

"The people are the
only sure reliance for
the preservation of
liberty." -

Thomas Jefferson
(1743 - 1826)

Phactum

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

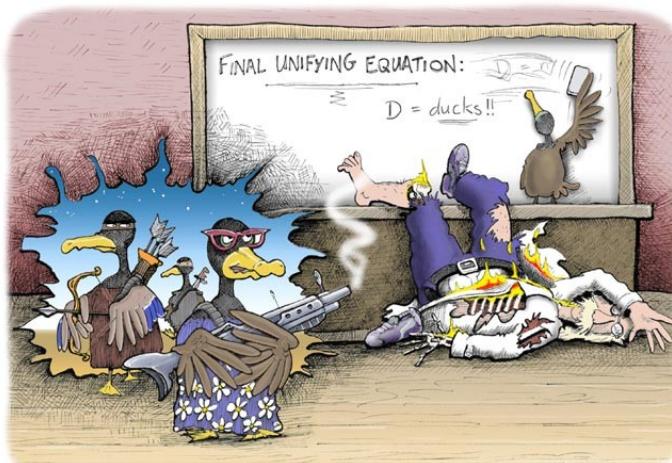
September 2010

editor: Ray Haupt email: phactpublicity@aol.com
Webmaster: Wes Powers <http://phact.org/>

Come and visit PhACT as we kick off our 2010/2011 Lecture Series
Saturday, September 18, 2010 at 2:00 PM

**Dr. David Cattell, Chairman of the Physics Department of Community
College of Philadelphia, will host science and science fiction author
John Grant.**

**At Community College of Philadelphia in the Small Auditorium in the
Bonnell Building. Enter on 17th street about 300 feet south of Spring
Garden Street. This meeting is free and open to the public.**



"Bravo Professor, you stumbled upon the one fact that makes sense of it all. Unfortunately humanity is not permitted to know that the Universe was designed by a committee of ducks."

Cartoon by Nick D. Kim, <http://www.lab-initio.com>
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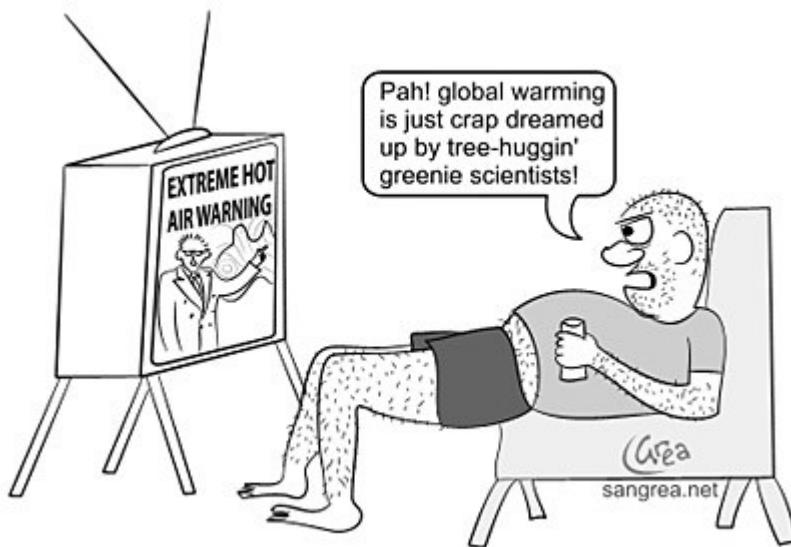
Denying Science - John Grant

Is global warming merely scaremongering by climatologists conspiring to protect their jobs? Is evolution "just a theory"? Do vaccinations cause autism? Did Pasteur recant the germ theory on his deathbed? Were those results showing a correlation between cigarettes and lung cancer faked up by anti-smoking Nazis out to stop us all from having a good time? Does HIV/AIDS exist as a disease at all or is it a figment dreamed up by greedy drug companies?

The ideas behind all of these questions are ridiculous, of course: to believe in such notions you'd have to refuse the

(Continued on page 2)

Belief begins where science leaves off and ends where science begins. -
Rudolf Ludwig Karl Virchow, German medical pioneer, (1821 - 1902)



Cartoon by Grea
<http://www.sangrea.net/free-cartoons/>
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including the Hugo (twice) and the World Fantasy Award. The book he is currently working on, Denying Science: Conspiracy Theories, Media Distortions, and the War Against Reality, will be published by Prometheus next year. In this talk he will, in effect, offer us a glimpse of a work in progress.

best understandings of modern science -- in essence, set your face firmly against reality. Yet many people, from average citizens to entertainment stars to powerful politicians, prefer to do exactly this rather than accept scientific findings that, for ideological, religious, or merely infantile reasons, they dislike. Some would quite literally prefer to watch their child die than admit that modern medicine works. And some denialists of science -- those who've convinced themselves and expend great effort convincing others that we have nothing to fear from greenhouse gases -- would rather see civilization founder than accept the need to change their daily habits.

John Grant is the author of the highly successful and sometimes controversial books *Discarded Science, Corrupted Science, and Bogus Science*, among about 60 others, and has won several international writing awards,

“Bogus Science” Reviewed - By Tom Napier

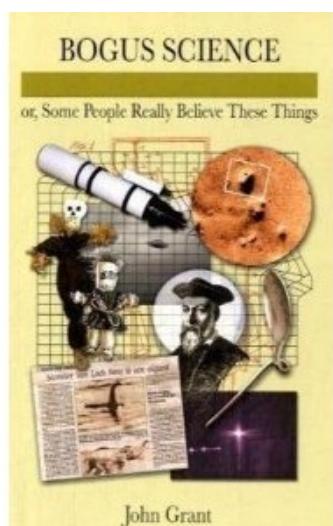
Back in 1952 a young author wrote, "Not many books have been written about modern pseudoscientists and their views." The author was Martin Gardner who recently died at the age of 95. He was introducing his book that, renamed "Fads and Fallacies in the Name of Science," became a modern classic. Its publication did more than anything to launch the skeptical movement.

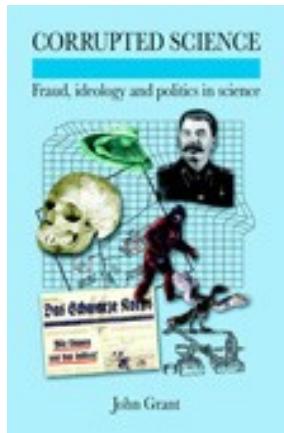
Gardner picked 25 areas of crackpottery and reported in depth on each. Since then there have been many books devoted to a single nutty idea and quite a few that try to cover too much ground too superficially. It is rare to find a book that follows Gardner's plan as closely as does "Bogus Science" by John Grant (2009) (\$12.95). Grant too has set out to discuss a limited number of topics in detail rather than to, "[T]ouch every possible base with infuriating briefness."

Here you will find all the usual suspects, the flat-earthers and the hollow-earthers, the believers in Atlantis, the pyramid prophets and the cryptozoologists. Perpetual motion and anti-gravity have their own long chapters. While there are some references to recent events, this is fundamentally an historical survey. You won't find any Johnny-come-lately cults or psychics. Perhaps they are more likely to sue.

Grant's chapters start in the middle of a page, making it difficult to locate or count them. Their headers are printed in red and all commence, "Some people really believe . . . ". As there is a substantial index, and as each right-hand page has a different heading, it is easier to check out specific topics than to read a chapter from beginning to end.

This fascinating but idiosyncratic little book (its footnotes too are printed in red) is the author's third about the fringes of science: it was preceded by "Discarded Science" (2006) and "Corrupted Science" (2007). I must look out for them.





Corrupted Science: Fraud, Ideology and Politics in Science

by John Grant

Publisher: Artist's and Photographers' Press Ltd, 2007
ISBN: 1-904332730 Hardcover 336 pages Retail Price: \$12.95

In this companion volume to John Grant's highly successful Discarded Science - Ideas That Seemed Good at the Time, we are introduced to the world of fraud and deception rather than the gentler realms of mistake and ignorance. Grant is as entertaining as ever, but his theme is serious and timely.

A panoply of scientific greats (including Ptolemy, Galileo, John Dalton, Robert Hooke and Isaac Newton) fake their results . . . Reiner Protsch's fraudulent dating of fossil humans . . . Shinichi Fujimura's astonishing diversity of "fossil finds" that seemed to rewrite Japan's racial history . . . Miracle cures for cancer . . . Copernicus, Galileo and the Roman Catholic Church's influence on cosmology . . . Christian Fundamentalism's war against evolution, environmentalism and stem-cell research . . . Racist pseudoscience - two words that encompass

much . . . The Nazis' promotion of pseudosciences like the World Ice Theory in an attempt to suppress "Jew Science" like Relativity . . . Stalinism and the promotion of Lysenkoist pseudogenetics in order to suppress bad news about Soviet agriculture . . . "Star Wars" and the Pentagon's fascination for other extraordinarily expensive, taxpayer-funded sciencefictional superweaponry that physics tells us cannot possibly work . . . The Bush Administration's attempts to impose sexual-abstinence programs and to suppress scientific information on global warming . . . The "burning of the digital books" on environmental damage . . .

In an age when politicians and zealots alike are using their every effort to corrupt our and our children's knowledge and understanding of science, and to a terrifyingly large extent succeeding, this witty, erudite and joyously readable book could not be more urgent.

It was very depressing to realize that, when looking around for regimes that have systematically corrupted science within the past century or so, three stand out quite distinctly, head and shoulders above the rest of the herd: Hitler's Germany, Stalin's Russia, and Bush's America. At times when working on the three relevant chapters I had to remind myself which chapter was the one in front of me: the parallels between the three regimes, in terms of their vigorous attempts to trample honest science underfoot, are as horrifically close as that - John Grant, 2007.

Discarded Science: Ideas That Seemed Good at the Time...

by John Grant

Publisher: Facts, Figures & Fun, 2006
ISBN: 1904332498, 9781904332497 320 pages, \$12.95

A fascinating trawl through the history of those scientific idea which seemed plausible, at least to some, but turned out to be wrong. Includes flat earth, hollow earth, lost worlds and bizarre ideas about evolution; Piltdown man and other scams; alchemy, aliens, humours and homunculi.

This is a special expanded version of our format that is 300+ pages. Included are:

Defunct Science and Pseudoscience: A lightning-quick broad-brush history of science, focusing on its transformation from a wing of philosophy via Bacon's introduction of the Scientific Method into the most powerful tool of understanding known to us. How scientific ideas have all the while fallen by the wayside as science has evolved. The difference between this and pseudoscience.

