue in the future, as I have in the past, to oppose this law in any way I can. Any other action would be in violation of my ideal of academic freedom—that is, to teach the truth as guaranteed in our constitution, of personal and religious freedom. I think the fine is unjust.”**

**~ John Thomas Scopes, July 21, 1925, after the court decision was rendered, his only words uttered in court during the Scopes Monkey Trial.**

# 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, January 16, 2016 - Lecture**

**In Lecture Room W2-47 in the West Building at the corner of 17th and Spring Garden Streets . This is NOT our usual location.**

**Dr. Ted Daeschler will discuss “A Farewell to *Tiktaalik*”.**

Dr. Ted Daeschler will share a personal account of his 15-year odyssey with *Tiktaalik roseae*, starting with the audacious idea of exploring for Devonian-age fossils in the inhospitable terrain of the Canadian Arctic. That exploration produced many interesting discoveries, but none more impactful than *Tiktaalik roseae*. Heralded as a transitional fossil worthy of Darwin’s notice, *Tiktaalik roseae* has been the subject of a myriad of scientific articles, books, documentaries, and online discussions about the origin of limbed vertebrates. Hear from the man at the center of this remarkable story that has made a profound impact on our scientific and popular culture.

Ted Daeschler is an American vertebrate paleontologist and Vice President for Collections and Associate Curator of Vertebrate Zoology, Academy of Natural Sciences Associate Professor, Department of Biodiversity, Earth and Environmental Science, Drexel University. His current research program in vertebrate paleontology focuses on the vertebrate fauna of the Late Devonian Period (385-363 million-years-ago) in eastern North America. The research involves active fossil collecting, systematic work focusing on freshwater vertebrates, and the nature of early non-marine ecosystems. Fieldwork is ongoing since 1993 in Pennsylvania and since 1999 on Ellesmere Island in the Canadian Arctic. Fossil discoveries from the incompletely-known Late Devonian interval help us to answer questions about the diversification of major groups of fishes, the origin of limbed vertebrates, and the invasion of land by plants and animals.



An artist’s interpretation of how *Tiktaalik roseae* may have appeared



## Saturday, February 20, 2016 - Lecture

**In Lecture Room W2-47 in the West Building at the corner of 17th and Spring Garden Streets . This is NOT our usual location.**

**Professor Alan Mann will speak on “The Scars of Human Evolution”.**

**MCHUMOR.com** by T. McCracken



“Know what I like about you, Grog?  
You're fluent in a language.”

Evolution results in function, not perfection. A good example is the evolution of human upright posture. We have evolved from four legged ancestors with the ability to move using only our legs, leaving our front limbs free to carry and use objects. But our bipedality has also resulted in numerous problems associated with this evolutionary development, including lower back problems and difficulty in giving birth.

Dr. Alan Mann is a physical anthropologist whose interests include paleoanthropology and human evolution. He is the author of *Some Paleodemographic Aspects of the South African Australopithecines* and is the co-author (with Mark L. Weiss) of *Human Biology and Behavior: An Anthropological Perspective*. Professor Mann is also affiliated with [Evolution at Princeton](#). Professor Mann teaches courses on human adaptation and evolution and a summer field course on modern human origins in France.

Dr. Mann is Professor Emeritus of Anthropology - Princeton University and Professor Emeritus of Anthropology - University of Pennsylvania.

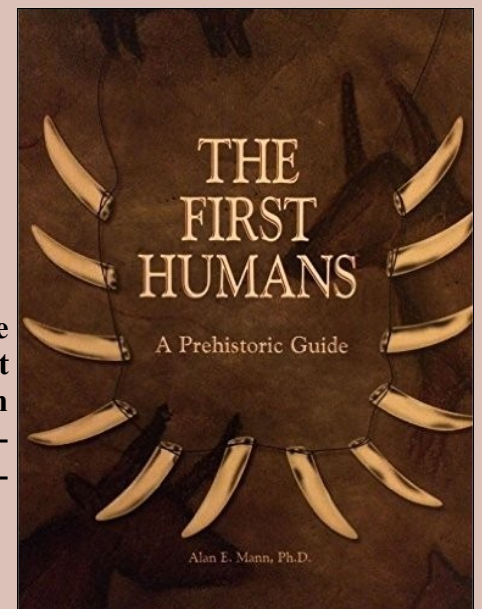
(Continued on page 6)

## The First Humans: A Prehistoric Guide

by Alan E. Mann

Publisher: Running Pr Book Pub      March, 1997  
ISBN-10: 076240048X    ISBN-13: 978-0762400485

Imagine the earth 4 million years ago. What kind of plant and animal life covered the earth? What did our ancestors look like? This fascinating kit explores humankind's evolutionary process from the earliest prehuman (Australopithecus) to our modern form. Learn about major fossil discoveries and how anthropologists and archaeologists use these finds to understand ancient life.



**Saturday, March 19, 2016 - Lecture In Lecture Room C2-28 in the Center for Business and Industry at the corner of 18th and Callowhill Streets.  
Professor Bob Blaskiewicz will speak on “Skepticism and Critical Thinking” .**

For 40 years, Houston internist Stanislaw Burzynski has treated the most intractable cancers, including pediatric brain cancers that are almost universally fatal. In 2011, he came to the attention of skeptics because of a threat against a skeptical blogger by one of Burzynski's supporters. Skeptics started digging in and made some horrific discoveries.

Bob Blaskiewicz is an Assistant Professor of Critical Thinking at Stockton University. He received his Ph.D. in English from Saint Louis University in 2008, where he wrote dissertation on the fiction and memoirs of WWII combat veterans. He has been a Brittain Postdoctoral Fellow at Georgia Tech and a Visiting Assistant Professor of Writing at the University of Wisconsin-Eau Claire. He currently researches and writes about extraordinary claims, with a special interest in conspiracy theories, alternative medicine, and the paranormal. He's published about James Jone in *War & Literature*, contributed an essay about the "Big Pharma Conspiracy Theory" to the journal *Medical Writing*, and even showed up in an episode of *Ancient Aliens*. He's written for *Skeptical Inquirer* and regularly contributes to the podcast *Skepticality*. He can be seen weekly on the live Google webshow *The Virtual Skeptics*, which is like *Meet the Press*, but with chupacabras (8PM Wed. [virtualskeptics.com](http://virtualskeptics.com) ).

See: [http://www.csicop.org/specialarticles/show/burzynski\\_in\\_court\\_again](http://www.csicop.org/specialarticles/show/burzynski_in_court_again) an article in *Skeptical Inquirer* by Dr. Blaskiewicz on the matter of cancer quackery and Stanislaw Burzynski.



**Saturday, April 16, 2016 - In Lecture Room C2-28 in the Center for Business and Industry at the corner of 18th and Callowhill Streets.  
Dr. Tom Delworth will discuss “Global Warming”.**



**Saturday, May 21, 2016 - PhACT Expedition to Haycock Mountain**

In the 19<sup>th</sup> and early 20<sup>th</sup> centuries there were countless peculiar articles about American wild men, reportedly hairy, man-like beings, in newspapers across the country. It was once believed that civilized people who went into the wilderness to live might revert to an animalistic state and grow a coat of fur all over their bodies. And, in the early 20<sup>th</sup> century, one of these feral men was thought to be haunting 980 foot high Haycock Mountain in Upper Bucks County.

Our guide, Don Nigrone, will relate the legend of the **Wild Man of Haycock Mountain**. Robb Kerr and Jeff Cooney will be providing zoological and botanical information about this Piedmont site, which overlooks scenic 1,450-acre Lake

Nockamixon, and professional photographer Ned Levi will be photo-documenting the day's activities. We will meet at the Nockamixon State Park boat rental concession (<http://www.dcnr.state.pa.us/stateparks/findapark/nockamixon/>) at 10:00 AM. Then we will caravan to nearby Haycock Mountain where one search party will ascend the hill, a steep and difficult climb requiring some bouldering, while a second search party will proceed along an old logging road at its base, a flat and easy walk. After a noon lunch at the picnic tables by the boat rental concession, participants can take a short drive caravanning past the nearby mysterious Rosicrucian pyramids, stop at the historic Levi Sheard Mill, a grist mill dating back to at least 1798, and drive over the 130 foot long picturesque Sheard's Mill Covered Bridge (1873). Also, the Nockamixon State Park boat rental concession (<http://www.nockamixonboatrental.com/>) provides kayaks and pontoon boats with a five person capacity for those interested in boating on the lake.



**Mysterious Rosicrucian pyramid.**

Although we may not find the Wild Man of Haycock Mountain, we will learn about his legend and inspect his wild habitat. Bring insect repellent, sturdy shoes, lunch, and a camera. The event is free and open to the public. Feel free to join us for any or all of these activities.

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## **Good News Announcement for PhACT Members and Donors**

### **PhACT is now a 501(c)3 Non-Profit**

PhACT has an important announcement for its members. As of the summer of 2015 the Philadelphia Association for Critical Thinking has been recognized as a 501(c)3 non-profit tax-exempt organization according to the Internal Revenue Service.

Retroactive to May 2010, all dues and contributions made directly to PhACT can be considered as tax-deductible to the extent of the law. (Please consult the IRS or a tax adviser for any specific questions about tax deductions.) Written acknowledgements will now be provided for dues and donations, including any made in 2015. For the period of May, 2010, through December, 2014, acknowledgements can be provided by the PhACT treasurer upon request. Please email [treasurer@phact.org](mailto:treasurer@phact.org) to make a request.

We are also happy to announce that as of October, 2015, members will be able to renew their memberships and anyone can make contributions directly online via Paypal using a credit/debit card or Paypal account. Please visit the [Join PhACT](#) page for more details.

Thank you to PhACT president Bob Glickman and former president Eric Krieg for their work in obtaining the 501(c)3 designation.



## Letters to the Editor

Letters to the Editor are encouraged.  
Send to [PhACTPublicity@aol.com](mailto:PhACTPublicity@aol.com)

There were no letters submitted this past quarter but we really do like to get them. Feel free to write and denounce the editor or engage in some other topic that might be of interest to skeptics.

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## Various Ruminations

of Woo Woo and Real Science  
and some Gossip

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

### Baby, It's Cold Inside

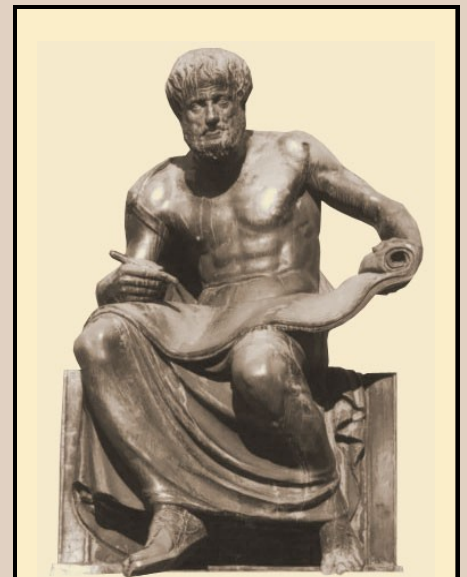
Cryology is the scientific study of cold and ice. It is real science, a part of the overall science of physics called Cryogenics where the effects of extreme cold on materials is systematically studied. In medicine there is cryotherapy, a well known set of techniques used to improve outcomes in surgery and perhaps to freeze warts and other skin blemishes for easy removal. And now there is a faddish form of "cryotherapy," a somewhat questionable practice involving a chamber cooled by liquid nitrogen to a temperature of -240 degrees Fahrenheit. "Patients" enter this chamber for about

## Reader Participation Desired

**"It is the mark of an educated mind to be able to entertain a thought without accepting it." - Aristotle**

Aristotle certainly makes a major Critical Thinking observation in that statement. There is an abundance of examples of thoughts regarding social customs, religion, sex, politics, science, slavery, prisons, vegetarianism and many others aspects of life where there is a multitude of differing and controversial opinions. One may accept or reject any of those ideas but progress in Civilization can only be made if serious thinkers entertain various propositions. We invite readers to ventilate with passion, but not anger, on some matter that might interest Critical Thinkers and annoy some others.

We would very much like participation from Creationists, UFOlogists, Homeopaths and others often scorned by Skeptics. Student letters and essays are as welcome as communications from established professionals. It could be a great mental and writing exercise to entertain some thoughts that you do not accept. But, please, no electoral politics and we really do not care about the vapid antics of the Kardashian Sisters.



Aristotle (384 BC – 322 BC), Greek philosopher. He was a student of Plato and teacher of Alexander the Great.



three minutes with minimal garb but they do wear gloves.

Practitioners claim that cryotherapy treatments impart great exhilaration and relieve the pain of many ailments such as arthritis. Needless to say there is some room for skepticism on this manner of therapy and the editorial staff of Phactum is dutifully skeptical, if not downright hostile. See the article on page 22, and also this New York Times report.

<http://www.nytimes.com/2015/11/06/us/cryotherapy-offers-treatment-at-300-degrees-with-little-oversight.html>

### Bacteria in the gut

Those who attended the PhACT meeting in November were treated to a discussion of very recent medical research being performed at Children's Hospital of Philadelphia by Dr. Robert Baldassano and his colleagues. Their research entails analyzing the various flora and fauna that lives in our digestive systems and how they affect our lives. The research effort at CHOP is highly advanced and other research institutions are following suit.

Here is an interesting article in the Los Angeles Times on that topic and research being pursued at UCLA and at the Cleveland Clinic linking gut bacteria to heart disease.

<http://www.latimes.com/science/la-sci-sn-gut-microbe-heart-disease-prevention-20151216-story.html>

### Homeopathy - Proving of Cygnus X-1, Black Hole, *Lux foraminis nigris*

Get a load of this!!!

In 2010 at the Northwestern Academy of Homeopathy located in St. Louis Park, Minnesota, a *remedy was prepared by Rowan Jackson and astronomer, Peter Lipscomb, using an 8" telescope, Meade LX90 aperture telescope. A vial of alcohol was affixed to the viewing end as the telescope was focused on Cygnus X-1's location within the Cygnus constellation.* In that process a mother tincture of the Cygnus X-1 Black hole was obtained.

*"Twenty provers took the remedy administered in 30C potencies. The proving was double blind format in which neither the supervisors nor the provers were aware of the substance they were taking. During the proving, provers logged symptoms on a daily basis and were in daily contact with their supervisor until symptoms subsided."*

This fascinating information can be found on the internet at: <http://homeopathictraining.org/about-us/provings/cygnus-x-1-black-hole/>

A few details are left out of the proving documentation, most importantly identification of the symptoms that provers might encounter and the disease the remedy is designed to cure. Nonetheless, this homeopathic remedy is on the market dispensed by a British firm called Helios Homoeopathy located in Tunbridge Wells, Kent and also in London. I did access the Helios website (<http://www.helios.co.uk/shop/black-hole>) and shopped for the 4 gram tablet form of this remedy in the 6C and more potent 30C strengths. Both products are available for delivery through the mail for £4.50. I did not, of course, complete the transaction as I am a cheap-



skate.

One can only muse as to what kind of nitwit would devise a "mother tincture" in such a loony way and to cure what? Perhaps it is the same guy who supervised the **Proving of *Gavia immer*, Common Loon** using

a single feather of a loon from British Columbia.

But do not despair as this remedy is also available at Helios Homoeopathy. One word of caution: *Gavia immer* is powerful medicine, so powerful that a prover dreamt she was making out with George Clooney.

### 50,000 child witches

A most dismal story appeared in the Daily Mail, October 19, 2015.

The article relates the sad tale of thousands of children abandoned on the streets of Kinsasha, Congo. The children are accused of being minions of the devil, of being witches, of eating the flesh of their relatives. Most have been abandoned because of extreme poverty and considerable debilitating superstition.

The United Nations is attempting to provide relief but that is not likely to be massively effective. There is massive poverty in Congo and that land has a long cultural history of fear of witches despite it now being the 21<sup>st</sup> Century and long past time that primitive superstition should rule a land. The UN is not likely to root out feckless clergy administering brutal exorcisms or lousy bureaucratic government tolerating such practices.

***"There are conscious witches who know they are evil and unconscious witches who do not know but get up in the middle of the night and eat human flesh."***

~ **Pastor Jean-Pierre Kwete**

Read more: <http://www.dailymail.co.uk/news/article-3276057>

### Blacklight Power Has a New Name

Thanks to Tom Napier for doing a bit of detective work discovering that Blacklight Power, an energy sector company founded in 1990, has now changed its name to Brilliant Light Power.

This company and its founder, Randall Mills, MD, claim to have developed a method of using "hydrinos" to create nearly unlimited electrical power. The company is very well funded by savvy investors but has yet to demonstrate a working apparatus. One minor flaw in the theory just might be the fact that "hydrinos", like Star Trek's "dilithium crystals," are non-existent substances.

<http://brilliantlightpower.com/>

Care to buy a nice bridge?

**Dr. Stephen Barrett Reports in Consumer Health Digest**  
**▶▶ Burzynski sued by long-time attorney (November 2, 2015)**

Stanislaw Burzynski, M.D., who is facing action by the Texas Medical Board, has been sued by his former attorney, Richard Jaffe. In September 2015, Jaffe filed a petition to force involuntary bankruptcy that would enable Jaffe to collect \$248,222 allegedly owed to him for legal fees. Jaffe, who has represented Burzynski and his clinic for nearly 30 years, has also withdrawn from the Medical Board action. The bankruptcy filings list about \$1.3 million in debts, but Jaffe says that there are additional creditors, including patients (or surviving relatives) who overpaid and at least one insurance company that is seeking recovery of money previously paid. Jaffe also noted that Burzynski owned property appraised at more than \$14 million. Administrative hearings in the board case are scheduled to begin on November 19th. Burzynski's new attorney requested a delay, but the board responded that Burzynski had had ample time to get ready.

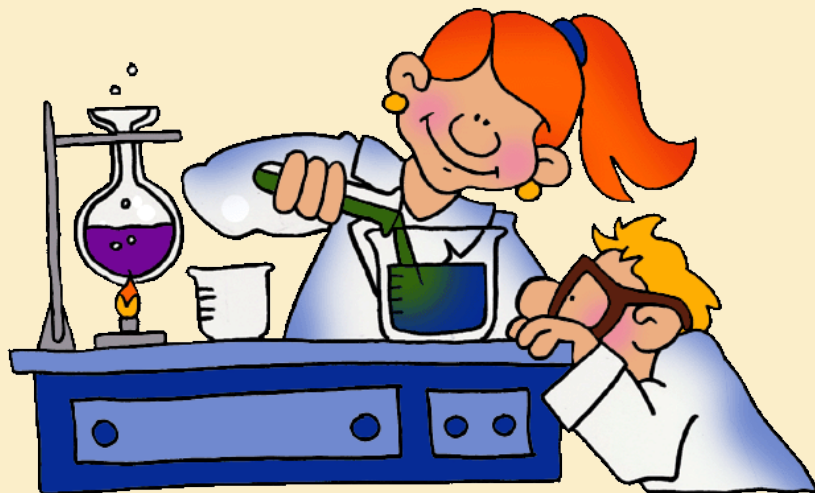
Note: Stanislaw Burzynski is a well know cancer quack who is now deep in litigation. On March 19 Professor Bob Blaskiewicz, who is highly knowledgeable on this matter, will be PhACT's speaker.

**▶▶ Miracle Mineral Solution (MMS) seller receives prison sentence (November 22, 2015)**

Louis Daniel Smith, 45, was sentenced to 51 months in prison to be followed by three years of supervised release. In June, a jury convicted Smith of six criminal counts related to marketing an industrial bleach as a "miracle cure" for cancer, AIDS, malaria, hepatitis, Lyme disease, asthma, the common cold, and many other diseases. MMS contains a 28% solution of sodium chlorite, which, when mixed with an acid such as citrus juice, produces chlorine dioxide, a potent bleach used for stripping textiles and industrial water treatment. High oral doses, such as those recommended in MMS labeling, can cause nausea, vomiting, diarrhea, and symptoms of severe dehydration. Sodium chlorite is not legal to sell for human consumption, and legitimate suppliers of the chemical include a warning sheet stating that it can cause potentially fatal side effects if swallowed. Evidence presented at trial indicated that Smith (a) created phony "water purification" and "wastewater treatment" businesses in order to obtain sodium chlorite and ship his MMS without being detected by the FDA or U.S. Customs and Border Protection and (b) hid evidence from FDA inspectors and destroyed evidence while law enforcement agents were executing search warrants. Before Smith's trial, three of his conspirators pleaded guilty to introducing misbranded drugs into interstate com-

## School Science Fairs - 2016

PhACT will once again participate in school science fairs in Philadelphia and Bucks County, Pennsylvania . Our contributions at these events is to award cash prizes to



phillipmartin.info

middle school and high school students who demonstrate good Critical Thinking skills in preparation of their entries. The exhibitions will be in early March at Temple University for the Philadelphia fair, and at Delaware Valley College for the Bucks County fair.

Donations for prize money are always welcome. Any excess donations will be reserved for the Science Fairs in 2017.

To donate go to [www.phact.org](http://www.phact.org) and press the "Donate" button which will direct you to PayPal.

merce. [Quackwatch](http://www.quackwatch.org) has a history of MMS-related enforcement actions.

<http://www.quackwatch.org/02ConsumerProtection/FDAActions/mms/mms.html>

▶▶ Free "Science Based Medicine" course available (November 29, 2015)

The James Randi Educational Foundation has produced a superb 10-part video lecture series in which Harriet Hall, M.D., contrasts science-based medicine with so-called "complementary and alternative" methods. The topics include: What is CAM?; acupuncture; chiropractic; energy medicine; homeopathy; miscellaneous "alternatives"; naturopathy and herbal medicines; pitfalls in research; science based medicine vs. evidence-based medicine; science-based medicine in the media and politics. The lectures range from 32 to 45 minutes. A companion course guide is also available.

[http://web.randi.org/uploads/3/7/3/7/37377621/course\\_guide.pdf](http://web.randi.org/uploads/3/7/3/7/37377621/course_guide.pdf)

<https://www.youtube.com/watch?v=VNzOOAiiNs>

▶▶ Top-10 worst anti-science sites listed (December 6, 2015)

Brian Dunning has updated his list of [Top-10 Worst Anti-Science Web Sites](#), five of which provide low-quality health information and advice:

- Natural News (promoted conspiracy theories that medical industry secretly wants to keep everyone sick, and con-

spires with the food industry to make people unhealthy, all driven by a massive plot of greed to sell poisonous medicines)

- [Mercola.com](http://Mercola.com) (aggressive promotion of "quack medical products")
- [DoctorOz.com](http://DoctorOz.com) (his web site is little more than "clickbait luring people . . . who might be looking for actual health advice to click on ads for Dr. Oz's "trusted sponsorship partners.")
- [Foodbabe.com](http://Foodbabe.com) (her advice is "a crap shoot of common knowledge, fearmongering, gross scientific illiteracy, misinformation, and ideological nonsense.")
- [Chopra.com](http://Chopra.com) ("claiming ayurvedic medical benefits from what amounts to little more than spiritualist word-salad mumbo jumbo, " including "'detoxification' . . . an implausible spiritual solution to a nonexistent physical problem." Mercola's activities were recently detailed in a [report from the Genetic Literacy Project](#), which indicates that he has donated more than \$1 million to groups that promote unfounded health-related ideas.