World in Upheaval: From the flat Earth at the centre of the Universe via the Copernican Revolution to the smallish planet orbiting an average star. The Ptolemaic cosmologies. Theories like that of the hollow Earth (and indeed the hollow Sun) - and do we live inside a hollow Earth? - as well as the annular theory, catastrophism, elective polarity, the expanding Earth, macrocosm and microcosm, neptunism, plutonism, Velikovskianism . . .

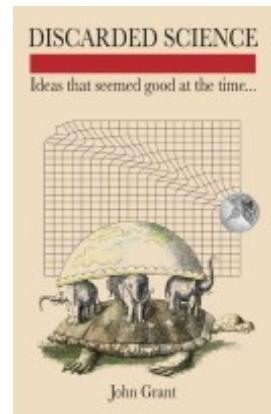
Lost Worlds, Hidden Races, and Unknown Creatures: Atlantis, Lemuria, Mu, the Hesperides, the myths of great past civilizations destroyed by catastrophe. Races such as the Amazons and the Yeti, and cryptozoology.

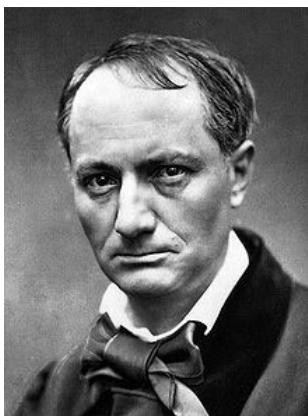
The Evolutionary Wars: Early and bizarre ideas (primarily Greek) about evolution. Lamarckism and Lysenkoism. Wallace and Darwin unravel the notion of natural selection. The Balance of Nature and the Chain of Being. Piltdown Man and others. Ontogeny recapitulating phylogeny. Root races, succeeding races of Man, the Shaver hoax, parallel evolution. The myth of racial purity. Creationism and Intelligent Design. Panspermia, and notions of alien-assisted evolution.

Aliens Among Us: The Plurality of Inhabited Worlds: Ideas about what Venusians, Martians and others must be like. The Moon Hoax and the Martian canals. Antichthon. Ancient astronauts à la von Däniken and the various UFO crazes. The 1896 7 Airship Flap. Aliens from inside the hollow Earth.

Hard Science: Alchemy, animal electricity, animal magnetism, argentaurum, the Aristotelian elements, astrology, caloric, the celestial sphere, cold fusion, continuous creation, the corpuscular theory of light, effluvium, the fifth planet, globulism, Lawsonomy, levity, the luminiferous aether, the music of the spheres, N-rays, orgonomy, pangenesis, perpetual motion, phlogiston, polywater, seriality, serial time, spontaneous generation, substantialism, the cool Sun, Vulcan, the World Ice Theory.

Us . . . Or Something Like Us: Humours and homunculi, the acquisition of virtues through cannibalism, telegony and tailed men defunct and bizarre ideas about the way human and other biology works, and the transposition of those ideas into "medicine". Allopathy, biomagnetics, colour therapy, dianetics, eye exercises, focal sepsis, iatrochemistry, iridiagnosis, leeching, mammarism, naturopathy, phrenology, psychicmedicine, radionics, the Rapture, the Doctrine of Signatures, spondylotherapy, swaddling, telegony, trepanation, vis plastica, vrilium, zone therapy . . .





**Charles Pierre
Baudelaire**

“For each letter received from a creditor, write fifty lines on an extraterrestrial subject and you will be saved.”
Charles Baudelaire (1821 - 1867)

We are not confident that remitting an essay to creditors in lieu of payment will assure salvation as the decadent dandy Charles Baudelaire suggests, but we are very sure that Essays and Letters to the Editor of Phactum on all manner of matters would be highly appreciated. Corrections and suggestions for improvement are wanted as are your thoughts on topics in previous Phactum or topics not priorly broached here are very welcome. We do discourage intense Partisan Politics but commentary on discrete topics of government and society is highly desirable. Poets are welcome to submit verse, philosophers to submit contemplations, and scientists to present topics in a manner accessible to laymen. Paranormalists and anti-paranormalists are equally welcome to opine on this forum with the caveat that submitted material be at least marginally lucid.

Writing is a splendid way to expands ones knowledge of a subject as Benjamin Disraeli suggests. A book is a bit too expansive for the purposes of Phactum, but long and short articles can be handled.

“The best way to become acquainted with a subject is to write a book about it.”
Benjamin Disraeli (1804 - 1881)

Errors

Tom Napier reported that he was bewildered as to why, in the July/August 2010 Phactum, the Editor illustrated his review of John Grant's book “Bogus Science” with the cover of Martin Gardiner's book “Fads & Fallacies”. I am baffled too. But, in this universe of many coincidental happenings John Grant will be the first speaker of PhACT's 2010/2011 Lecture Series. Tom's book review is reprinted in this Phactum with the correct book cover on Page 2.

PhACT Council Elections

At the September 2010 meeting, on Saturday, September 18, 2010 PhACT will have elections to the PhACT Council. Only dues paying members may vote in this proceeding, which will be mercifully short in duration. Only nominations, and voting. No speeches. And the band will not play Hail to the Chief.

Letters to the Editor

Editor: Wow—lots of gambling related info in Phactum (July/August 2010), including Professor Nelson Rose's column. You really put a lot of work into Phactum!

I also like the suicide article. Psychotherapists are always on guard for impulsive and certain pathologies which are more prone to suicidal attempts. Of course, we know gamblers attempt suicide more than other addicts.

I also enjoyed the dark blocks comparison.
Gary Lange, Ph. D.
 Certified Gambling and Addictions Counselor
 Rancho Mirage, California

Editor: Two upcoming guests of the Philadelphia Science Fiction Society may interest PhACT members. On 13 August, H. Paul Schuch, executive director emeritus of the SETI League (that's the Search for Extraterrestrial Intelligence, as by radio telescope) will speak. On 8 October the guest will be Anna Dhody of the Mutter Museum. The August meeting will be at International House, 3701 Chestnut St in Philadelphia, while October's will be at The Rotunda, the domed building at 4014 Walnut. Programs start at 9pm. --

Eric Hamell
 Philadelphia, PA

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Various Ruminations

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

Bad News, Good News, and Team Kareem

There is little doubt that Kareem Abdul-Jabbar, born in 1947 in New York City, is one of the most significant professional athletes of the 20th century. When Kareem left the game in 1989 at age 42 no NBA player had ever scored more points, blocked more shots, won more Most Valuable Player Awards, or played in more All-Star Games. Kareem's records still stand.

Since retiring as an active basketball player, Abdul-Jabbar has authored several books, worked in the entertainment business and served as a "basketball ambassador," working in various capacities such as a coach and broadcaster, and helped to fight hunger and illiteracy. In 1995 Abdul-Jabbar was elected to the Naismith Memorial Basketball Hall of Fame.

But all was not well, there was **Bad News**. In late 2008 Kareem was diagnosed with a blood cancer. A year later, in December of 2009, a public announcement was made of Kareem's diagnosis with Philadelphia chromosome-positive chronic myeloid leukemia, (Ph+ CML), a slow progressing type of blood cancer. The **Good News**: *"I couldn't believe it when I found out I had leukemia,"* Kareem says. *"But I was lucky. Thanks to life-saving research, I can take a medication every day to keep my cancer in check, and this gives me hope for the future. Please join my team so we can bring this hope to others by raising funds for this important cause."*

And more **Good News** is that Kareem is using his celebrity well. He initiated a CML education program with Novartis Oncology to show people that they are not alone in fighting this disease. Now, Kareem and Novartis Oncology have partnered with The Leukemia & Lymphoma Society (LLS) to create Team Kareem, a national team whose aim is to raise money for cancer research, through participation in LLS's annual Light The Night® Walk.

The website for the Leukemia Lymphoma Society is:

http://www.leukemia-lymphoma.org/hm_lls

There is a very powerful local angle to this story. In 1960, Doctor Peter Nowell, at University of Pennsylvania and his colleague David Hungerford at Fox Chase Cancer Center in Philadelphia, noticed an abnormally small chromosome in patients with CML. The study of chromosomal abnormalities in the 1960's was an uncertain proposition as the technology was not highly refined. Gradually however, this line of medical research was pursued



resulting in new ways to treat some blood cancers including the drug Gleevec, introduced in 2001, which is giving Kareem a chance at a decent life.

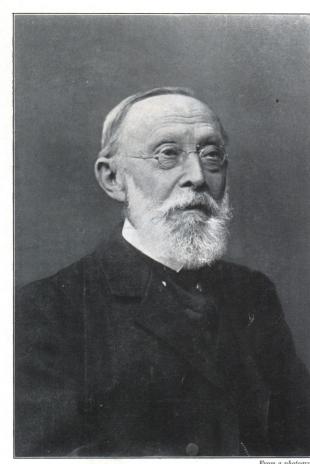
This year 2010 marks the 50th Anniversary of the discovery of the Philadelphia Chromosome. Dr. Nowell has been awarded the very prestigious Albert Lasker Award for Medical Research. The Lasker Award is a big deal. It is given to living scientists who have made ground breaking contributions to medical science. The awards are sometimes referred to as "America's Nobels." Seventy-six Lasker laureates have received the Nobel Prize since its inception in 1946.

There is no lack of irony in that Dr. David Hungerford, the co-discoverer of the Philadelphia Chromosome, passed away in 1993 at the age of 66. Dr. Hungerford suffered from Multiple Sclerosis which limited his ability to continue working. He retired in 1982. A smoker, Dr. Hungerford died of lung cancer.

Leukemia and Rudolf Ludwig Karl Virchow

In the preceding story we take note of some modern developments in the treatment of cancer, most specifically blood cancers. But there were earlier medical pioneers and they too are noteworthy.

One of those scientists, Rudolf Ludwig Karl Virchow (13 October 1821 – 5 September 1902), was a German doctor with many accomplishments, many fields of study, and a few contradictions. In addition to being a medical doctor Virchow was an anthropologist, pathologist, prehistorian, biologist and politician. Virchow is often referred to as "the father of modern pathology" having developed more scientific methods to perform autopsies during the Franco-Prussian War.



RUDOLF VIRCHOW

Virchow has been involved with many important discoveries. His most widely known scientific contribution is his cell theory which showed that cell origins are from the division of other cells. Virchow relied heavily on the work of Robert Remak (1815-1865), a neurologist who first developed a theory of cell division. Virchow may have plagiarized some of Remak's work. Virchow is credited with first identifying leukemia cells. In fact, Virchow coined the word "leukemia" which in Greek literally means "white blood".

Virchow coined several other medical terms during his

career, including *embolism, myelin, amyloid and leukocytosis*. His name is also associated with several medical eponyms, such as Virchow's cell, Virchow's node and Virchow-Seckel syndrome. A "medical eponym" is a disease or syndrome derived from the name of a person.

Interestingly, Virchow was opposed to the use of antiseptics. He was hostile to the theory that bacteria cause disease and his opposition is believed to have delayed routine use of antiseptics.

Medical research and practice was not Virchow's only intellectual interest. He was an avid anthropologist and worked on an excavation of Troy, made two expeditions to the Caucasus and participated in fieldwork in Egypt.



Virchow was co-founder of the German Anthropological Society and the Society for Anthropology, Ethnology and Prehistory.

It is sometimes said that Virchow was antagonistic to Charles Darwin's theory of the origin of species by natural selection. In fact he accepted the theory as a hypothesis but maintained throughout his

later years that there was insufficient scientific evidence to justify full acceptance of the theory.

Politics was another area of involvement for Virchow. He was politically active for most of his life, dedicated to notions of public health reform, the building of hospitals, and the planning and construction of modern sewer systems

If popular medicine gave the people wisdom as well as knowledge, it would be the best protection for scientific and well-trained physicians. — Rudolf Virchow

in Berlin. Virchow was a member of the Berlin Representative Assembly from 1859 until his death in 1902 and was a founder of the Deutsche Fortschrittspartei (German Advance Party) in 1861. Virchow represented the party in the Prussian Parliament where he was a sharp critic of Otto von Bismarck. The two men often disagreed vehemently and at one point, Bismarck challenged Virchow to a duel. As the challenged party Virchow was entitled to his choice of weapons. It is rumored that Virchow chose sausages, one inoculated with cholera. The duel never happened. In 1880 Virchow was elected to the German Reichstag.

Never seriously ill throughout his long life, Virchow suffered a broken hip in early 1902 after falling from a streetcar in Berlin. Although seemingly on the mend, the long period of inactivity seriously undermined his health, and he died several months later of cardiac insufficiency.

Psychics 1, Spooky coincidences 3

Tom Napier submitted this little gem.

The late Jeane Dixon frequently claimed to have predicted the assassination of President Kennedy. The record shows that in 1956 she predicted that the next president, whose identity she did not know, would be assassinated or would die in office.

According to the International Movie Database <www.imdb.com> the first test screening of Stanley Kubrick's brilliant satire, Dr. Strangelove or: How I learned to stop worrying and love the bomb, was scheduled for November 22, 1963, the day Kennedy was shot. It contained a line referring to a character having a pretty good weekend in Dallas. In the original ending a pie-fight breaks out



Help!!!!

The PhACT council would like to apply for 501c3 (formal nonprofit status) to help us attract a funding base, to allow deduction of contributions, and continue to host excellent speakers and programs. Our members represent a diverse array of talents and abilities. We would appreciate hearing from any member who could assist us in applying for 501c3 status. If you can lend a hand with this please contact our president, Eric Krieg, at EricKrieg@verizon.net

We can also use your help in other ways such as being an event organizer to help present programming and other tasks that arise for small organizations. As always we are eager to get your input in letters and articles for Phactum. Please, take time to write and send letters and articles to Ray Haupt at phactpublicity@aol.com

between a group of Russians and Americans. As the President (played by Peter Sellars) is hit by a custard pie a character cries out, "Gentlemen! Our gallant young president has just been cut down in his prime!"

The movie's release was delayed to January 1964, "Dallas" was dubbed to "Las Vegas" and the custard-pie scene was deleted.

ASTRONOMY: New Decadal Survey Shows Restraint

In his weekly "What's New" newsletter of August 20, 2010, physicist Bob Park observes:

These surveys had become impossible wish lists for every kind of telescope an imaginative bunch of astronomers could dream up. That's not smart. It means someone else will make the decisions. This is a reasonable survey. A lot of it has to do with extrasolar planets. But while we're thinking big, what are the theoretical limitations? How much is it possible to see with a telescope if I can build it as large as I want and put it wherever I want in the solar system?

Rather conveniently, by spooky coincidence, Tom Napier had written a short article for Phactum discussing just that question: what can be seen through telescopes? See page 15.

Stephen's Ark? - Stephen Hawking: Abandon the Earth

Get a load of this!! Stephen Hawking, at a website called Big Think, on August 6, 2010 stated:

I believe that the long-term future of the human race must be in space. It will be difficult enough to avoid disaster on planet Earth in the next hundred years, let alone the next thousand, or million. The human race shouldn't have all its eggs in one basket, or on one planet. Let's hope we can avoid dropping the basket until we have spread the load.

<http://bigthink.com/ideas/21691>



Cartoon by Dave Lowe
<http://www.paraabnormalthecomic.com/>
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According to the Daily Mail Hawking warned earlier this year that humans should be cautious in trying to contact other alien life forms because there is no way to know if they will be friendly. I agree, let's hope the Martians are vegetarians.

I have a funny feeling this idea is about to go Hollywood again and who better to lend credibility than Stephen Hawking?

Rich Exoplanet System Discovered

The BBC reported that astronomers have found a star similar to ours that has at least 5 planets. This star, with the intriguingly sexy name, HD-10180, is in the southern constellation Hydrus and is about 127 light years distant, a short hop if you happen to have a handy worm hole or goodly supply of di-lithium crystals. One minor problem is that the

Why stand we here idle? What is it that gentlemen wish? What would they have? Is life so dear, or peace so sweet, as to be purchased at the price of chains and slavery? Forbid it, Almighty God! I know not what course others may take; but as for me, give me liberty or give me death! - Patrick Henry, March 23, 1775

Hawking has a point, at least in the contention that the human species and Planet Earth are in jeopardy of extinction, but surely, despite Hawking's legendary erudite authority, something seems a wee bit wrong with this notion. I find it troubling that a serious scientist is sounding like a science fiction writer. Perhaps interplanetary travel is indeed possible to a very small number of destinations, we know it is possible, but when thinking in terms of an Ark the proposition is fatuous at best.

Who is it among us that will be our Noah leading his flock on the journey to some extra-terrestrial Mount Ararat, and what will they do when they get there? Furthermore, a project to transport a significant civilization to a new location would likely in itself be ruinous to Planet Earth. And then there are the whales. How do we take the whales?

This website gives more details and commentary about Hawking's assertions:

<http://www.myfoxnepa.com/dpps/news/stephen-hawking-abandon-the-earth-dpgoha-20100809->

five confirmed planets are Neptune-like in nearly circular orbits lying within a distance about equivalent of the orbit of Mars.

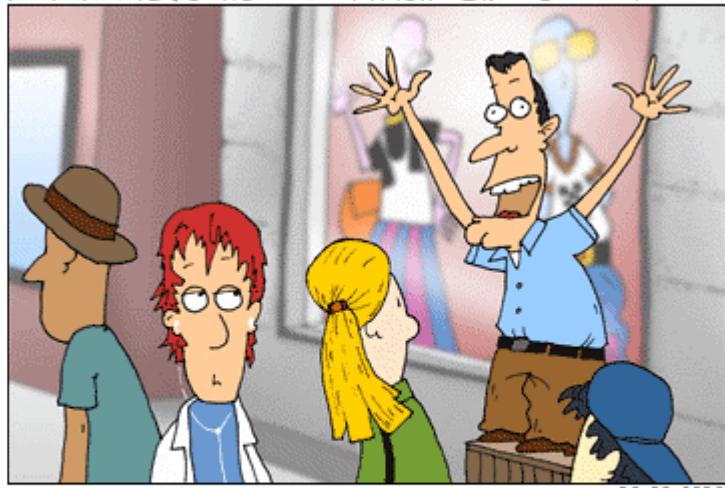
<http://www.bbc.co.uk/news/science-environment-11070991>

The Rapture is Nigh

Professor Hawking may have made some good points, but they are useless... all is lost

The Rapture of Believers is scheduled to occur on May 21, 2011, so why worry about Global Warming or some other Earth Ending Cataclysm?

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06-08-2006

OK, SO NOTHING HAPPENED ON 06/06/2006,
WHICH CAN ONLY MEAN ONE THING ...
WE'VE GOT LESS THAN 100 YEARS TO
PREPARE OURSELVES FOR 06/06/2106

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Harold Camping, President of Family Radio, predicts that we can know from the Bible alone that the date of The Rapture of Believers will take place on May 21, 2011. His previous estimate was September 6, 1994 which seems to have failed. Some of his followers gathered around dressed in their Sunday best and carrying their Bibles open to the sky, but were disappointed.

Camping's reasoning for this new date is:

- † "The number 5 ... equals "atonement."
- † 10 is "completeness."
- † 17 means "heaven."
- † Christ was executed on April 1, 33. The interval from that date to April 1, 2011 is exactly 1,978 years.
- † 1,978 multiplied by 365.2422 days (the average number of days in each solar year) = 722,449 days

† Add an arbitrary 51 days brings the total days since Jesus' execution to: 722,500 which will occur on May 21, 2011.

† $(5 \times 10 \times 17) \times (5 \times 10 \times 17) = 722,500$. This can be interpreted as: (Atonement x Completeness x Heaven), squared.

It is kind of Mr. Camping to share his prediction and we invite skeptics and non-skeptics to discuss the matter at the PhACT meeting scheduled for Saturday, May 21, 2011. If the Rapture of Believers occurs before 4:00 PM on that day we will know for certain who among us are True Believers or True Skeptics.

UK Homeopathy Controversy Rages On

This item was in Dr. Stephen Barrett's Consumer Health Digest of August 19, 2010.

In February, The House of Commons Science and Technology Committee issued a 275-page report that examines the British Government's policies on providing homeopathy through the National Health Service (NHS) and the licensing of homeopathic products by the Medicines and Healthcare products Regulatory Agency (MHRA). [House of Commons Science and Technology Committee. Evidence Check 2: Homeopathy. Feb 8, 2010]

http://www.homeowatch.org/policy/evidence_check.pdf

The report debunks many of homeopathy's common claims and places homeopathic research in proper perspective. It concludes:

- ♦ *The Government's position on homeopathy is confused. On the one hand, it accepts that homeopathy is a placebo treatment. This is an evidence-based view. On the other hand, it funds homeopathy on the NHS without taking a view on the ethics of providing placebo treatments. We argue that this undermines the relationship between NHS doctors and their patients, reduces real patient choice and puts patients' health at risk. The Government should stop allowing the funding of homeopathy on the NHS.*
- ♦ *Placebos should not be routinely prescribed on the NHS. The funding of homeopathic hospitals-hospitals that specialize in the administration of placebos-should not continue, and NHS doctors should not refer patients to homeopaths.*
- ♦ *It is unacceptable for the MHRA to license placebo products-in this case sugar pills-conferring upon them some of the status of medicines. Even if medical claims on labels are prohibited, the MHRA's licensing itself lends direct credibility to a product. Licensing paves the way for retail in pharmacies and consequently the patient's view of the credibility of homeopathy may be further enhanced. We conclude that it is time to break this chain . . . the MHRA should withdraw its discrete licensing schemes for*

Laws should be made, not against quacks but against superstition. - Rudolf Virchow

homeopathic products.