▶▶ Antivaccine referendum drive falls short (October 11, 2015)

The attempt to generate a statewide referendum intended to overturn California [SB277](#) appears to have failed to gather enough signatures. The targeted bill, enacted earlier this year, made California one of three states with the most stringent childhood vaccine requirements. Its main provision elimi-

## A new book by "The Quack Doctor"

### The History of Medicine in 100 Facts by Caroline Rance

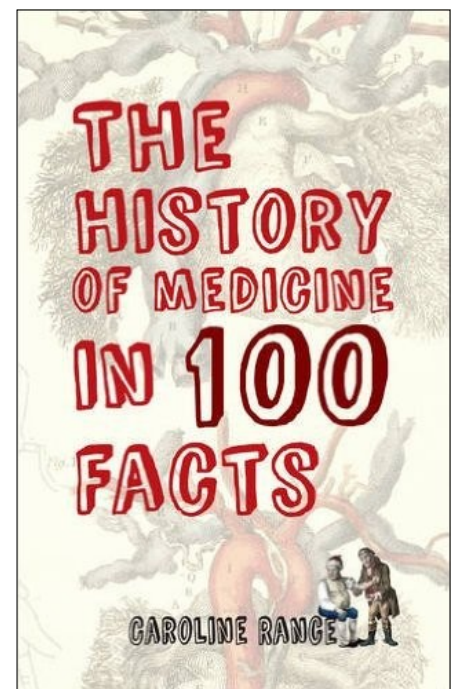
**Publisher: Amberley (February 19, 2016) Paperback: 192 pages**  
**ISBN-10: 1445650037 ISBN-13: 978-1445650036**

The history of medicine is a vast subject, encompassing the whole of humanity in every region of the globe. For millennia, our ancestors have sought to combat disease, relieve pain and postpone the Grim Reaper's inevitable victory, doing so with a fortitude and humor that makes their experiences resonate with us today. The history of medicine has been a march of progress – a gripping story of heroes and villains, of momentous discoveries and gruesome events that we're lucky to have left behind.

In this book packed full of facts from medicine's long and often shocking past, Caroline Rance gives concise introductions to some of the well-known (and not so well-known) episodes from medicine's long history, dispelling a few myths and celebrating a few neglected figures along the way.

#### About the Author

Caroline Rance runs the popular history of medicine website [www.thequackdoctor.com](http://www.thequackdoctor.com) and has an MA in Medicine, Science and Society. She has written a historical novel, Kill-Grief, and a non-fiction book on Victorian proprietary medicines, The Quack Doctor: Historical Remedies For All Your Ills. She has also compiled a pocket trivia gift book, What the Apothecary Ordered, for Old House Books.



nated the personal belief exemption that enabled nonvaccinated children to attend public schools. Press reports indicate that the referendum-seekers needed 365,000 signatures but turned in only 228,000.

### ▶▶ Vaccination advocacy group expands scope

In anticipation of its 25-year anniversary, Every Child By Two (ECBT) has expanded its original mission of ensuring timely vaccination of all children by the age of two to include people of all ages. Its enhanced Web site and Facebook pages present scientifically-accurate information on vaccines needed at each stage of life; details about the burden of vaccine-preventable diseases; answers to questions about the

safety of vaccines; personal stories from families who have been affected by deadly but preventable infectious diseases; and links to other reliable sources.

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](mailto:chd-subscribe@lists.quackwatch.org)

Dr. Barrett's main website is [www.quackwatch.org](http://www.quackwatch.org)

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## Bad Faith: When Religious Belief Undermines Modern Medicine

by Paul A. Offit

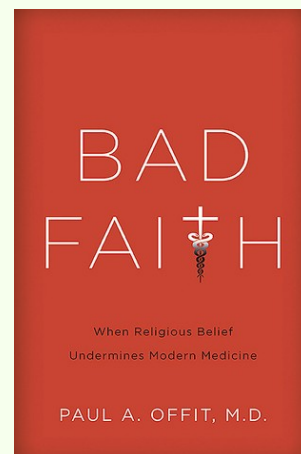
**Hardcover: 272 pages Publisher: Basic Books (March 10, 2015)**

**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 contaminated circumcision tools. 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 the name of religion isn't just unwise and immoral, but a rejection of the very best aspects of what belief itself has to offer.





# The Canadian Association of Witch Doctors



## 2015 Dr. Woo Awards! Final Results



Dear Friends and colleagues,

It is with great excitement and fanfare we announce the winners of the CAWD 2015 Dr. Woo awards. These distinguished awards are for those outstanding individuals who have excelled within the realms of magical healthcare. Although there are many who are worthy of such high distinction, only those selected by their peers as having made remarkable achievements in their field this year are awarded this ultimate accolade. Thanks to all our members for the outstanding nominations and votes which were very competitive.

The winners in the following categories are (drumroll please)::

### Professional Practice:

**Are You With Me Dr. Woo Award:** for the best promotional activity by a celebrity/politician in promoting woo and completely irrational health beliefs

[Mehment Oz](#) – All-round health-wizard

**Ultimate Fleecing Award:** for the practitioner using the most creative way to fleece the public for a magical health therapy without actually breaking the law

[Brian Clement](#) of [Hippocrates Health Institute in West Palm Beach](#)

**Sartorial Woo Award:** for most creative use of a white coat/stethoscope/cosmetic dentistry/tan and posing arts by an alternative health practitioner in their advertising.

[Jordana Aziz](#) – Naturopathic stylist

**Uncanny X-Men Award:** for the most creative justification of woo involving the use of mutant psychic energies for healing

[Theta Wellness Center in Utah](#) for their [Theta Chamber](#)

### Woolosophy:

**Mystic Brew Award:** Best use of post-modern mysticism and pure nonsense using the most esoteric and jargonistic language used to justify an alternative health therapy

[Adam Macleod](#) (aka “the Dream-healer”)

**Best Conspiracy Theorist Award:** for the most creative use of big-pharma, evil medicine, alien DNA etc. in memes to promote an alternative health therapy

[Gillian McKeith](#) – Weirdest nutritional advice

**Hippy Hippy Shake Award:** for the best use of new age speak/ hippy hand-crafts/imagery in justifying an alternative health therapy

[Centre for Natural and Integrative Medicine in Florida](#) – Far out!

**It's Life Jim (but not as we know it) Award:** for the most logical fallacies used in the justification of an alternative health therapy/practice in a single explanation.

[Canadian Association of Naturopathic Doctors](#) – Fascinating.

### Quackademics:

**Integrative Woo Award:** for the educational institution offering the best integration of science and magic in an academic program or research activity.

[University of Toronto, ON](#)

**Hogwarts of Woo Award:** for the most auspicious made-up private alternative health college

[Quantum University, Hawaii](#)

**Woo to Go Award:** for the institution/business offering the best mail-order alternative health professional qualifications

[Boucher Institute of Naturopathic Medicine, BC](#)

**Bums on seats Award:** for the educational institution giving the best excuse for profiting from the sale of magical health education.

[Langara College, BC](#)

Congratulations to all our esteemed winners. It was gratifying to see so many Canadian winners too, go Canada! Prestigious certificates will be mailed out shortly, along with an invite to a magical award ceremony on Pluto. We hope to see many of you there.

Dr. Wen Shortispy

Director of CAWD & Witch Finder General

# Meeting Reports - October/November 2015

Reported by Jeffery B. who is a Physics student of  
Dr. David Cattell at Community College of Philadelphia.

**Author John Grant discussed his latest book:  
*Debunk It! How to Stay Sane in a World of Misinformation.*  
Saturday, October 17, 2015**

## Reported by Jeffery B.

The Philadelphia Association for Critical Thinking convened on Saturday, October 17, to hear author and editor John Grant speak on the topic of the soul and the history of its attempted scientific study.

Thematically, Mr. Grant focused on the historically-ignorant, tabula rasa methodology that accompanies each new wave of para-scientific research, resulting in a procession of false paradigm shifts and subsequent debunkings. He contrasted the research with robust sciences such as physics and geology, where scientists fastidiously build upon prior breakthroughs. "If I have seen farther, it is by standing on the shoulders of giants," said Isaac Newton. Newton himself brought about a significant paradigm shift, as did Albert Einstein in the 20th century – expanding upon the ideas of Newton into a whole new physical framework. Mr. Grant noted, that in spite of this advance, the old stuff is still good: Newtonian physics, he says, provides a method of motion calculation accurate enough for NASA to guide spacecraft into orbit and beyond - not bad for a 300 year-old pair of shoulders. Para-science's forays into incorporeal psychic phenomena, to the contrary, have no anatomy (literally) upon which to stand, and thus exist as a regretful record of prior para-scientists' incompetence and fraud.

Examples given by Mr. Grant of "discoveries" and their subsequent debunkings include spirit photography from the mid-19th century well into the 20th, Duncan MacDougall's and Harry Laverne

**No matter how the bologna is sliced,  
it's still...**



In *Debunk It!*, author John Grant uses modern, ripped-from-the-headlines examples to explain clearly how to identify bad evidence and dismantle poor arguments. He provides a roundup of the rhetorical tricks people use when attempting to pull the wool over our eyes, and even offers advice about how to take these unscrupulous pundits down. So, if you're tired of hearing blowhards spouting off about climate change, history, evolution, medicine, and more, this is the book for you. *Debunk It!* is the ultimate guide for readers seeking a firmer footing in this very slippery world.

"This can't-miss title is great recreational reading for budding skeptics as well as an outstanding addition to units on science, current events, or debate. A must-have." – School Library Journal (Starred Review)

Zest Books // 978-1-936976-68-3 // \$12.99

Twining separate but equally error-ridden attempts to measure the weight of a soul, and the Soal-Goldney experiments on “psychic” Basil Shackleton.

Finally, Mr. Grant discussed the recent “Heaven Tourism” craze, ushered in by a slew of top-selling books detailing the near-death experiences of purported caelonauts, ranging from three-year-olds to brain surgeons.

Though he can claim authorship of numerous publications in skepticism, fantasy and science fiction, Mr. Grant proved he's a man who separates fact from fiction: fact was all we got at this month's PhACT lecture.

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**Dr. Robert Baldassano discussed:  
The Ecosystem Within You, How is it Affecting You?  
Saturday, November 21, 2015**

**Reported by Jeffery B.**

The Philadelphia Association for Critical Thinking convened on Saturday, November 21, to hear Dr. Robert Baldassano lecture on the emerging field that asks how microbiota within the human body impact our health.

Titled “The Ecosystem Within You, How is it Affecting You?”, the lecture covered the ways in which a person’s microbiota can predispose them for variety of diseases, including IBD, Obesity, IBS, Gastroenteritis, Poor growth, motility, colon cancer, and liver disease.

The importance of microbiota has long been underestimated. It helps us digest certain foods, produces vitamins, and even supplements our immune system by acting as a barrier against other microbiota that would be harmful to our health. And yet, with little appreciation for the role of this bacteria, doctors have long over-prescribed antibiotics, upsetting the delicate ecosystem within our bodies.

Scientists would like to step in and start managing this microbiome, but the reality is that it’s a very complicated system (there are over 100 trillion bacteria that live in our GI tract with 100-150x as many genes as in human genome), and we are only beginning to understand how it works and how susceptible it is to change.

While there are many factors in an individual’s microbiome, Dr. Baldassano focused primarily on diet. Exposure as a baby to things like rice cereal, antibiotics, formula and table foods, cow milk can be tracked as discrete stages, with an accompanying biota fingerprint for each.

The curious thing, is that changing what’s known as an “enterotype” - the blueprint of the bacteria in your G.I. tract - once it is set, is not so easy. Exposure to a new diet or even stool transplants can sometimes be effective, but it is usually only short-term if it works at all. Dr. Baldassano says that research is still in progress to see how long it would take to change enterotypes.

Lastly, the study of microbiota brings up the question - is there anything we should be changing in the production of food in order to make us healthier? Emulsifiers and preservatives have been shown to reduce the zone between bacteria and the intestinal walls, and of course, the antibiotics used to fatten livestock may be disrupting these balanced systems and could be fattening us up as well.

In summary, Dr. Baldassano says the microbiome is a filter of our largest environmental exposure - what we eat! And what we eat may be coming under further scrutiny as this nascent field develops.

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**“It is health that is real wealth and not pieces of gold and silver.”  
~Mahatma Ghandi**



## 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>

### Events at the Wagner

#### Saturday, February 6th, 2016, noon to 4 PM Wagner's Winter Wonderland

Celebrate Winter with seasonal arts, crafts, and activities during this Saturday open house.

#### When Bugs Outsmart Drugs: The Effects of America's Antibiotic Obsession, by Dr. Bill Wuest, Temple University

#### Thursday, February 18th, 2016, 6 to 7:30 pm

Bacteria are everywhere. While most bacteria are helpful, hype about a few disease-causing bacteria has fueled mass "germaphobia," leading us to overuse antibacterial disinfectants to the point that some are failing due to resistance. At this Weeknights at the Wagner talk, Temple University Chemistry professor Bill Wuest will discuss the future of microbiological and biochemical approaches to fighting bacteria and how examples from nature advance our understanding of the earth's most numerous living organisms.

#### Westbrook Lecture 2016

#### Saturday, March 19th, 2016

Zoologist Dr. Kristofer Helgen. Curator-in-Charge of Mammals at the Smithsonian National Museum of Natural History, Dr. Helgen is known for discovering approximately 100 mammal species worldwide that were previously unknown to scientists. While he's traveled the world to make his discoveries, many of them also happen in natural history museums, giving him a unique perspective on how collections such as the Wagner's are vital to the scientific community.

Join us for an afternoon lecture and reception with Dr. Helgen.

### Adult Education

#### Winter/Spring 2016 Course Schedule

#### Agriculture for City Folks - Professor Karen Snetselaar 6 Tuesdays, January 19 - February 23, 2016, 6:30 to 7:30 pm at the Pennsylvania Horticultural Society.

This course will provide an overview of agricultural practices and background on how food is grown and processed so we can make informed judgments about issues related to food and farming. Preregistration is required and will open on Tuesday, December 8th.

"If you are what you eat, why aren't I a cheeseburger?" -

#### Musings on Nutrition by a (Portly) Biochemist - Professor Michael McCann

#### 6 Wednesdays, January 20 - February 24, 2016, 6:30 to 7:45 PM at the Falls of the Schuylkill Branch of the Free Library

This course will address some of the major issues related to human nutrition, including a discussion of ongoing areas of debate within the popular press. Preregistration not required; register by attending the first course.

#### Human Physiology - Professor Jason Downs 8 Saturdays, January 30 - March 19, 2016, 10:30 AM to noon at the University of Pennsylvania Museum of Archaeology and Anthropology

Human physiology is the study of human bodily functions and the mechanisms behind those functions. This course will approach the subject at multiple scales of biology—from the tiniest movement of ions across cell membranes to the transport of materials throughout the body to the behaviors that connect us to one another, to other species, and to our planet. Preregistration is required and will begin on Tuesday, December 8th.

#### Biochemistry of Your Medicine Cabinet - Professor Joseph B. Rucker

#### 6 Wednesdays, January 27 - March 2, 2016, 6:15 to 7:30 PM at the Independence Branch of the Free Library

This course will be a biochemist's view of how common medicines work. Each week will focus on a different drug or class of drugs, how they were discovered, and how they act at the molecular and cellular level. Preregistration not required; register by attending the first course.

#### Urban Plant Ecology - Professor Dr. David Hewitt 6 Tuesdays, March 29 - May 3, 2016, 6:30 to 7:30 pm at the Pennsylvania Horticultural Center

This course will cover the basics of plant ecology, with a focus on principles especially relevant to plants growing in urban (and sub-urban) areas in and around Philadelphia. Preregistration is required and will begin on Tuesday, December 8th.

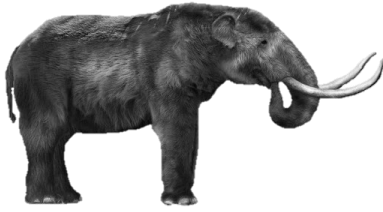
#### Evolution in Action - Professor Mary Beth Davis 6 Wednesdays, March 30 - May 4, 2016, 6:15 to 7:30 PM at the Independence Branch of the Free Library

This course will examine case studies of the natural history of individual species and consider how information from molecular studies can provide insight into evolutionary change. Preregistration is not required; register by attending the first course.

See the website for more details of lectures and courses.



## A Book Review of: **American Monster** by Paul Semonin

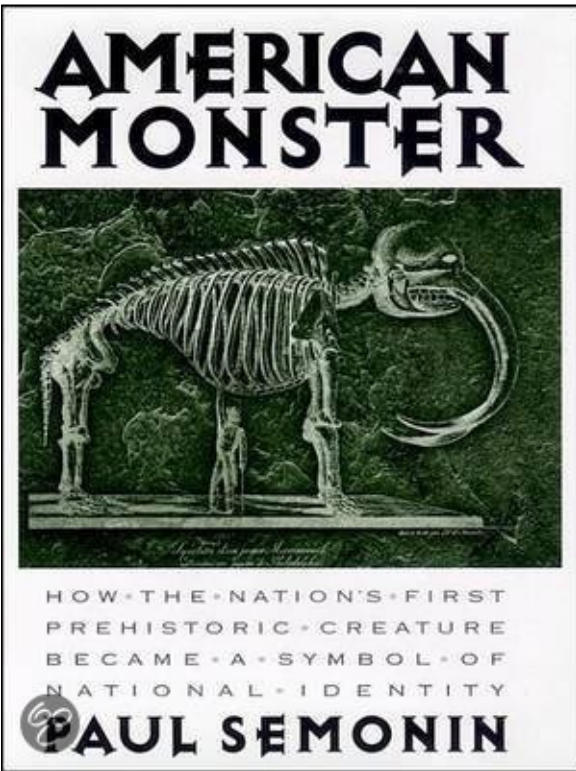


New York University Press  
Washington Sq./ New York, NY 10003  
www.nyupress.nyu.edu ISBN 0 - 8147 - 8120 - 9

Reviewed by Paul Schlueter III

This remarkable book, published in 2000, describes the discovery of America's incognitum, now known as the mastodon, during pre-Revolutionary times. Once known as "the Claverack giant," the fist-sized, 5-lb. molar of some marvelous beast was first found by a Dutch tenant farmer in the Hudson valley, near Claverack Manor, outside Albany, NY, in 1705. Over the next half century, speculation over the identity of the tooth's source ran rampant throughout the civilized world.

Increase Mather (and his son, Cotton) figured prominently in the early conjectures, where he attributed the tooth to the great giants described in the Bible (in the story of Noah's Flood). George Washington and Ben Franklin also became involved in the investigations, in their own turn (just before the Revolution). Discovery of the similar (but distinct) Siberian mammoth's remains further complicated matters; learned men rationalized the fossils by presuming that the great flood had floated elephant bodies to both Siberia and America, depositing them when the waters receded. At the time, nobody seriously credited the idea that there might be such thing as "extinct" animals, with even the great Isaac Newton believing that the Biblical Creation was the literal truth, and that all species were created in their present forms, by the hand of God himself. Darwin's theories about evolution remained far in the future.



Semonin exhaustively mines the surviving correspondence and reports of the various scientific societies which existed at the birth of Paleontology. The resulting book is often repetitive and tedious, and several times it returns to but a few classic mastodon discoveries, while relating how the men of early science and conservative religion (even European royalty!) debated the meaning of gigantic bones, elephantine tusks, and "molars which resembled those of no known beast." Many more fossils were discovered and collected near the Ohio River (roughly between modern Louisville and Evansville), at a Kentucky site cartographers named Big Bone Lick; this turned out to be a marshy field of many mastodon skeletons, eroding out of a vast natural salt lick which even Native Americans viewed with mystery. No Indian legend remembered the great beasts as anything other than huge bones and teeth, found when erosion exposed them.

Gradually, in exacting detail, Semonin tells how science figured out that extinct creatures populated the planet before mankind, and all of it traces back to the worldwide debates about the source of "the great ruins" of mastodons and mammoths. This is a must-have book for anyone enthusiastic about the history of Paleontology, or about the early steps of coming to terms with the recognition that the history of Life on our planet is unimaginably ancient. It requires no prior specialty in the field, but the sheer quantity of fascinating data makes this a dense and slow read, suitable for many long, wintry nights beside a fireplace.

(NOTE: This book also contains several fascinating side-topics, such as the roots of "scientific racism" and white supremacy in Revolutionary times, and extensive discussion of how religious dogma was widely intermingled with early scientific thinking. It eventually incorporates the early steps of discovering and identifying dinosaur fossils and old-earth Geology, tracing every related misstep.)



The cloud on the horizon slowly resolves into individual specks of white, whirling and spinning in synchronicity this way and that. Like dust motes in a shaft of sunlight or snowflakes in a breeze, they spiral slowly downwards to the ice. Without warning they loft up again to the sky, following paths no snowflake ever traveled; for these are not snowflakes, but Snow Geese.

The ice has begun to thaw at Middle Creek Wildlife Management Area in Lebanon County, and the geese have followed the thaw to these fields and impoundments. This is a

popular stop on their migration from winter homes along the coast to their breeding grounds in the High Arctic.

Much of the year snow geese are highly gregarious and gather on staging grounds like Middle Creek by the tens of thousands. Peak migration is in early to mid-March. Once open water begins to appear, the goose population jumps from 3,000 to 60,000 in a week.

Snow geese are white birds with black wingtips, smaller than the familiar Canada geese. There is also a “blue” or dark phase color morph of snow goose, with a white head and a



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Two Snow Geese fly overhead at  
Middle Creek Wildlife Management Area, March 2015.





**Snow Geese forage in a waste grain field. Middle Creek WMA, March 2015.**

dark body. A single gene determines the color of the goose. Offspring of a dark goose and a white one will be dark; two white geese produce only white geese, but two dark geese might produce a mix of white and dark.

Middle Creek Wildlife Management Area comprises 6,000 acres of woodlands, managed crop fields, impoundments and ponds. Besides snow geese, tundra swans are also spectacular in the migratory season. Other birds seen at Middle Creek include numerous duck species, shorebirds, harriers and ospreys, short-eared owls, bobolinks and meadowlarks. Bald eagles nest here, as do great blue herons. Mammals include meadow voles, long-tailed shrews, red foxes, coyotes and white-tailed deer.

Middle Creek is in farm country, and this is why the snow geese are here. Committed vegetarians, they feast on grasses, sedges and marsh plants on wetlands. A few decades ago, they discovered a new grocery store to their liking: farms. Waste grain left behind on harvested fields has proven to be an abundant food source.

Since the geese discovered the waste grain bounty in the 1970s, snow goose populations have boomed. The Atlantic Flyway population has grown from 50,000 in the mid-1960s to over one million in recent years. Estimates have placed total growth at close to 9% a year.

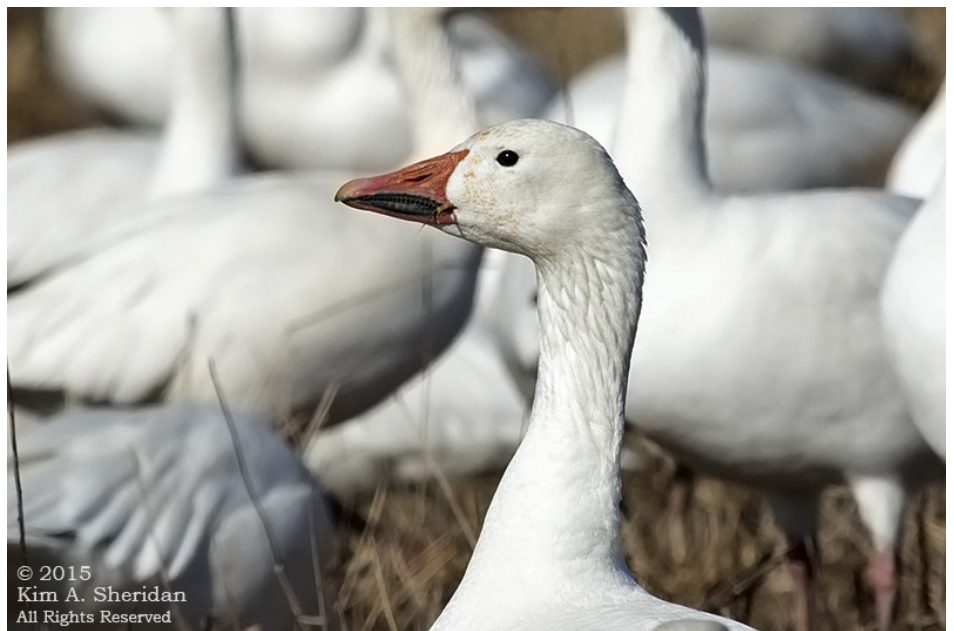
It turns out you can have too much of a good thing. The exploding numbers of snow

geese have put tremendous pressure on habitats the goose uses, particularly the fragile Arctic wetlands where the goose breeds. The damage caused by these voracious eating machines threatens the success of nesting shorebirds and other species that share their habitats. Today Middle Creek WMA is both a refuge for migratory snow geese, and a strictly-monitored hunting area where specially licensed sportsmen can hunt geese for the purpose of population control.