- ♦ If the MHRA is to continue to regulate the labelling of homeopathic products . . . we recommend that the tests are redesigned to ensure and demonstrate through user testing that participants clearly understand that the products contain no active ingredients and are unsupported by evidence of efficacy, and the labeling should not mention symptoms, unless the same standard of evidence of efficacy used to assess conventional medicines has been met.

In July, the UK Department of Health issued a response which acknowledged that "the evidence of efficacy and the scientific basis of homeopathy is highly questionable" but the products should remain available "to provide patient choice." [Secretary of State For Health. Government Response to the Science and Technology Committee report 'Evidence Check 2: Homeopathy'. July 2010] http://www.homeowatch.org/policy/evidence_check_response.pdf

Professor Michael Baum, one of the leaders of the scientific community's effort to de-legitimize homeopathy in the UK, expressed astonishment about this decision. In a comment in *The Lancet*, he stated:

"Using this kind of logic, why not offer astrology on the NHS to help women decide when to induce labour? It beggars belief that a modern NHS that prides itself on evidence-based medicine should fly in the face of the Science and Technology Committee, which concluded that homeopathy is nothing other than an elaborate placebo and involves deceiving the patient every time it is prescribed." [Baum M. Homeopathy waives the rules. *The Lancet* 376:577, 2010]

Evidence Check 2: Homeopathy is one of the most insightful reports on homeopathy ever published. The full text is available online.

To subscribe to Dr. Barrett's newsletter go to this website:

<http://www.ncahf.org/digest/chd.html>

Lines on Homeopathy

Stir the mixture well
Lest it prove inferior,
Then put half a drop
Into Lake Superior.

Every other day
Take a drop in water,
You'll be better soon
Or at least you oughter.

Bishop William Croswell Doane (1832-1913), first Episcopal bishop of Albany, New York

The PhACT Jersey Devil Expedition—June 16, 2010

See this website for a write-up by Joe Nickell about PhACT's fun but unsuccessful Jersey Devil expedition. Special thanks to Don Nigroni, our guide, and to Bob Clark who supplied Devil Bait which was consumed by the Devil Hunters.

http://www.centerforinquiry.net/blogs/entry/jersey-devil_expedition/



A Clerihew by Tom Napier

**Joe Nickell
Knows the paranormal's
fickle.
If he saw the Jersey Devil
He'd fear it wasn't on the level.**

Gambling Notes

A few notes on the problems and follies of casino gambling.

♠ **Pa. Casinos Offering Credit To Players** - If you're short on cash to buy chips, the casino will give you a credit line so you can keep playing. The casinos call it a convenient service, but others call it dangerous.

<http://kdka.com/local/Casino.credit.lines.2.1809748.html>

♠ **Gambling council requires better mix** - It's true that public councils and nonprofit boards of directors often must work hard to find qualified people willing to volunteer their free time in order to serve. That's one of the reasons floated to explain why the South Dakota Council on Problem Gambling is comprised mainly of state bureaucrats and people tied to the gaming industry.

<http://www.argusleader.com/article/20100718/VOICES01/7180307/1052/OPINION>

♠ **Las Vegas 'Doctor' Accused of Scamming Terminally Ill Patients** - A Las Vegas man who misrepresented himself as a retired physician convinced more than 100 chronically ill patients to undergo experimental stem cell implant procedures that he claimed could cure incurable diseases, federal agents say. The 'Doctor' didn't spend any of the approximately \$1 million that he received from patients and investors on laboratory research or clinical studies. Instead, authorities say, he spent \$700,000 of it on gambling and other personal expenses.

<http://www.foxnews.com/story/0,2933,597465,00.html>

▲ **Help for gamblers precedes casino** - Problem gamblers in central Ohio probably have more luck picking winners than they do finding treatment. "I Googled my brains out looking for help in the area," said a 24-year-old West Side man whose addiction has cost him jobs and friends and drained his bank account. "If you have a gambling problem, you don't have the money for a private counselor." Although sports-crazed central Ohio surely has its share of problem gamblers, it doesn't have any public treatment programs such as those available for people battling drug or alcohol addictions.

http://www.dispatch.com/live/content/local_news/stories/2010/08/02/help-for-gamblers-precedes-casino.html?sid=101

If You Want an Enhancing Experience, Be in Philadelphia in December

This item by Ronald A. Lindsay, president and CEO of the Center for Inquiry, was taken in its entirety from the Center For Inquiry website.

December 3–4 to be precise.

The Center for Inquiry, in cooperation with the Penn Center for Bioethics and the Penn Center for Neuroscience & Society, will be holding a conference on the ethical, legal, and public policy issues presented by biomedical enhancements. The conference is entitled "Transforming Humanity: Fantasy? Dream? Nightmare?" The title reflects three common reactions to enhancements, namely, that we cannot expect significant changes to human nature or society from enhancements, that significant changes are both possible and desirable, and that significant changes are possible—but are something that should trouble us.

Participants in the conference include many leading experts in the field of bioethics, such as Arthur Caplan, Allen Buchanan (who has a forthcoming book on enhancements), Martha Farah, Maxwell Mehlman, Jonathan Moreno, and Rosemarie Tong. John Shook and I will be representing CFI.

The conference will be held on the campus of the University of Pennsylvania. Pricing for registrants has not been determined yet, but it will be under \$100; Friends of the Center will receive an additional discount. Further details regarding the conference will be posted in the near future.

But, in the meantime, save the dates. Whatever the exact

No doubt science cannot admit of compromises, and can only bring out the complete truth. Hence there must be controversy, and the strife may be, and sometimes must be, sharp. But must it even then be personal? Does it help science to attack the man as well as the statement? On the contrary, has not science the noble privilege of carrying on its controversies without personal quarrels?

— Rudolf Virchow

consequences resulting from use of enhancements, there is no question they present significant issues. For example, we are already debating the extent to which drugs that can increase mental alertness are permissible, and the possibility of eliminating some genetic defects from children is generating controversy over so-called "designer babies."

CFI continues to be committed to sponsoring scholarship on cutting-edge issues. Bioethics has all too often been plagued by dogmatic thinking. Sometimes it seems as though every new development in biomedical technology is decried as an ill-advised attempt to "play God." We need sound policy, not slogans. We need to apply critical reasoning to developments in biotechnology.

Biotechnology could transform our world—it could transform you. Ponder the consequences, consider the choices—and join us in Philadelphia.



This 1950's seeming ad is actually a fake, but given the claims of cigarette companies and other advertisers in that era, and now too, it is almost believable. The Soda Pop Board of America is a fiction, but that does not stop Kevin Trudeau and others from talking about the ad in attacks against "Big Pharma". This hoax underscores the need for robust Critical Thinking for average citizens as well as scientists.

See: <http://www.ktradiionetwork.com/tag/soda-pop-board-of-america/>

'Questioning Statistical Significance'

by Paul Schlueter III

It's likely that you've read many scientific reports in which researchers conclude that a small effect noticed in an experiment was, or was not, "statistically significant." In both a lengthy feature article and an editorial, Science News Editor in Chief Tom Siegfried has made an unusual critique of the widespread misuse and misunderstanding of that phrase, and presented profound evidence of its negative impact on science's overall credibility when using statistical math to draw conclusions. See

SN, March 27, 2010, or:

www.sciencenews.org.

In "Odds Are, It's wrong," Siegfried makes the early point, "It's science's dirtiest secret: The 'Scientific Method' of testing hypothesis by statistical analysis stands on a flimsy foundation." He goes on to state later, "Even when performed correctly, statistical tests are widely misunderstood and frequently misinterpreted," and, "...any single scientific study alone is quite likely to be incorrect, thanks largely to the fact that the standard statistical system for drawing conclusions is, in essence, illogical."

These are astonishing statements, particularly when they come from a top staffer at such a preeminent scientific news publication. You can almost smell the creationists salivating at the anticipation of how they'll chew THIS one up. Siegfried does point out that he is not denouncing the rest of science's principles and methods, nor does he forget how much useful, reliable knowledge has been derived from study of the natural world following scientific methods. What's at issue here is not science itself. In fact, this report/editorial SHOULD be held up by pro-science debaters as solid evidence that, when a flaw in scientific methodology is detected, responsible voices in the scientific community stand up and call attention to the need for corrective attention. Science is flawed, but it is also open-sourced, and responsive to reasoned critique and adjustments aimed at self-correction and the preservation of credibility, overall. It is just such an attitude of self-reflection, and the humility of accepting that science sometimes experiences human error,

which belies the common charge of "arrogance" leveled at us by those who believe that they (and they alone) are privy to all the answers.

The subject of Siegfried's discussion is the concept of "statistical significance" itself, which he attributes to mathematician Ronald A. Fisher's work in the 1920s. Fisher sought a statistical method by which to determine whether variation in crop yields was due to the application of fertilizer (the cause under examination), or other factors (including random ones) for which the experiments did not maintain adequate control. Fisher's solution was a new term, "the P value," for the calculated "probability of an observed (or more extreme) result" showing up in the data purely by chance, when no real effect exists. According to Siegfried, "...in fact, there's no logical basis for using a P value from a single study to draw any conclusion." Stephen Ziliac, an economic historian at Roosevelt University in Chicago, essentially agrees; "The test itself is neither necessary nor sufficient for proving a scientific result."

Shortly after Fisher developed his methodology, it was challenged by Egon Pearson and Jerzy Neyman, mathematicians who thought it better to test competing hypothesis against one another with an approach that, rather than employing a "null hypothesis," would use a different P value "to gauge the likelihood of a 'false positive'." Siegfried complains that the resulting practice of hybridizing a mixture of the "mutually inconsistent Fisher and Neymen-Pearson approaches has rendered interpretations of standard statistics muddled at best and simply erroneous at worst."