Snow geese are powerful fliers, capable of speeds up to 50 miles per hour. The flight of a single bird is a miracle to behold. The flight of 50,000 snow geese is a spectacle. One moment there are thousands of honking geese on the ice. The next, there is a great WHOOSH, and the entire flock lifts off as one. The decibel level goes up by a factor of ten; you need not look at the geese to know the birds have taken off.

As the day at Middle Creek draws to a close, skeins of snow geese fill the air.

Some will fly off to search out a safe roost for the night. Many others will remain at the impoundment, where they will sleep on the open water. On the next day, or the next, a blizzard of snow geese will rise and wing their way north, towards the Arctic, towards the midnight sun, towards summer.



**Snow Goose portrait. Middle Creek WMA, March 2015.**



**IF YOU GO:**

Amenities at Middle Creek include a Visitor's Center, three picnic areas and a boat launch, and a self-guided Conservation Trail through a variety of habitats. The staff maintains a migration update webpage in February and March so visitors can plan for large numbers of snow geese. The Wildlife Viewing Drive is popular; however, it is closed during the winter until March 1 – or clear of snow. Call during March for conditions. Bring binoculars and cameras and weather-appropriate clothing.

**GENERAL INFO**

Middle Creek Visitors Center  
100 Museum Road  
Stevens PA 17578  
717-733-1512

Visitor's Center open February 1 to Thanksgiving  
Hours: 8 am to 4 pm Tuesday-Saturday, Noon to 5 PM Sunday.

Middle Creek Wildlife Management Area Portal

<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=613318&mode=2>

Middle Creek Waterfowl Migration Update

<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=621427&mode=2>

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**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://thewildedgedge.net/>



When a flock of Snow Geese takes off, it's a noisy spectacle. Middle Creek WMA, March 2015.



# NEW CARE AFTER A STROKE

by Paul Schlueter III

Recent tech advances have improved the success rate of post-stroke treatment by over 140%, over tPA (clot dissolver) injections alone.

In a feature article by Nathan Seppa, Science News (June 13, 2015) describes a newly upgraded treatment involving a catheter (threaded into the clogged vessel), and a one-two punch of a tunneling wire (to pierce the offending clot) followed by a stent (which scoops the remains of the clot back thru the catheter for permanent removal). The device is called Solitaire, developed by Covidien (now owned by Medtronic of Minneapolis).

tPA, a tissue plasminogen activator, dissolves the clots in brain arteries which are responsible for strokes. When such a stroke blocks a blood vessel, brain cells downstream begin to

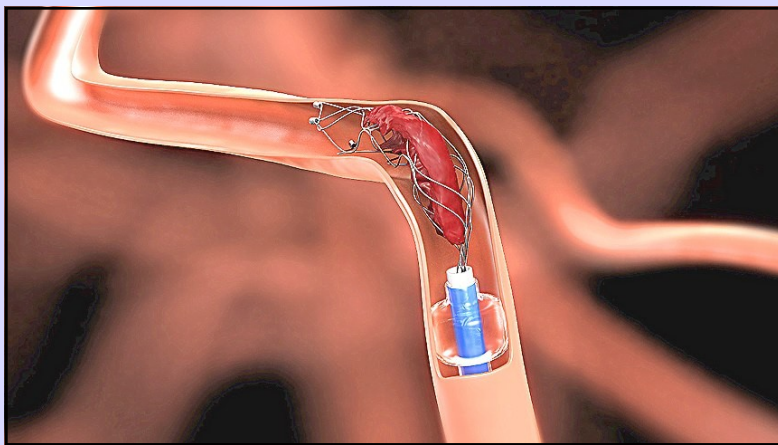
Los Angeles, has said, "This is a once-in-a-generation change in acute stroke care." Also, "a retrievable stent can open up 80 to 90 percent" of the clots some 80,000 people per year suffer in stroke cases across the U.S., including many whose condition forestalled treatment with tPA. In addition, it is possible (in appropriate cases) to remove the bulk of a clot with the removable stent, and then also treat with tPA to prevent micro-clots from forming as pieces of the larger clot drift through smaller vessels downstream.

The Solitaire system is inserted into a groin artery (which is large and easy to find), and then threaded through the artery highway under observation by imaging devices which can observe blood flow in real time. It can be precisely positioned at the clot, and actually drags away the bulk of the clot when the procedure nears completion. Five studies of the treatment show that patients are better off with the catheter-based operation (followed by standard stroke care) than with standard care alone; in fact, the difference is so pronounced that four of the studies were stopped early, so other patients could benefit sooner from the improved treatment. The system's benefit is described as "indisputable."

The five studies were published in the New England Journal of Medicine during 2015.

Patients were evaluated 90 days after treatment. In one Australia/New Zealand trial, 71 percent of patients had become functionally independent again, with no lingering stroke-related symptoms. Only 40% of patients who received tPA alone were doing as well after the same period. In an international study, 60% who received both treatments were well recovered, compared to only 35% receiving tPA alone. By my own figuring, about 44% more treatments were successful in the former group, and about 42% more were successful in the latter.

Not all stroke patients recovered, even with clot removal by stent. Part of the problem is the question of time lapse before treatment. Stroke treatment is still highly dependent upon prompt medical attention, quick diagnosis, and the fastest possible removal of the clot. Brain cells die off with each passing moment of diminished blood flow, and this is what leads to the severe after effects in some patients (paralysis, and loss of various cognitive functions). For some reason, the treatment is most effective if the catheter/stent process can be accomplished while the patient is awake (perhaps because patients who have lost consciousness have suffered greater damage?)



**A cerebral blood clot captured by the Solitaire Revascularization Device**

die off from oxygen starvation, so successful treatment requires prompt restoration of blood flow past the clotted point. tPA only works on about 33% of such clots, and because it dissolves blood clots, it cannot be used where there is a hemorrhage threat or certain other medical conditions. For larger clots (the ones least likely to be broken up by tPA), this new treatment is crucial.

Catheters and stents have been used for some time in heart-artery clogs, where the arteries are larger and tougher, but brain arteries are far more delicate, and new tech was necessary to create a device that wouldn't do more harm than good. Jeffrey Saver, Director of the UCLA Stroke Center in

The Solitaire retriever system has been approved by the FDA for stroke treatment. Practice guidelines are expected to be published soon, and it is hoped that hospitals will quickly ensure that their staff are trained in promptly applying this new treatment.

It is an appropriate time to discuss this treatment with your own Doctor. He can advise you whether you are at high risk for potential strokes, and whether this treatment is likely to be appropriate in your specific situation. He can also determine where such treatments are (or will soon be) available, to facilitate hospital choices in the event of need. Having the plan in place, and prior assessment by your personal

physician, might save precious minutes if you need treatment. Nobody wants to have a stroke, but when one hits without warning, the fastest and most-effective treatment determines your likelihood of successful recovery.

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Paul Schlueter III is serving Life in Prison in NE Pennsylvania. His supporters have created a website about him. [www.jaylbird.org](http://www.jaylbird.org)

## Cryotherapy, A New Fad in CAM

by Paul Schlueter III

Every so often, the woo-woo world comes up with yet another really bad idea to "cure" our ills. According to a brief article in *The Week* (11/6/15, p. 9), a 24-year-old spa employee was killed when she tried to enjoy some of the very same therapy her spa offered to the credulous public.

Chelsea Ake-Salvacion worked at the Rejuvenice spa in the Las Vegas suburb of Henderson. She entered a "full body unit" which is capable of chilling its occupant to -240° F for minutes at a time, a process which purportedly burns calories (from shivering?), tightens the skin, and treats pain. She was found the next day, "frozen solid" and apparently having suffered from nearly instantaneous suffocation within the unlockable chamber.

The owners of the spa were reportedly charged with operating without the appropriate license(s), and the salon was shut down by Nevada authorities.

As skeptics well know, practically any goofy idea can be sold to a certain segment of the populace, given suitable CAM trappings and a bit of Barnum & Bailey patter. Here, it appears that someone found a way to super- refrigerate people, and decided to make some quick cash claiming that such "therapy" does a body good. In the victim's case, it definitely stopped her aging process.

Perhaps the idea was thought comparable to the common practice of "sweat lodge" steam bathing, which some people follow with a body-shocking plunge into frigid water. Another possible "inspiration" might be the practice of swimming in icy water during the winter, attributed to the Polar Bear Club and others. Neither situation requires subjecting the body to sub-zero temperatures, let alone hundreds of degrees below zero, but perhaps there was some of the "if a little is good, more must be better" philosophy involved.

In any case, it appears that at least this one spa/salon has offered



Pictured here is a three person, two chamber cryotherapy chamber. The first chamber, the preliminary chamber, operates at temperatures between -40 F to -76 F. The actual therapy chamber is much colder, therapy taking place at -190 F to -260 F. Therapy sessions are timed between 1.5 and 3 minutes.



Full body Cryotherapy is performed with minimal clothing; socks and gloves are required. Underwear, a bottom, is required for men, optional for women. The fact that this therapy chamber can accommodate three people suggests a somewhat frolicsome atmosphere not for the shy. The extreme cold temperatures are achieved using liquid nitrogen.

its "cryotherapy" services to the public before any medically supportable, science- based testing. The fate of one hapless employee demonstrates how flawed such shortcuts can be.

Perhaps the owners will argue that their equipment was misadjusted, misused, or even that this was some unforeseeable fluke event which wasn't their fault. It would be interesting to apply skilled skeptical review to the process and the facility, and hopefully learn more of the facts. Does such a therapy have ANY basis in sound medical theory? Can real health conditions be treated effectively by simply chilling the patient (this is far more than what is involved when a dermatologist "freezes off" a wart with compressed gas!)

How are such facilities licensed, and what licensing requirements might be more appropriate? How did the operator even manage to open the facility without appropriate licensing? Are there any cryotherapy salons in our own neck of Penn's Woods, and who might be operating them? Do they protect clients any better than the Rejuvenice spa protected its employee?

Any further investigation by Phactum readers would be quite welcome. Let's see if we can get AHEAD of the ball on this new fad in CAM.

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Editor's note: In fact there is a facility offering cryotherapy near Philadelphia, located in Southampton in Bucks County. The website for this facility is: <http://www.wb-cryotherapy.com/> At that website there is information about the advantages of cryotherapy in treatment of fibromyalgia, arthritis, and psoriasis. This mode of treatment, we learn, is endorsed by Dr. Oz and Dr. Alan Christianson, a Naturopathic Medical Doctor in Scottsdale, Arizona. We are skeptical.

**But however mysterious is nature, however ignorant the doctor, however imperfect the present state of physical science, the patronage and the success of quacks and quackeries are infinitely more wonderful than those of honest and laborious men of science and their careful experiments.**

~ P. T. Barnum, *The Humbugs of the World* (1865)





# How Sherlock Was Mistaken

by Paul Schlueter III

***"Once you have eliminated the impossible, then whatever you have left, no matter how improbable, must be true."*** -Sherlock Holmes (by Sir Arthur Conan Doyle) (shamelessly paraphrased!)

I may not have quoted the famous fictional detective perfectly, but that's the general gist of one of his perennial maxims. This phrase is frequently quoted by skeptics and the credulous alike, according to their need to cite fiction in proving their case.

Let's not go quite so far as to call Sherlock wrong; one must always remember the equally profound quote, "I thought I was wrong once, but I was mistaken." In any case, Sir Conan Doyle was himself well known for having bought into Spiritualism (the fraudulent practice of supposedly channeling messages from the deceased, through a living "spiritual medium"), so perhaps his fictional creation may be forgiven for experiencing the occasional brain infarction.

The basic flaw in Sherlock's maxim is that it relies on a (moderately extended) false dichotomy. Technically, a false dichotomy only acknowledges TWO possible proposals, such that one is clearly false, therefore the other must be true. Here, Sherlock tries to apply pseudologic and extend the dichotomy to two CLASSES of information, the "impossible," and the balance of all knowledge once the impossible has been eliminated. Seen in those terms, you begin to observe the essential problem of all false dichotomy arguments.