Drug efficacy testing is one field in which this sort of issue can have important, life-altering consequence. If a study to test a drug reveals a small effect among the subjects studied, researchers will use what is essentially an ARBITRARILY established P value, often $P=0.05$. That means that if more than 5% of the subjects show an effect, it will be concluded that the cause is the drug, but if fewer than



Cartoon by Gruhn
gruhn@webdonuts.com
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5% show the effect, it will be concluded that some other cause was responsible. However, if 7.5% show an effect which actually has an alternative cause (due to random events, selection bias, or whatever), that means the drug will have been wrongly "proven" efficacious, and patients would likely be subjected to the drug's costs, dangers, and side-effects even though it actually won't help their condition. Conversely, if a mere 4% of subjects show an effect, it will be wrongfully attributed to something else, and that 4% of people who COULD be successfully treated will be denied that treatment.

Essentially, the proposed solution to this is to use statistical significance findings to refine hypothesis, not to draw conclusions. Also, it is crucially important to run multiple, duplicative studies; the more studies which, using EQUIVALENT standards and definitions, support a conclusion, the more reliable that conclusion becomes.

This brings us to another methodology of growing influence in science,¹ the use of "meta-analysis", or the statistical analysis of multiple independent studies to attempt to enlarge the test subject pool, to consolidate diverse findings, and to support conclusions with literature, rather than new experimentation. To do such meta-analysis effectively, ALL studies must be included, even the unpublished ones which are notoriously hard to obtain. Also, the studies must be performed in a statistically equivalent manner, something practically impossible to enforce among far-flung and independent researchers who each think their approach to be the best for their purposes. Current practices fail on both counts, leaving the methodology highly suspect.

Siegfried also brings up Bayesian Reasoning, a methodology devised by Rev. Thomas Bayes in the 18th century. Bayesian statistics require the use of an additional

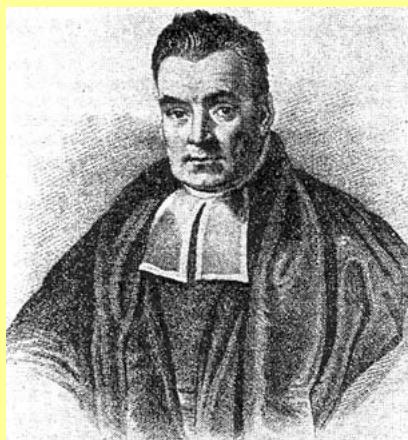
factor, "prior probability," to include an informed guess about the expected probability of an outcome, prior to actual experimentation. In other words, use the information you can gather from previous work and reason, and figure that into your statistical computation as you try to establish your criteria of judgment. As George Diamond and Sanjay Kaul wrote in the Journal of the American College of Cardiology in 2004, "A scientific hypothesis cannot be properly assessed solely by reference to the observational data." Siegfried adds, "... but only by viewing the data in light of prior belief in the hypothesis." Yes, he uses the B-word,

These articles are complex, and they address an area of math (statistics) to which I readily admit I have poor understanding. There are many points I've passed over, and copious quotes from scientists who have, for decades, long objected to the practice of using "statistical significance" conclusions in ways that either get twisted by readers, or that are misunderstood and wrongly applied by the scientists themselves. This short article isn't meant to completely cover the topic, but rather to alert our small group of readers that there is a serious challenge afoot, relating to the use and meaning of the phrase/concept "statistical significance." If you feel that it is important to you and your understanding of scientific progress to stay atop such issues I highly recommend that you read the SN pieces yourself, and research Siegfried's references at: <http://bit.ly/aqlx28>

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

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Thomas Bayes



born in 1702 in London, was the eldest of the seven children of Joshua Bayes, a Nonconformist Presbyterian Minister from a wealthy family. In 1719 Thomas attended the University of Edinburgh where he studied theology and logic in preparation to enter the Presbyterian ministry. At that time Nonconformists were not permitted to attend Oxford or Cambridge. By 1828 Bayes had been ordained and around 1734 was appointed minister in a church at Tunbridge Wells, Kent.

He is known to have published two works with rather snappy titles, one theological and one mathematical: *Divine Benevolence, or an Attempt to Prove That the Principal End of the Divine Providence and Government is the Happiness of His Creatures* (1731) and the irresistible

An Introduction to the Doctrine of Fluxions, and a Defence of the Mathematicians Against the Objections of the Author of the Analyst. It was for the second work, published anonymously in 1736, that Bayes accumulated his fame. In it he defended the logical foundation of Isaac Newton's calculus ("fluxions") against the criticism of George Berkeley, author of *The Analyst*.

It is speculated that Bayes was elected as a Fellow of the Royal Society in 1742 on the strength of the *Introduction to the Doctrine of Fluxions*, as he is not known to have published any other mathematical works during his lifetime.

In later life Bayes took interest in Probability. In 1755 Bayes fell ill and on April, 17, 1761 died at Tunbridge Wells.

Suicide and the Bible

by Paul Schlueter III

Like most adults, I've heard many times that those who have committed suicide are barred from interment in Catholic religious cemeteries. This is a fairly common theme in literature, film, and conversation. For some time, I had assumed that the Bible actually condemned suicide, but after making comments to that effect over the years, friends with better familiarity have told me this isn't so. In fact, here's a rundown of what the Bible DOES have to say about suicide.

The word "suicide" does not appear in the standard English translations of the Bible. It is widely INTERPRETED to be included in prohibitions against killing (Exod. 20:13 - the fifth of the Ten Commandments; and, Deut. 5:17 - a restatement of the 5th Commandment). Also, since many believers hold life to be a sacred gift from God, and hold that the body is God's temple, committing an act to separate life from the body (even one's own body) would therefore be a sacrilege. Here's a list (perhaps incomplete) of seven biblical characters who took their own lives. They are:

Abimelech (Judges 9:54) - Abimelech, one of seventy sons of Jerubbel, killed all seventy of his brothers prior to taking the throne of Israel for three years. Later, God caused ill will between Abimelech and the men of Shechem (who had helped him kill his brothers), and the men cursed him. The Shechemites, led by Gaal, battled with Abimelech, but the latter defeated their city, demolished it, and sowed it with salt. He then set the stronghold at Shechem afire, destroying its great tower, and killing about a thousand men and women. Finally he went to the city Thebez, besieged and defeated the city, and approached their tower door to set it afire, when a woman in the tower dropped a millstone onto his head. Abimelech ordered his armorer to run him through with a sword, so that it couldn't be said that a women had

killed him. This, then, was technically an assisted suicide, committed to avoid the shame of an impending irreputable death.

Samson (Judges 16:30) - Samson is more familiar; he was the strongman with long hair who was seduced by Delilah into revealing that the secret of his strength was his hair. After lulling him to sleep, Delilah had a servant shave Samson's hair, and turned him over to the Philistines, who imprisoned him, blinded him, and made him grind their grain. At a ceremony to the god Dagon, the Philistines called out Samson to perform for the crowd of about three thousand men and women, including the Lords of the community.

Samson tore down the temple of Dagon by two of its pillars, killing himself along with the attendees, his enemies. This, then, was technically a martyrdom suicide, committed to wreak death among the actor's enemies.

Saul (I Samuel 31:4) - Saul, King of Israel before David's reign, had been warring with the Philistines, and his main troops were slain on Mount Gilboa. Saul and his sons fled, but were pursued, and the Philistines killed Saul's three sons, and then severely wounded Saul himself with arrows. Saul ordered his armor bearer to kill him with a sword, rather than suffer the shame of being killed by uncircumcised men, but the



Samson destroying the Temple of Dagon

armor bearer refused. Saul finally "took a sword and fell on it."

Saul's Armorbearer (I Samuel 31:5) - After refusing to kill his master, Saul's armor bearer witnessed Saul's suicide, then imitated it upon himself.

Ahitophel (II Samuel 17:23) - After David became King of Israel, he let his son Absalom act as a sort of Deputy and Judge for 40 years, after which Absalom (known in part for his physical beauty) tried to take up a throne of his own in Hebron. Absalom sent for Ahithophel the Gilonite, a counselor of David's, for help in conspiring the overthrow of

his father's kingdom. Ahithophel advised Absalom to go in among David's concubines publicly, to give the impression that he was abhorred by his father. This, presumably, would give the hands of Absalom's followers strength. Ahithophel's advice was cherished, because he gave it "as if [he] had inquired at the Oracle of God," so Absalom did as Ahithophel suggested. However, David had called down God's curse upon Ahithophel's advice, so that it could only be bad. Ahithophel then asked Absalom for an army of twelve thousand, with which to pursue and kill David, but Absalom called Hushai the Archite, for a second opinion. Hushai's advice was for Absalom to go into battle in person; Absalom took Hushai's advice, but after some rather convoluted intrigue, David's entire encampment managed to escape to safety across the river Jordan. Seeing that his advice had not been followed, Ahithophel went to his home in his own city, put his house in order, and hanged himself. (Absalom soon afterwards suffered the indignity of becoming caught by the head in a terebinth tree, and being left by his donkey to dangle there; Joab thrust three spears through his heart, and ten other men - Joab's armorbearers - struck and killed Absalom.)

Ahithophel's suicide appears to have been inspired by his loss of the esteem of his patrons; he couldn't bear that his advice was no longer to be followed. Alternatively, he may have simply feared David's vengeance for his treachery; scripture doesn't attempt to clarify Ahithophel's reasoning.

Zimri (II Kings 16:18) - Elah, son of Baasha, had ruled Israel for two years, when his servant (and commander of half his chariots) conspired to kill the King as he drank at his house in Tirzah. Zimri struck and killed King Elah, and immediately set about killing all the households of Baasha - it seems the households had worshipped idols, and the prophet Jehu had relayed God's displeasure to Zimri, justifying the killing spree. Zimri ruled for all of seven days, when the Israelites (encamped against Gibbethon, a Philistine city) heard of his murder and dethronement of Elah; the Israelites made Omri, commander of the Israeli army, their new king, and they left Gibbethon to besiege Tirzah, where Zimri was. Seeing that his city was taken, Zimri went into the citadel of Elah's house and set it afire, bringing it down upon himself. His reason, according to the verses that follow, was that he had sinned, and also committed treason against Elah (though the Bible includes two verses of attempted explanation in Zimri's case, his story is so convoluted that the reasons for suicide remain difficult to follow). Omri reigned for twelve years over Israel, six years of that in Tirzah.

Judas Iscariot (Matthew 27:3-5) - After betraying Jesus to



Saul falls upon his sword

the Romans in the Garden of Gethsemane, with a greeting and a kiss, Judas felt remorse, and he brought back the thirty pieces of silver (payment for services rendered) to the Chief priests and elders at the temple. He threw down the silver, left, and hanged himself. The silver couldn't be returned to the Treasury, for it was tainted by having been "the price of blood," so the priests used it to purchase the potter's field, where strangers were thereafter buried (right up to modern times, the municipal burial ground is now known as Potter's Field).

Having told the stories of just seven obvious suicides, the Bible actually goes on to suggest that Jesus himself essentially committed suicide, offering himself as sacrifice to God for the sins of all who would believe in him. Jesus could arguably have prevented his own execution at several occasions, yet at every opportunity he allowed, and perhaps even insisted, that the execution proceedings continue. Though the Bible doesn't actually say this, Jesus' death could be called a Suicide-by-the-Authorities. Of course, the message is meant to be that, since Jesus had allowed himself to be sacrificed (or, God had allowed His only son to be sacrificed) for the sins of all men, the practice of offering sacrifices was thereafter repealed. As such, it is considered a martyrdom of love for all others.

In any case, the Bible does not appear to prohibit suicide. Rather, it seems to suggest that there are a variety of reasons why even the most powerful and influential of people may deliberately bring about their own deaths. More interestingly, it leaves the judgment as to the ethical quality of the described suicides up to those who choose to interpret scripture for themselves. I think I'll do the same.

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

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"Suicide vs. Catholicism"

Christianity made no written link between suicide and sin until the 4th Century. St. Augustine defined suicide as a crime because it involved killing without providing for repentance. St. Thomas Aquinas defined suicide as a "mortal sin" because it usurps God's authority over Life and Death.

The Essential Telescope

by Tom Napier

In 1610 Galileo (1564-1642) turned a crude telescope on Jupiter and found four bright moons circling it. About the same time Johann Kepler (1571-1630) showed that planets move in ellipses around the sun. These discoveries marked the beginning of the end of geocentrism, the millennia old and church-sanctioned belief that the earth remains stationary while the sun and planets revolve around it.

Modern cosmology dates from Isaac Newton's publication of his inverse square law of gravitation in 1678. This explained the planets' elliptical motion pretty nicely. It wasn't until 1915 that Einstein showed that Newton's law didn't quite take everything into account.

Among many other things, Newton studied the behavior of light. He discovered that a prism splits white light into a colored spectrum. This led to the science of spectroscopy which tells us the composition of distant stars. He also improved on Galileo's telescope.

Galileo's Telescope

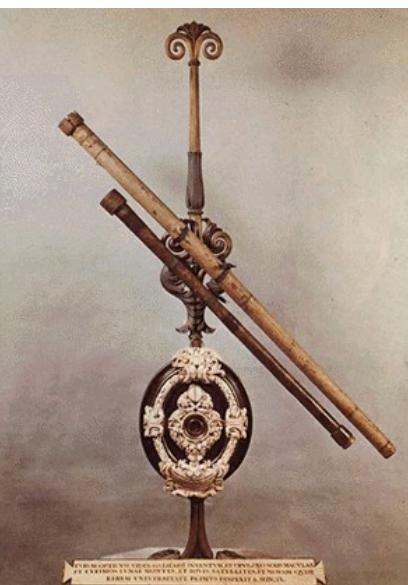
Improving on Galileo

By modern

standards, Galileo's telescope performed dismally. It consisted of a tube with a long-focus positive lens at one end and a short-focus negative lens at the other end. This is the so-called "opera-glass" configuration. It is cheap and easy to build, provides an upright image and is optically terrible. Its only modern application are the disposable plastic binoculars used to admire the cleavages of opera singers.

Kepler found that much better results could be achieved if the eyepiece had a positive focal length. This directs more light into the eye and allows one to see over a wider angle. Unfortunately, it inverts the image. This is of little consequence in astronomy but the makers of binoculars and terrestrial telescopes have to add either prisms or an extra eyepiece to correct for it.

Galileo's telescope suffered from the chromatic



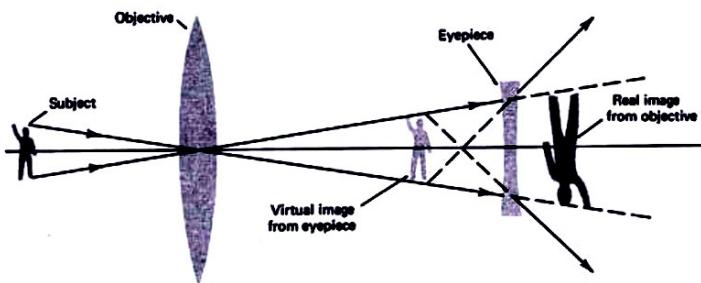
aberration I mentioned in my Phactum article on camera lenses. The solution is the same; combine a positive lens of one type of glass with a negative lens of another.

Newton believed (wrongly) that all transparent materials had the same chromatic aberration so he invented a work-around. In a Newtonian telescope, light is focused by a concave mirror which has no chromatic aberration. A small flat mirror reflects the focused light into an eyepiece on the side of the telescope tube where one can put one's head without blocking the incoming light.

Reflectors and refractors

Nearly all modern astronomical telescopes are reflectors, that is, they use a concave mirror rather than a lens as their objective. Refracting (lens) telescopes tend to be used only for special purposes such as viewing the planets. They need a multi-element objective lens and these become very expensive at diameters over four or five inches. The physical limit is about three feet, the point where a disk of glass supported only at its edge distorts excessively due to its own weight. A mirror can be made much larger as it is supported from its back.

A refracting telescope is at least as long as the focal length of its objective and thus is cumbersome to use. Newton's reflecting design is also long and



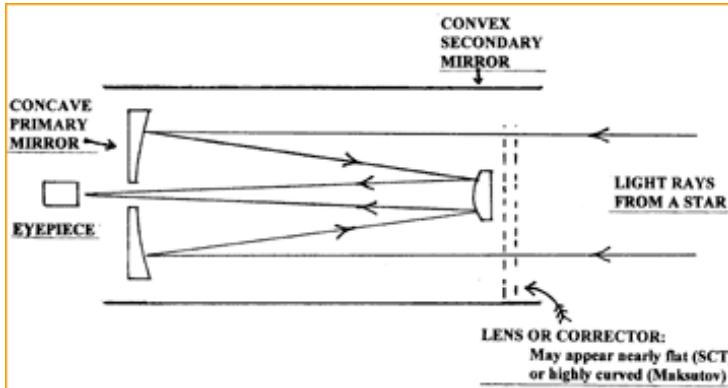
Refracting Telescope

cumbersome. Its balance point is near its bottom end where the mirror is but its eyepiece is close to its top end. It is popular with amateurs as it is cheap to buy and quite practical to make but you may need a stepladder to look into it.

Shorter is better

Many telescopes fold the light path. The primary mirror has a short focal length which is converted into a long one by reflecting the focused light from a convex mirror at the front of the telescope tube. The light then passes through a hole in the center of the primary mirror and comes to a final focus just beyond it. This is known as the Cassegrain





Schmidt-Cassegrain Reflecting Telescope

configuration and has many variations as Wikipedia will reveal.

The telescope tube can be a fifth the length of a Newtonian or refracting telescope. The eyepiece is mounted just below the primary mirror, usually with an additional plane mirror so you look down into it rather than crouching down and looking up.

Fatter matters

The magnification of a telescope is the ratio of its objective focal length to its eyepiece focal length. My eight-inch telescope has a focal length of 2 meters. I usually observe planets with an 18 mm eyepiece, giving a magnification of 111. There are three reasons for not using a higher power. One is that it makes the image fainter. Another is that the atmosphere shakes the image about, further enlargement just makes this worse. The ultimate reason is that more magnification doesn't show more detail.

The detail a telescope can show depends on its resolution. Because of the wave nature of light a point source of light, such as a star, focuses to a circle with fainter rings around it. Two adjacent stars produce overlapping circles and, if they are close enough, can't be distinguished from a single star. The size of the focal pattern depends on the diameter of the objective lens or mirror. Increasing the magnification makes the blur bigger, using a bigger mirror makes the blur sharper.

Air, the enemy

Unless you live in the desert south-west, atmospheric instability limits how much detail you can see. I bought my telescope in 1973 but I've seen detail approaching its theoretical resolution only once or twice.

The huge telescopes dotting mountaintops in Hawaii and Chile are less affected by atmospheric motion. They are big, not to improve their resolution, but to gather more light from faint objects. The Hubble Space Telescope is small (2.4 m) by present standards but it out-performs its Earth-bound cousins for two reasons. It has no atmosphere above it so it performs at its theoretical resolution and, for the same

reason, it can detect ultraviolet light that can't make it through the atmosphere.

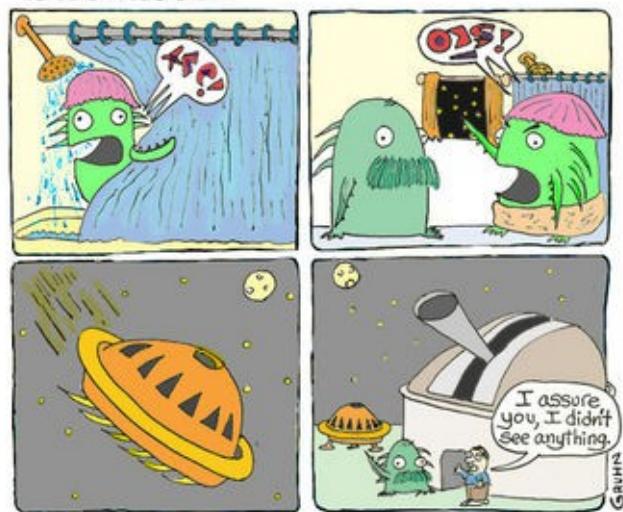
Cheap and nasty

The plastic telescopes typically sold in department stores are a tempting bargain; \$40 or so compared with \$300 for a real beginner's telescope. Their only function is to turn children off astronomy. The boxes show colored photos of nebulae, boast incredible magnifying powers and claim 2" or 3" objective lenses. Few astronomical objects show color to the human eye, a magnifying power of 600 is quite pointless and the poor quality objective lens has a stop behind it that cuts its effective diameter down to an inch or so. Even the tripod wobbles so much that you can't find anything or get a steady view if you do. It's far better to save up and buy the real thing. Today, most telescopes have computerized motor drives that will point them towards any object you name and will track it as the Earth turns.