First, Sherlock mistakenly proposes that it is possible to "eliminate the impossible," as if the set of potential impossibilities were somehow finite. There are, in fact, as many impossibilities as one has the ability to imagine, multiplied by the number of people doing the imagining! That comes



**Sherlock Holmes: [to Watson] Never theorize before you have data. Invariably, you end up twisting facts to suit theories, instead of theories to suit facts.**



to a rather large product, and eliminating all of these impossibilities quickly becomes burdensome (not to say, impossible in its own right). If we must eliminate every impossibility before finding truth in the balance, we'll never reach the end of the inquiry, and the acquisition of knowledge would come to a screeching halt.

Second, the balance of knowledge is a really big set as well. In terms of this quote, rather than encompassing all that remains POSSIBLE as true, we next must eliminate the possible-but-still-wrong. It's always possible that your car won't start because there's something wrong with the carburetor (a favorite explanation among backyard mechanics), but that still doesn't justify ending your inquiry there; there are too many OTHER possibilities, each equally "possible," which should also be considered (such as the ignition, the battery, the fuel supply, the air supply, etc.). In this very practical example, simply eliminating the "impossible" does not leave only one possibility, but many, and the possible causes must then be winnowed down through some rational process. FYI, far too many backyard mechanics simply began adjusting the many screws on their carb, and threw off those delicate settings so badly that even a competent mechanic would first have to correct that as a problem before he could look elsewhere. Jumping to conclusions can be as unhelpful as pursuing an impossible course (for example, praying for your favorite deity to fix your car).

Third, the final part of the Sherlock quote presumes that the investigator is competent to imagine the full scope of possibilities. Even beyond the possible-but-wrong set, there remain possibilities that one might never imagine. In the car example, perhaps someone removed the chain which drives the camshaft(s) off a crankshaft gear! It's highly unlikely of course, but for that very reason it is one of the last possibilities someone might be likely to imagine. Few backyard mechanics would even think of it. In an example more familiar to skeptics, a magician might come up with an entirely new technique of sleight of hand (or of technology), and even the best of us might fail to spot that explanation. In fact, the perpetual goal of the con artist is to always seek a new way to fleece the rubes with some bit of legerdemain. Same goes for the opponent in a legal suit, or the prophet leading a new cult. If there were only a finite number of "possibilities," they could (eventually) be cataloged in a database and automatically listed for your rational consideration. Despite all best intentions, nobody (not even the mighty Wikipedia) has been able to exhaustively list every "possible" solution to our inquiries.

It's no shame that we've perhaps relied too gullibly on Sherlock's maxim; shucks, even Spock fell for it at least once (oh yeah, he's fictional too!) Our minds are ill-equipped to pursue an exhaustive analysis of potential explanations to every mystery we encounter. But Holmes is sometimes given a bit too much "deference to Authority," because of his rank (um, none), academic degrees (ditto), and aristocratic bearing (now we've hit on it!) Leave it to the boys at Scotland Yard to lend more credence than called for to an opium addict! As for the rest of us, it might just be helpful to remember that we cannot always rely on fictional characters to define the best means of skeptical inquiry.

Finally, I hope a few of you might have noticed that this entire article has been what is known as a "Straw Man" argument; I set up my straw man (Holmes), plagiarized his words in a shameless paraphrase, and then proceeded to demonstrate the might of my intellect by knocking him down. It's like I almost couldn't help but win! Isn't this fun? :)

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**One day, Sherlock Holmes and Doctor Watson were doing their usual investigative business, when they uncovered an unusual painting.**

**At first glance, it looked like a picture of normal oak tree, in the middle of a wilderness, but if one looked closer, one could see that it was a remarkable painting. The tree trunk was actually made of fire, and its branches were made of ice, clouds and earth.**

**"What is it, Holmes?" asked Watson in awe.**

**"It's an Element tree, my dear Watson," replied Holmes.**

# 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, January 16, 2016 - Lecture**

**Dr. Ted Daeschler will discuss “A Farewell to *Tiktaalik*”.**

**See page 4 for more details.**

**Saturday, February 20, 2016 - Lecture Professor Alan Mann will speak on “The Scars of Human Evolution”.**

**See Page 5 for more details.**

**Saturday, March 19, 2016 - Lecture**

**Professor Bob Blaskiewicz will speak on “Skepticism and Critical Thinking” .**

**See Page 6 for more details.**

**Saturday, April 16, 2016 - Lecture**

**Dr. Tom Delworth will discuss “Global Warming”.**

**See Page 6 for more details.**

**Saturday, May 21, 2016 - PhACT Expedition to Haycock Mountain**

**See Page 6 for more 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](mailto: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>

**Tuesday, January 5, 2016 at 7:00 PM** at Washington Memorial Chapel, on Route 23 in Valley Forge.

Friends of Valley Forge Park

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

**September 11, 1777: The Battle of Brandywine**

**Speaker: Bruce Mowday**

A popular author talks about the soldiers and civilians who shaped the first big battle of the Philadelphia Campaign and sent Congress fleeing.

Free and Open to the Public.

**Tuesday, January 5, 2016 - 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: Discussion Topic TBA.**

This event is part of Eastern State's ongoing Searchlight Series of events addressing issues in contemporary corrections. The Searchlight Series discussions take place the first Tuesday of every month, free and open to the public. No reservations required.

The Searchlight Series is supported in part by a grant from The George W. Rentschler Foundation.

Free. Reception to follow.

**Wednesday, January 6, 2016 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

**Wednesday, January 6, 2016 at 6:00 PM** at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

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

**THE PILTDOWN FOSSIL FORGERY AND**

**THE SEARCH FOR THE "FIRST ENGLISHMAN"**

**Saturday, January 9, 2016 at 10:00 am** at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

**LAUREL HILL: THE HOT SPOTS AND STORIED PLOTS**

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? 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. This is the perfect tour for first-time visitors to Laurel Hill, and anyone else who enjoys beautiful art, scenic nature and fascinating history. "The Hot Spots and Storied Plots" will be presented monthly as part of Laurel Hill Cemetery's Fourth Friday and Second Saturday tour series.

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

**Saturday, January 9, 2016 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:

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

**Monday, January 11, 2016 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.

This month's Science of Tap is brought to you by the American Philosophical Society.

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

<http://scienceontapphilly.com/>

**Friday, January 15, 2016 at 12:00 pm.** at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

**LUNCHBOX LECTURE**

As the days grow shorter and the chill of the winter season settles upon us, Laurel Hill's 78 acres of enchanting landscape becomes increasingly difficult to traverse by foot. The Lunchbox Lecture series offers visitors the opportunity to tour and explore the Cemetery from the seated comfort of the warm indoors. Bring a bagged lunch and your sense of curiosity to the first of this three-part winter series.

Free parking is located in the lot across the street from the Gatehouse.

The cost is \$8/person general admission. Tickets may be purchased in advance by phone (215) 228-8200 or online. Advanced reservations are requested and seating is limited.

## PhACT Lecture

**Saturday, January 16, 2016  
at 2:00 PM**

**Dr. Ted Daeschler will discuss "A Farewell to Tiktaalik".**

**See page 4 for more details.**

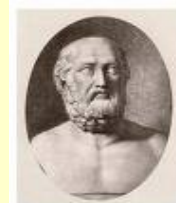
**Monday, January 18, 2016 at 6:00 PM** at **National Mechanics**, 22 S. Third Street, Philadelphia, PA 19106, **The Center for Environmental Policy of the Academy of Natural Sciences**

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

The Academy's environmental programs focus

**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.



on a variety of critical topics, including watershed science, environmental policy, and sustainability. A monthly gathering that features a brief, informal presentation by a scientist or other expert followed by lively conversation. Good food and beer.

Sponsored by the Pew Foundation..

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

<http://scienceontaphilly.com/>

**Tuesday, January 19, 2016 at 6:00 PM at Landmark Americana Tap & Grill at 54th and City Avenue, Philadelphia 19131 at St. Joseph's University**

<http://scienceonthehill.weebly.com/>

**Sleepy Worms and Tired Flies**

**Dr. Matthew, Dept. of Biology, St. Joseph's University**

Sleep is an essential behavior that we spend more than a third of our lives doing, however the function of sleep remains one of nature's greatest biological mysteries. Every animal that has been observed closely has proven to display a sleep behavior of some form. Over the past few decades invertebrate animals like fruit flies and nematodes have provided insights into both the purpose and molecular regulation of sleep. Dr. Nelson will talk about the history and sleep contributions of the invertebrate sleep biology field.

Free and Open to the Public.

Registration Requested

**Friday, January 22, 2016 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**

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## Tapping Our Watershed—The Academy of Natural Sciences

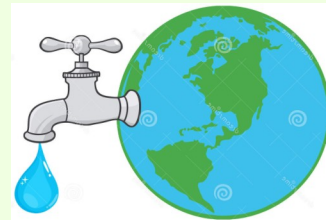
The Academy's environmental programs focus on a variety of critical topics, including watershed science, environmental policy, and sustainability.

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/>



history. "The Hot Spots and Storied Plots" will be presented monthly as part of Laurel Hill Cemetery's Fourth Friday and Second Saturday tour series, which takes place every fourth Friday, and second Saturday.

The walking tour will take place on Friday, January 22 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 \$12/person general admission. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

**Sunday, January 24, 2016 at 1:30pm: Humanist Association of Greater Philadelphia (HAGP)**

[www.HAGP.org](http://www.HAGP.org)

**Speaker Series presents *Living in the Crosshairs: The Untold Stories of Anti-Abortion***

David S. Cohen & Krysten Connon will discuss issues their book covers at a time when these subjects are in the news regularly and a few days after the anniversary of Roe v. Wade. Upper Moreland Library, 109 Park Avenue, Willow Grove, PA

Free and Open to the Public

**Monday January 25, 2016 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/>  
Topic TBA

Free and Open to the Public.

**Tuesday, January 26, 2016 at 6:00 PM at World Cafe Live, 3025 Walnut Street, Philadelphia**

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

**PENN Science Café**

**Michael Platt**, James S. Riepe University Professor of Neuroscience in the Perelman School of Medicine, professor of psychology in the School of Arts and Sciences and professor of marketing in the Wharton School "Friendship and Your Brain" Friendship, charity and empathy: How do these profoundly human feelings arise from the coordinated actions of our brains, bodies and genes? What are the roots of the social emotions in other animals? How does our social environment get "under our skin" to shape our lives and livelihood? Using his decades of experience studying the behavior and biology of rhesus macaques, Michael Platt, a Penn Integrates Knowledge Professor, will discuss the new science of friendship and what monkeys can teach us about ourselves.

Free and Open to the Public.

**Tuesday, February 2, 2016 - 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: Discussion Topic TBA.**

This event is part of Eastern State's ongoing Searchlight Series of events addressing issues in contemporary corrections. The Searchlight Series discussions take place the first Tuesday of every

**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>



month, free and open to the public. No reservations required.

The Searchlight Series is supported in part by a grant from The George W. Rentschler Foundation.

Free. Reception to follow.

**Tuesday, February 2, 2016 at 7:00 PM** at Washington Memorial Chapel, on Route 23 in Valley Forge.

Friends of Valley Forge Park

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

**To the Last Extremity: Fort Mifflin's Valiant Stand**

**Speaker: Elizabeth Beatty**

Fort Mifflin's site director shares the history, construction, and defense of the Delaware River Fort that the British bombarded for weeks during the Revolutionary War.

Free and Open to the Public.

**Wednesday, February 3, 2016 at 6:00 PM** at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

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

**Dr. Megan Kassabaum, Weingarten Assistant Curator, American Section and Dr. Simon Martin, Associate Curator / Keeper, American Section**

**Great Myths and Legends Lecture Series: HERO TWINS OF THE AMERICAS: MYTHS OF ORIGIN, DUALITY, AND VENGEANCE**

Myths concerning the "hero twins" are widespread from Canada to South America. In the archetypal Maya myth, a pair of twin brothers battle with a range of monsters and death deities as they seek to make the world safe for humankind. Instead of defeating their enemies in trials of strength, they outwit them in games of skill, ingenuity, and magic, offering role models of how best to survive death and ultimately attain rebirth into the sky. A variety of myths throughout North America draw on these same themes but differ dramatically in the details, thereby demonstrating the incredible antiquity of the basic story and the relationships between the diverse cultures of the New World.