UFOs close-up

In a recent Skeptical Inquirer article, Robert Sheaffer pointed out that astronomical telescopes are useless for tracking unexpected and fast-moving lights in the sky. Aircraft, satellites and, presumably, UFOs move much faster than telescopes are designed to follow so you won't get a close-up even if you buy a heap of expensive equipment. On the plus side, a telescope might help you recognize that your slow-moving UFO is really a planet. As many writers have pointed out, amateur astronomers are notable both for the amount of time they spend watching the sky and for the paucity of their UFO reports. (And shouldn't one of them have spotted the approaching planet Nibiru by this time?)

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gruhn@webdonuts.com
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Viewing Apollo

Any halfway-decent astronomical telescope will show amazing detail on the moon. One amateur who was showing off the moon to passers-by was asked, "That's fantastic, how long have we known about it?" "About 300 years," he answered. Usually the next question is, "Can you see the lunar landers?" After all, 15% of the population thinks the Apollo landings were a hoax.

Let's work it out. The moon averages about 384,000 kilometers from the center of the earth so when overhead it's about 378,000 km away. It has a diameter of 3476 km and subtends 1897 seconds of arc, just over half a degree.

An eight-inch telescope under good seeing conditions can resolve about one second of arc, that is, the moon is almost 2000 pixels across. What does that translate to on the lunar surface? Divide 3476 by 1897 and you get 1.83 km or a bit over a mile. That is, anything less than a mile across is a blur. The lunar lander descent stages are about 14 feet across. To make them out you'd need a resolution better than two feet.

The Hubble Space Telescope has a resolution of 0.05 seconds. That translates to about 300 feet on the moon, better but far from good enough. Besides, the moon is on the list of things you don't point the Hubble at to avoid frying its detectors. Or maybe that's just part of the conspiracy.

The moon on TV

About 15 years ago I bought a solid state B/W TV camera, removed its lens, and fitted it at the prime focus of my telescope. On a 27" TV set this produced an image where the whole moon would have been about five feet across. The detail was amazing, particularly when I videotaped the image and looked at single frames. This froze the

atmospheric movement that blurs the image seen by the eye. Today a digital camera with a removable lens would be a better option.

The original Moon Hoax

In 1835, Sir John Herschel visited South Africa to try his new telescope on the southern skies. The New York Sun newspaper took it upon itself to publish a series of articles describing what Herschel was discovering. They told how

his telescope used a form of light amplification that permitted huge magnifications without the image becoming too faint to be seen. This allowed Herschel not only to see the oceans of the moon but also its plants and animals. The paper ultimately described the human-like but winged inhabitants of the moon going about their daily business.

This story sold so many papers that other journals started imitating it, printing their own imaginings about the lunar environment. A Springfield, Mass., society even resolved to send missionaries to the moon to convert its inhabitants. It would be nice to think we are less gullible today.



Cartoon by Chris Madden
[http://www.chrismadden.co.uk/moon/
jigsaw.html](http://www.chrismadden.co.uk/moon/jigsaw.html)

Tom Napier has been a stalwart skeptic for many years and was one of the founders of PhACT. He delights in exposing the outlandish claims of pseudo-scientists and charlatans. Tom made his living as an electronics consultant, writer, and scientific consultant. Tom has been an occasional amateur astronomer since the days when a child could walk in the suburbs at night and be entranced by the sight of the stars.

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"For my confirmation, I didn't get a watch and my first pair of long pants, like most Lutheran boys. I got a telescope. My mother thought it would make the best gift."

Wernher von Braun, rocket scientist, (1912 - 1977)

Developments in Paleontology

by Paul Schlueter III

It's getting tough to keep up with the recent developments in Paleontology. Of course, there was the news about the discovery of "Ardi", which was actually a recently released story of research that was 15 years in the development. However, there have recently been a handful of new revelations that deserve discussion, as well.

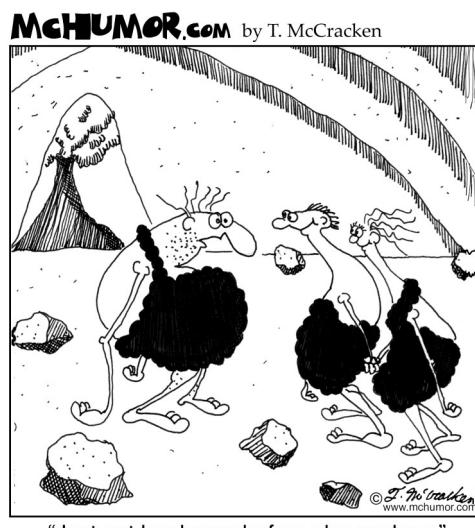
In the 4/30/10 issue of the Week, the discovery of 4 skeletons in South Africa, nearly 2 million years old, reveal a newly-described species, *Australopithecus sediba*, which appears to include features of the older *Australopithecus* line, and of the subsequent *homo* line. It's not certain if they were "human ancestors," or just an interesting side-branch of cousins. It turns out that the New York Times also ran an article on the discovery, 4/9/10, pp. A1 and A10. As it turns out, the bones were first discovered by the 9-yr.-old son of paleoanthropologist Lee R. Berger, who had been searching on the next hill over for decades! Young Matthew Berger literally stumbled over an *Au. sediba* clavicle while playing. The discovery led to the excavation of an ancient sinkhole, where the hominids had become trapped and died, along with the remains of many contemporary animals. It's now known as the Malapa Site, a bit North-by-Northwest of Johannesburg.

In the 4/24/10 issue of Science News, p. 5, a story by Bruce Bower describes how the "Recovered DNA suggests a new type of hominid" excavated from the Denisova cave in Siberia (described at length 3/24/10 in Nature, online.) "The DNA suggests the hominid left Africa in a previously

unsuspected migration around 1 million years ago." The touchy part about this discovery is that it is limited to a single tiny finger bone, roughly 40K years old, attributed to a species currently dubbed "Denisova hominid." The hominid lived among Neanderthals and humans, during the period when *h. floresiensis* (the "Hobbits" of Flores, Indonesia) lived. This wholly unknown hominid cousin is thought to represent a fourth species of hominid which existed at that point in time. The fossil was originally thought to be Neanderthal remains, but its mitochondrial DNA (inherited maternally) turned out to be highly unusual. Now, researchers are re-evaluating many other hominid fossils, seeking similar examples of possible misidentification. The Denisova specimen's DNA differs from human mDNA at about twice as many points as does Neanderthal mDNA. Researchers are still trying to analyze the specimen's nuclear DNA, in part to determine if this individual was a human/Neanderthal hybrid. Though the specimen's sex won't be known until nuclear DNA reveals X or Y chromosomes, the individual is being called "X Woman." The Denisova cave, and other sites in Siberia's Altai mountains, have yielded numerous artifacts, but not as many remains as scientists would like. mDNA analysis suggests that a common maternal

ancestor to both humans and Neanderthals lived 620K - 320K years ago; the Denisova line's common ancestor to humans and Neanderthals appears to have been 1.33M - 780K years ago,

The March 2010 issue of Smithsonian offers a rare treat to us non-expert observers; it's a timeline chart of "Key Human



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

"Where, then, must we look for primaevial Man? Was the oldest *Homo sapiens* pliocene or miocene, or yet more ancient? In still older strata do the fossilized bones of an ape more anthropoid, or a Man more pithecid, than any yet known await the researches of some unborn paleontologist?"

— Thomas Henry Huxley (1825 - 1895),

'On some Fossil Remains of Man' (1863). In *Collected Essays* (1894). Vol. 7, 208.

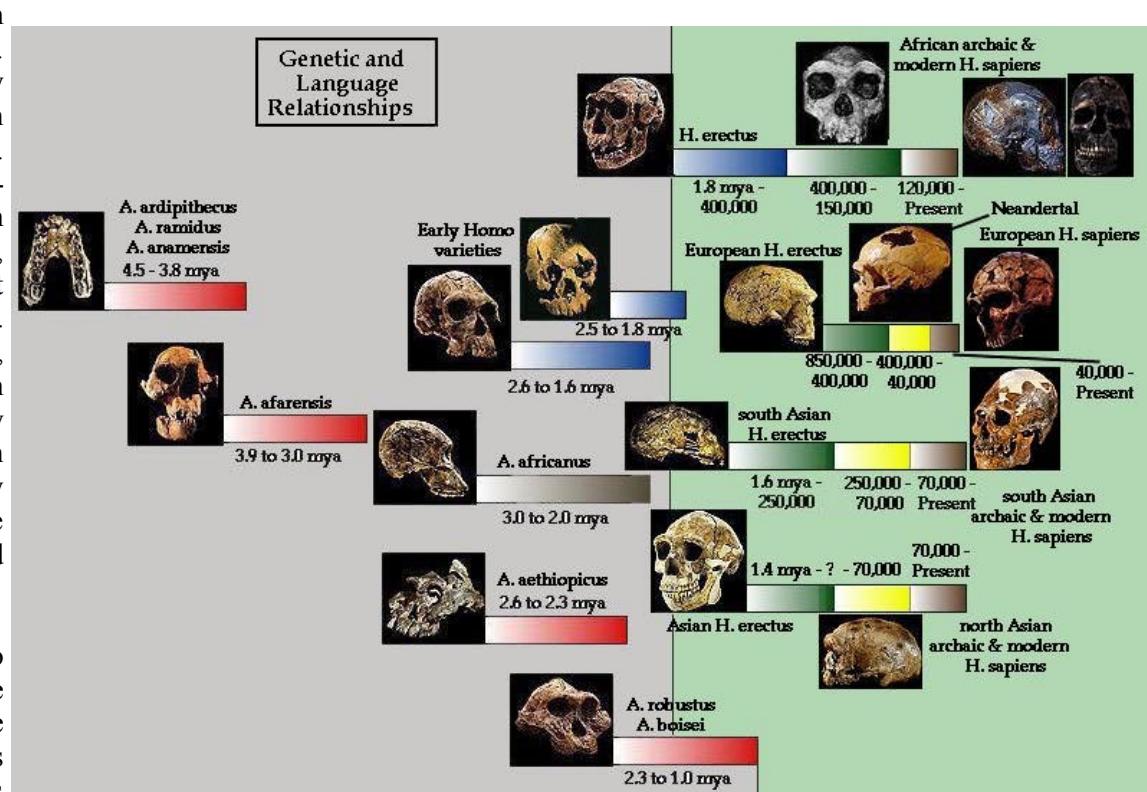
Species," on p. 38. "Ardi" is included, as is her distant ancestor *Ardipithecus kadabba* (5.75M - 5.5M years ago). Older still are *Orrorin tugenensis* ("Millennium Man"), at about 6 MYA and "Toumai", the *Sahelanthropus tchadensis* species, from about 6.75M - 6.25 MYA. *Australopithecus garhi*, at 2.5 MYA, is indicated as being a descendent of "Lucy" (*au. afarensis*, 7.75M - 3 MYA), and of *Au. anamensis*, from 4.25M - 3.75 MYA.