**Saturday, February 6th, 2016, noon to 4 PM** at the **Wagner Free Institute of Science, 1700 West Montgomery Avenue, Philadelphia, PA 19121**

[www.wagnerfreeinstitute.org](http://www.wagnerfreeinstitute.org) ph 215-763-6529

Wagner's Winter Wonderland

Celebrate Winter with seasonal arts, crafts, and activities during this Saturday open house.

Free and Open to the Public

**Monday, February 8, 2016 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.

This month's Science of Tap is brought to you by the American Philosophical Society.

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

<http://scienceontapphilly.com/>

**Tuesday, February 9, 2016 at 6:00 PM** at **World Cafe Live, 3025 Walnut Street, Philadelphia**

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

**PENN Lightbulb Café**

**Peter Decherney** professor of English and cinema studies in the School of Arts & Sciences "Hollywood's Past and Future" Hollywood has dominated global screens and imaginations for more than 100 years. Against the odds, movie studios have weathered economic crises, disruptive new technologies and powerful competition. Peter Decherney will draw on his new book, *Hollywood: A Very Short Introduction*, to offer five theses on Hollywood's tenacity. What is the recipe that has allowed Hollywood to adjust to new challenges? And what can our media past tell us about our current moment and future?

Free and Open to the Public.

**Wednesday, February 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:

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

**Thursday, February 11, 2016 at 10:00am** at **Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA 19132. 215-228-8200**

<http://www.thelaurelhillemetery.org>

**VICTORIANS AFTER DARK: LOVE AND LUST IN THE 19TH CENTURY (A VALENTINE'S DAY PROGRAM and RECEPTION)**

Between OkCupid and singles night at the bar, w e



may think we have the corner market on love connections in the 21st century; but be not fooled; Victorians in the 1800s had their ways. The flick of a fan could indicate whether a lover was supposed to follow or flee, and calling cards did double duty as both contact information and indicating interest level. Even sketches, letters, and locks of hair joined the fray as harbingers of amour and sometimes scandal. Join us for a night that is equal parts love and lust as we cover everything from the 19th century version of

speed dating to romantic acts that will make you swoon.

Who was the stunning young medium who left a famous explorer embarrassed by his 1850s "sexts"? What is the tragic account of the handsomest man in Laurel Hill? And what other tales of beating hearts lie beneath Laurel Hill? This Valentine's Day program will answer those questions and more with a scintillating talk around a roasting fire in Laurel Hill's historic gatehouse followed by a reception with cocktails and sumptuous desserts. Don't miss the opportunity to try your hand at Victorian flirting tactics and depart into the winter's night warmed by stories that prove though the body may be gone, a good love story is rarely forgotten.

The talk will take place

on Thursday, February

11 at 6:30pm and

8:15pm, in Laurel Hill

Cemetery's Gatehouse

at 3822 Ridge Avenue,

Philadelphia, PA

19132. Free parking is

located in the lot across

the street from the Gatehouse.

The cost is \$20/person. Space is limited, advance registration is required. Tickets can be purchased by phone (215) 228-8200 or online.

**Presented by: Alexis Jeffcoat**



**Saturday, Friday, February 13, 2016 at 10:00am** at **Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA 19132. 215-228-8200**

<http://www.thelaurelhillemetery.org>

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

**-our-watershed/**

The Academy's environmental programs focus on a variety of critical topics, including watershed science, environmental policy, and sustainability. A monthly gathering that features a brief, informal presentation by a scientist or other expert followed by lively conversation. Good food and beer.

Sponsored by the Pew Foundation..

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

<http://scienceontapphilly.com/>

**Tuesday, February 16, 2016 @ 7:00 pm - 9:00 pm**

at Commonwealth Chateau, Chestnut Hill College, 9230 Germantown Avenue, Philadelphia, PA 19118

**The Institute for Science and Religion**

<http://www.irands.org>

**Where the Great Heron Feeds: Christianity, Animism, and the Re-Enchantment of the World**

**Mark I. Wallace Ph.D, Professor of Religion, Swarthmore College**

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

Thursday, February 18th, 2016, 6 to 7:30 pm at the **Wagner Free Institute of Science**, 1700 West Montgomery Avenue, Philadelphia, PA 19121 [www.wagnerfreeinstitute.org](http://www.wagnerfreeinstitute.org) ph 215-763-6529

**When Bugs Outsmart Drugs: The Effects of America's Antibiotic Obsession**, a lecture by Dr. Bill Wuest, Temple University

Bacteria are everywhere. While most bacteria are helpful, hype about a few disease-causing bacteria has fueled mass "germophobia," leading us to overuse antibacterial disinfectants to the point that some are failing due to resistance. At this Weeknights at the Wagner talk, Temple University Chemistry professor Bill Wuest will discuss the future of microbiological and biochemical approaches to fighting bacteria and how examples from nature advance our understanding of the earth's most numerous living organisms.

**Friday, February 19, 2016 at 12:00am at Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

**LUNCHBOX LECTURE**

As the days grow shorter and the chill of the winter season settles upon us, Laurel Hill's 78 acres of enchanting landscape becomes increasingly difficult to traverse by foot. The Lunchbox Lecture series offers visitors the opportunity to tour and explore the Cemetery from the seated comfort of the warm indoors. Bring a bagged lunch and your sense of curiosity to the second lecture of this three-part winter series.

February's lecture will take place on Friday, February 19 at 12:00am. The cost is \$8/person general admission. Tickets may be purchased in advance by phone (215) 228-8200 or online. Advanced reservations are requested and seating

is limited.

Upon arrival, 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.

**PhACT Lecture**

**Saturday, February 20, 2016 at 2:00 PM**

**Professor Alan Mann will speak on "The Scars of Human Evolution".**

**See Page 5 for more details.**

**Tuesday, February 23, 2016 at 6:00 PM at World Cafe Live, 3025 Walnut Street, Philadelphia**

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

**PENN Science Café**

**Vijay Balasubramanian**, Cathy and Marc Lasry Professor of Physics in the School of Arts & Sciences (Topic to be announced)

Free and Open to the Public.

**Friday, February 26, 2016 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**

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? 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. This is the perfect tour for first-time visitors to Laurel Hill, and anyone else who enjoys beautiful art, scenic nature and fascinating history. "The Hot Spots and Storied Plots" will be presented monthly as part of Laurel Hill Cemetery's Fourth Friday and Second Saturday tour series, which takes place every fourth Friday, and second Saturday.

The walking tour will take place on Friday, January 22 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 \$12/person general admission. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

**Tuesday, March 1, 2016 at 6:00 PM at World Cafe Live, 3025 Walnut Street, Philadelphia**

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

**PENN Science Café**

**Michael Weisberg**, chair and professor of philosophy in the School of Arts & Sciences "Public (Mis)understanding of Evolution" Ten years have passed since the *Kitzmiller v. Dover* trial, one of the most prominent public forays into evolution in recent memory. But in the decade since what has changed about the perception of this topic? Michael Weisberg, an expert on scientific methods and evolutionary biology, discusses what we currently know about evolution, why people are still confused about it, what role religion and background play in their perceptions and what he learned on a recent research trip to the Galapagos to document evolution in action. He'll share photos and video from the Galapagos trip and a preview of the short documentary series he and his colleagues are creating.

Free and Open to the Public.

**Tuesday, March 1, 2016 - 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: Discussion Topic TBA.**

This event is part of Eastern State's ongoing Searchlight Series of events addressing issues in contemporary corrections. The Searchlight Series discussions take place the first Tuesday of every month, free and open to the public. No reservations required.

The Searchlight Series is supported in part by a grant from The George W. Rentschler Foundation.

Free. Reception to follow

**Tuesday, March 1, 2016 at 7:00 PM at Washington Memorial Chapel, on Route 23 in Valley Forge.**

Friends of Valley Forge Park

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

**Economics of the Valley Forge Encampment Speaker: Dr. Susan Christoffersen**

A university professor discusses the economics of the Valley Forge encampment and suggests how lessons learned from Washington's army can inform our decisions today.

Free and Open to the Public.

**Wednesday, 02 March 2, 2016 at 6:00 PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104**

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

**Great Myths and Legends Lecture Series: THE GOLDEN AGE OF KING MIDAS**

**Dr. C. Brian Rose, Ferry Curator-in-Charge, Mediterranean Section**

Midas was indisputably the most famous ruler of the Phrygian kingdom in central Turkey, and his Golden Touch made him an especially favorite subject in Greek legend. His first monumental project as king was a colossal tomb



## 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/](http://www.rittenhouseastronomicalsociety.org/)

for his father (ca. 740 BCE) that was excavated by the University of Pennsylvania in 1957, and the finds from that tomb form the centerpiece of the Golden Age of King Midas exhibition at the Penn Museum (open February–November 2016). This lecture provides an overview of the city that he ruled, his diplomatic outreach to the Greeks, and his antagonistic relationship with the Assyrians.

Full series subscriptions for the Great Myths and Legends Lecture Series (nine lectures) are \$40; \$15 for Penn Museum Members. Single lectures are \$5, or \$2 for Museum members in advance; \$10 for all at the door. All programs begin at 6:00 pm on the first Wednesday of the month.

**Wednesday, March 9, 2016 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: <http://www.rittenhouseastronomicalsociety.org/>

**Thursday, March 12, 2016 at 10:00am** at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA 19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

### LUNCHBOX LECTURE: MEET THE ENTERTAINERS

As the days grow shorter and the chill of the winter season settles upon us, Laurel Hill's 78 acres of enchanting landscape becomes increasingly difficult to traverse by foot. The Lunchbox Lecture series offers visitors the opportunity to tour and explore the Cemetery from the seated comfort of the warm indoors. From America's first ballerina to the contemporary stars of cinema (hint: YO! Adrian!), the final curtain call of the series will feature a look into the cemetery's most prolific entertainers who now call the cemetery home.

The lecture will take place on Thursday, March 12 at 10:00am. The cost is \$8/person general admission. Tickets may be purchased in advance by phone (215) 228-8200 or online. Advanced reservations are requested and seating is limited.

Upon arrival, 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.

**Guide: Terri Greenberg**

**Sunday, March 13, 2016 1:30 pm – 4:00 pm** at Commonwealth Chateau, Chestnut Hill College, 9230 Germantown Avenue, Philadelphia, PA 19118

### The Institute for Science and Religion

<http://www.irands.org>

### The Principle and Practice of Civil Dialogue

**Janet Mock, CSJ, Former Executive Director, Leadership Conference of Women Religious**

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

**Monday, March 14, 2016 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.

This month's Science of Tap is brought to you by the American Philosophical Society.

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

<http://scienceontapphilly.com/>

**Tuesday, March 15, 2016 at 6:00 PM** at World Cafe Live, 3025 Walnut Street, Philadelphia

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

### PENN Science Café

**Brenda Casper**, chair and professor of biology in the School of Arts & Sciences "Studying Climate Change in a Land of Nomads: How Species Will Respond to New Conditions in the Mongolian Steppe" Industrialized nations bear the biggest responsibility in contributing to anthropogenic climate change, but even the most remote areas of the globe bear the consequences. Brenda Casper and her students have spent years studying how future climate change will impact northern Mongolia, a semi-arid steppe where nomadic herders have practiced their livelihoods in much the same way for thousands of years. In this talk, she will explain what their work is revealing about how plants and soil bacterial communities will respond to future warming and land-use change and what that will mean for the region.

Free and Open to the Public.

**Sunday, March 15, 2016 at 10:00am** at Laurel

**Saturday, March 19th, 2016 at the Wagner Free Institute of Science**, 1700 West Montgomery Avenue, Philadelphia, PA 19121

[www.wagnerfreeinstitute.org](http://www.wagnerfreeinstitute.org) ph 215-763-6529

### Westbrook Lecture 2016

Zoologist Dr. Kristofer Helgen. Curator-in-Charge of Mammals at the Smithsonian National Museum of Natural History, Dr. Helgen is known for discovering approximately 100 mammal species worldwide that were previously unknown to scientists. While he's traveled the world to make his discoveries, many of them also happen in natural history museums, giving him a unique perspective on how collections such as the Wagner's are vital to the scientific community.

Join us for an afternoon lecture and reception with Dr. Helgen.

**Saturday, March 19, 2016 at 9:30 AM to 2:30 PM** at the 1696 Thomas Massey House in Broomall, PA.

An 18th century hearth-cooking workshop  
A late winter/early spring meal.

Cost: \$35.00

For information call Clarissa Dillon ... 610-642-4269

## PhACT Lecture

**Saturday, March 19, 2016  
at 2:00 PM**

**Professor Bob Blaskiewicz will speak on "Skepticism and Critical Thinking".**

**See Page 6 for more details.**

**Monday, March 21, 2016 at 6:00 PM** at National Mechanics, 22 S. Third Street, Philadelphia, PA 19106, The Center for Environmental Policy of the Academy of Natural Sciences

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

The Academy's environmental programs focus



on a variety of critical topics, including watershed science, environmental policy, and sustainability. A monthly gathering that features a brief, informal presentation by a scientist or other expert followed by lively conversation. Good food and beer.

Sponsored by the Pew Foundation..

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

<http://scienceontapphilly.com/>

**Tuesday, April 5, 2016 - 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: Discussion Topic TBA.**

This event is part of Eastern State's ongoing Searchlight Series of events addressing issues in contemporary corrections. The Searchlight Series discussions take place the first Tuesday of every month, free and open to the public. No reservations required.

The Searchlight Series is supported in part by a grant from The George W. Rentschler Foundation.

Free. Reception to follow

**Tuesday, April 5, 2016 at 6:00 PM at World Cafe Live, 3025 Walnut Street, Philadelphia**

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

**PENN Lightbulb Café**

**Michael Horowitz**, associate professor of political science in the School of Arts & Sciences **"Why Leaders Fight"**

Michael Horowitz is the co-author of *Why Leaders Fight* and will discuss how world leaders engage in different types of military decision-making, depending on their personal experiences in life. Compiling the biographies of nearly 2,500 dictators, presidents, kings, heads of state and prime ministers from around the world since the 1800s, *Why Leaders Fight* uses the largest set of data on leader backgrounds to create a scale for risk-aversion and propensity for violence. The researchers used this scale to see if it can predict the leaders' behavior when it comes to military aggression, and it worked.

Free and Open to the Public.

**Tuesday, April 5, 2016 at 7:00 PM** at Washington Memorial Chapel, on Route 23 in Valley Forge.

Friends of Valley Forge Park

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

**Mount Vernon during the Revolutionary War**  
Speaker: **Mary Thompson**

The research librarian at Mount Vernon gives us a behind-the-scenes look at what was happening at Washington's Virginia home during America's long fight for freedom.

Free and Open to the Public.

**Wednesday, April 6, 2016 at 6:00 PM** at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

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

**Dr. Megan Kassabaum, Weingarten Assistant Curator, American Section and Dr. Simon Martin, Associate Curator / Keeper, American Section**

**Great Myths and Legends Lecture Series: THE QUEEN OF SHEBA IN HISTORY AND LEGEND**

**Dr. Annette Y. Reed, Associate Professor of Religious Studies, University of Pennsylvania**

Best known from the Bible's account of her marriage to the wise king Solomon, the Queen of Sheba has attracted the curiosity of Jews, Christians, and Muslims for millennia. The lecture traces tales about her from Israel to Ethiopia, and explores how traditions about her have traveled between different religions and connected different regions.

**Thursday, April 7, 2016 at 7:30PM** at the Free Library of Philadelphia, 1901 Vine Street, 19103  
<http://libwww.freelibrary.org/authorevents/215-686-5322>

**Buzz Aldrin | No Dream Is Too High: Life Lessons From a Man Who Walked on the Moon**

Best known for the 1969 Apollo 11 moon landing, retired Air Force Colonel Buzz Aldrin holds a doctorate in astronautics; developed the orbital rendezvous technique critical to America's lunar landings; and founded the ShareSpace Foundation, a nonprofit organization devoted to opening the doors of space tourism for all people. In *Magnificent Desolation: The Long Journey Home from the Moon*, Aldrin told the tale of the historic moon landing, as well as the story of his later struggle with and triumph over depression and alcoholism. He is also the author of three other nonfiction books, two scientifically accurate novels, and two children's books. In *No Dream Is Too High*, Aldrin illustrates the finely honed principles and lessons taught by his extraordinary life.

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

Buy tickets online |

**Monday, April 11, 2016 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.

This month's Science of Tap is brought to you by the American Philosophical Society.

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

<http://scienceontapphilly.com/>

**Wednesday, April 13, 2016 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: <http://www.rittenhouseastronomicalsociety.org/>

## PhACT Lecture

**Saturday, April 16, 2016  
at 2:00 PM**

**Dr. Tom Delworth will discuss  
"Global Warming".  
See Page 6 for more details.**

**Sunday, April 17, 2016 1:30 pm – 3:30 pm** at Commonwealth Chateau, Chestnut Hill College, 9230 Germantown Avenue, Philadelphia, PA 19118

**The Institute for Science and Religion**

<http://www.irands.org>

**Laudato Si: Reflections on Pope Francis' Encyclical**

**Thomas Reese, SJ, Senior Analyst for National Catholic Reporter**

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

**Monday, April 18, 2016 at 6:00 PM** at **National Mechanics, 22 S. Third Street, Philadelphia, PA 19106, The Center for Environmental Policy of the Academy of Natural Sciences**

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

The Academy's environmental programs focus on a variety of critical topics, including watershed science, environmental policy, and sustainability. A monthly gathering that features a brief, informal presentation by a scientist or other expert followed by lively conversation. Good food and beer.

Sponsored by the Pew Foundation..

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

<http://scienceontapphilly.com/>

**Tuesday, April 19, 2016 at 6:00 PM** at **World Cafe Live, 3025 Walnut Street, Philadelphia**

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

**PENN Science Café**

**Lauren Sallan**, assistant professor in Earth and Environmental Science Department in the School of Arts & Sciences

**"The Rise of Tiny Fish"**

The 64,000 living species of vertebrates dominate ecosystems on land (as tetrapods, including humans) and in the sea (as ray-finned fishes and sharks). The rise of vertebrates in the Paleozoic (542-250 million years ago) is usually cast as a gradual march towards bigger and better things. Paleontologist Lauren Sallan will show that new, 'Big Data' approaches to the early fossil record have shown that modern vertebrate biodiversity is the unlikely, but predictable, result of global change, environmental



challenges, ecological interactions and even mass extinction.

Free and Open to the Public.

**Thursday, April 21, 2016 at 7:30PM** at the Free Library of Philadelphia, 1901 Vine Street, 19103

<http://libwww.freelibrary.org/authorevents/215-686-5322>

Historians Annette Gordon-Reed and Peter S. Onuf are two of the world's leading authorities on America's enigmatic and paradoxical third President. Gordon-Reed is most noted for the Pulitzer Prize-winning *The Hemingses of Monticello*, a history of the African American family whose close blood ties to Jefferson had theretofore been redacted from the pages of history. A professor of law and history at Harvard, her many honors include the National Humanities Medal and a prestigious MacArthur "Genius Award." Onuf was the longtime Thomas Jefferson Foundation Professor of History at the University of Virginia, known for his profound Jeffersonian scholarship. His books include *The Mind of Thomas Jefferson*, *Jefferson's Empire*, and a score of works about this man and his era. In *Most Blessed of the Patriarchs*, Gordon-Reed and Onuf present a revealing character study that definitively clarifies the philosophy of the man from Monticello.

Cost: \$15 General Admission, \$7 Students  
Buy tickets online.

**Saturday, April 23, 2016 at 9:30 AM to 2:30 PM** at the 1696 Thomas Massey House in Broomall, PA.

An 18th century hearth-cooking workshop  
Making 18th century pickles.

Cost: \$35.00

For information call Clarissa Dillon ... 610-642-4269

**Tuesday, May 3, 2016 at 7:00 PM** at Washington Memorial Chapel, on Route 23 in Valley Forge.

Friends of Valley Forge Park

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

Free and Open to the Public.

**Reporting the Revolutionary War**

Speaker: **Todd Andrlik**

Revolutionary War news coverage, as reported in the eighteenth century newspapers of Britain and the United States, and shared by the award-winning author of *Reporting the Revolutionary War*.

Special Location: Park Theater. Tickets required  
Friends Members and WM Chapel donors:  
FREE • Non-members: \$20

**Tuesday, May 3, 2016 - 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: Discussion Topic TBA.**

This event is part of Eastern State's ongoing Searchlight Series of events addressing issues in

contemporary corrections. The Searchlight Series discussions take place the first Tuesday of every month, free and open to the public. No reservations required.

The Searchlight Series is supported in part by a grant from The George W. Rentschler Foundation.

Free. Reception to follow

**Monday, May 9, 2016 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.

This month's Science of Tap is brought to you by the American Philosophical Society.

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

<http://scienceontapphilly.com/>

**Wednesday, May 11, 2016 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: <http://www.rittenhouseastronomicalsociety.org/>

**Monday, May 16, 2016 at 6:00 PM** at National Mechanics, 22 S. Third Street, Philadelphia, PA 19106, The Center for Environmental Policy of the Academy of Natural Sciences

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

The Academy's environmental programs focus on a variety of critical topics, including watershed science, environmental policy, and sustainability. A monthly gathering that features a brief, informal presentation by a scientist or other expert followed by lively conversation. Good food and beer.

Sponsored by the Pew Foundation..

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

<http://scienceontapphilly.com/>

## PhACT Expedition

**Saturday, May 21, 2016**

**PhACT Expedition to Haycock Mountain**

**See Page 6 for more details**

**Saturday, May 21, 2016 at 9:30 AM to 2:30 PM** at the 1696 Thomas Massey House in Broomall, PA.

An 18th century hearth-cooking workshop

A mid-spring meal. Cost: \$35.00

For information call Clarissa Dillon ... 610-642-4269

**Tuesday, June 7, 2016 - 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:**

**Discussion Topic TBA.**

This event is part of Eastern State's ongoing Searchlight Series of events addressing issues in contemporary corrections. The Searchlight Series discussions take place the first Tuesday of every month, free and open to the public. No reservations required.

The Searchlight Series is supported in part by a grant from The George W. Rentschler Foundation.

Free. Reception to follow

**Wednesday, June 8, 2016 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: <http://www.rittenhouseastronomicalsociety.org/>

**Tuesday, June 14, 2016 at 6:00 PM** at World Cafe Live, 3025 Walnut Street, Philadelphia

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

**PENN Science Café**

**Scott Barry Kaufman**, scientific director of the Imagination Institute in the Positive Psychology Center, School of Arts & Sciences "Wired to Create: Unraveling the Mysteries of the Creative Mind"

Is it possible to make sense of something as elusive as creativity? Based on his research, psychologist Scott Barry Kaufman offers a glimpse inside the "messy minds" of highly creative people. Revealing the latest neuroscience and psychology findings, along with engaging examples of artists and innovators throughout history, he will shine a light on the practices and habits of mind that promote creative thinking. Kaufman will untangle a series of paradoxes — mindfulness and daydreaming, seriousness and play, openness and sensitivity, solitude and collaboration — to show that, by embracing our own contradictions, we can tap into our deepest creativity.

Free and Open to the Public.

**Saturday, October 22, 2016 at 9:30 AM to 2:30 PM** at the 1696 Thomas Massey House in Broomall, PA.

An 18th century hearth-cooking workshop

A mid-autumn meal. Cost: \$35.00

For information call Clarissa Dillon ... 610-642-4269

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

Name: \_\_\_\_\_

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\_\_\_\_\_

Phone: \_\_\_\_\_ E\_mail \_\_\_\_\_

**Mail checks to:**  
**PhACT**  
**653 Garden Road**  
**Glenside, PA 19038**  
  
**or to pay online go to**  
**[www.PhACT.org](http://www.PhACT.org)**

## 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.

### The PhACT Council 2015/16

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The PhACT website is: [www.phact.org](http://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](mailto:phactpublicity@aol.com).

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*Phactum* Editor, Ray Haupt  
[phactpublicity@aol.com](mailto:phactpublicity@aol.com)



**The things that will destroy America are prosperity-at-any-price, peace-at-any-price, safety-first instead of duty-first, the love of soft living, and the get-rich-quick theory of life.**

~ Theodore Roosevelt (1858 - 1919),  
26th President of the United States