The Smithsonian chart attempts to identify closely-related lineages, *H. heidelbergensis* apparently evolved into *h. neanderthalensis* about 130Kya, in Europe, having been there since around 800 - 500Kya. "*H. sapiens* may be a direct descendant of *H. erectus*." We modern humans appeared in Africa around 250K - 200Kya, and we left Africa around 60Kya (Australia was settled at around that time by *h. sap.*). We appeared in Europe about 4.4Kya; Neanderthals retreated into the Iberian peninsula by around 33Kya, and were supplanted by Cro-Magnon man (*h. sap.*) by 28Kya. *Homo habilis*, which may have been either a common ancestor of *h. erectus* and *h. heidelbergensis*, or just a side-branch cousin, lived from around 2.3Mya to 1.25Mya, overlapping *h. erectus*, but preceding *h. heidelbergensis*. The Hobbits, *h. floresiensis*, lived in relative isolation from about 90K - 13Kya (they may have still been thriving when *h. sap.* first successfully crossed the Bering land bridge into the Americas, around 14Kya).

Some dig sites have proven to be especially interesting. The Middle Awash Valley, in the Afar desert of Ethiopia, has recently yielded fossils

ranging from *Ar. kadabba* (6M yrs. old) to *h. sapiens* just 160K yrs. old. The Turkana Basin, in Kenya, has revealed that 4 species of hominids co-existed there at a point about 2M yrs. ago. The oldest, *Au. africanus* (the "Taung child") was fading out just as *Paranthropus robustus* (2M - 1.2Mya) was appearing, and they most likely would have shared the Earth with *P. boisei* and *H. habilis*. Somewhat earlier (2.5Mya),, *Au. garhi* and *Au. africanus* overlapped, along with *P. aethiopicus* (2.754 - 2.25Mya), which seems to have been the direct ancestor of *P. robustus*.

The Smithsonian chart lists 17 hominid species, and *Au. sediba* and the Denisova "X woman" aren't even on the list yet! Who knows what we'll discover next, as hominid remains keep turning up and filling in the diminishing gaps of the fossil record of human ancestry?



Responding to the Bishop of Oxford, Samuel Wilberforce's question whether he traced his descent from an ape on his mother's or his father's side: "If then, said I, the question is put to me would I rather have a miserable ape for a grandfather or a man highly endowed by nature and possessing great means and influence and yet who employs those faculties for the mere purpose of introducing ridicule into a grave scientific discussion—I unhesitatingly affirm my preference for the ape."

— Thomas Henry Huxley
Letter to Dr. Dyster (9 Sep 1860),

PhACT CALENDAR

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 \$3.75 for all day. Enter the college parking lot on 17th Street which is one way south bound. This meeting site is handicap accessible. PhACT Meetings are free and open to the public unless otherwise noted.



Saturday, September 18, 2010 - The PhACT Lecture season begins anew. **John Grant**, a prolific science and science fiction writer, will be our speaker. He will be discussing some of the ideas in his upcoming book, **Denying Science**, which will be published next spring. Is global warming merely scaremongering by climatologists conspiring to protect their jobs? Is evolution "just a theory"? Do vaccinations cause autism? Did Pasteur recant the germ theory on his deathbed? Were those results showing a correlation between cigarettes and lung cancer faked up by anti-smoking Nazis out to stop us all from having a good time? Does HIV/AIDS exist as a disease at all or is it a figment dreamed up by greedy drug companies? **At Community College of Philadelphia in the Small Auditorium in the Bonnell Building. Enter on 17th street about 300 feet south of Spring Garden Street.** This meeting is free and open to the public. For more details see Page 1.

Saturday, October 16, 2010 - TBA

Saturday, November 20, 2010 - TBA

Friday, September 10, 8:00 PM: Delaware Valley MENSA General Membership Meeting: LOYALTY in REVOLUTIONARY PENNSYLVANIA, Speaker: Clarissa Dillon, Ph.D. Many people believe that the citizens of the original thirteen colonies were staunch supporters of the war with Britain. Others believe that the citizens were united behind the King — "how dare a bunch of radical men and women bring such dishonor and turmoil to this British outpost?" Of these opinions, how many are true and how many are myths will be explored by our speaker.

Clarissa Dillon, Ph.D., has a doctorate in history from Bryn Mawr College. Her work uses a blend of traditional scholarly research and replication - doing 18th century women's work "their way" to the greatest extent possible. She is an active participant in Association for Living History, Farms and Agricultural Museums (ALHFA) and is a founding member of Past Masters in Early American Domestic Arts. She can be seen demonstrating various domestic processes at many historic sites in the area.

Prepare to be entertained by this lively, original and animated speaker.

Prior to the meeting, those who can, are invited to attend the pre-General Membership Meeting Dinner at a secret location someplace in the heart of "the City with a Million Eat'ries" 's very own Chinatown or Ol'City. This is an excellent opportunity to have a good meal and get to speak with the evening's guest, one on one. Contact Pete Stevens to reserve your place at dinner, by NOON on Friday.

Join us at the Police Administration Building, 750 Race Street, Philadelphia, PA. This meeting is DVM's only activity specifically open to the public, so feel free to invite your friends and relatives.

PS: Don't let traffic on the Schuylkill Expressway interfere with attending. Consider taking SEPTA and exiting at Market Street East / Gallery, it is only a two block walk to the Police Administration Building. Contact Contact Pete, 215-235-pete, for additional information.

Saturday, September 11, 2010 at 7:00 PM - Operatic concert paying tribute to Paul D. Osimo former Vice President and Production Manager of the Delaware Valley Opera Company. The concert will be a selection of arias and ensembles by many of DVOC's outstanding singers. At the Immaculate Heart of Mary sanctuary, 819 Cathedral Road in the Roxborough section of Philadelphia. Free will donations will be accepted. Donations are tax deductible and go to support the Delaware Valley Opera Company. For Information: Phone: 215-725-4171 - Email: info@dvopera.org

Tuesday, September 14, 2010 at 7:30PM - Eliza Griswold | The Tenth Parallel: Dispatches from the Fault Line Between Christianity and Islam - at the Free Library of Philadelphia

An award-winning investigative journalist and poet, Eliza Griswold has spent the past seven years traveling between the equator and the 10th parallel—the line of latitude 700 miles north of the equator—at the geographic and ideological front where Christianity and Islam collide. In The Tenth Parallel, Griswold illustrates how faith is shaped by geography and demographics and how one's sense of God is shaped by one's place on earth.

FREE. No tickets required. For Info: 215-567-4341.

Wednesday, September 15, 2010 at 7:15 pm. Rittenhouse Astronomical Society at the Franklin Institute. Speaker: Joyce Towne (past RAS member and educator/producer at the Fels Planetarium), will join us for a retrospective review of Armand Spitz (past RAS president and

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

member), and his quest to bring astronomy to the masses in planetariums manufactured here in Pennsylvania. Armand Spitz has long since passed away but his legacy lives on. Learn how planetaria evolved as Armand attempted to make these facilities affordable to many schools and museums. Joyce will talk about the evolution of the instrument into what is considered 'state of the art' today.

Joyce currently works for Spitz Incorporated, an amazing local resource for astronomy education. The Spitz company has been installing planetariums around the world since the late 1940's. They entered the digital/full dome domain in the late 1990s with projection systems, real time software, and notable presentations and curriculum for those systems.

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

Wednesday, September 22, 2010 at 7:30PM - Daniel R. Biddle and Murray Dubin | Tasting Freedom: Octavius Catto and the Battle for Equality in Civil War America - at the Free Library of Philadelphia

Philadelphia orator and activist Octavius Catto electrified audiences in 1864, calling on free men and women to aid and educate the newly freed slaves. In Tasting Freedom, co-authors Biddle and Dubin profile this charismatic black leader who championed equal rights nearly a century prior to the modern Civil Rights movement. Daniel R. Biddle is the Philadelphia Inquirer's Pennsylvania editor; he won a Pulitzer Prize and other national awards for his investigative stories on the courts. Murray Dubin, the author of South Philadelphia: Mummers, Memories and the Melrose Diner, was a reporter and editor at the Philadelphia Inquirer for 34 years, until 2005. FREE. No tickets required. For Info: 215-567-4341.

Wednesday September 22, 2010 at 7:30 P.M. - Tim McGrath will discuss his new book (published May 2010) John Barry An American Hero in the Age of Sail.

At Broad Axe Tavern, 901 West Butler Pike, Ambler, PA 19002 Telephone: (215) 643-6300. This event is Free.

See the American Revolution Round Table of Philadelphia (ARRTOP) website at www.arrtop.com

Monday, September 27, 2010 at 7:30PM - Thomas Buergenthal | A Lucky Child: A Memoir of Surviving Auschwitz as a Young Boy - at the Free Library of Philadelphia

In 1944, at the age of 10, Thomas Buergenthal arrived at Auschwitz after surviving two ghettos and a labor camp. Separated from his mother, then his father, he survived by his wits and some remarkable strokes of luck. Almost two years after his liberation, he was reunited with his mother, and in 1951, arrived in the U.S. to start a new life. A past president of the Inter-American Court of Human Rights, he is a co-recipient of the 2008 Gruber Foundation International Justice Prize, and currently serves as the American judge in the International Court of Justice in The Hague.

Monday, September 27, 2010 - 06:00PM - 07:30PM - Lecture at University of Pennsylvania Museum of Animals in Art and Polemic at

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



the Intersection of Christianity and Islam

In many of the medieval church floor mosaics from Palestine and Jordan, the tesserae were scrambled and reset to eliminate images of humans and animals. Were these erasures a response to the rise of Islam in the region, as is commonly assumed, or to Christian concerns about idolatry?

Henry Maguire was Professor of the History of Art at Johns Hopkins University until his retirement in 2010. He was Director of Byzantine Studies at Dumbarton Oaks 1991-96. His lecture is sponsored by the Alexander S. Onassis Foundation. Admission: Pay-what-you-want.

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

Saturday, October 02, 2010 - 01:00PM - 04:30PM - Afternoon Symposium Water in the Ancient World. At University of Pennsylvania Museum of Archaeology and Anthropology

As part of the University of Pennsylvania's "Year of Water"-a multidisciplinary program of events and exhibitions- Penn Museum offers this afternoon program highlighting the challenges of water management in ancient times. Penn Museum scholars and invited specialists dive in, exploring the myths around and evidence for the Great Flood, the engineering marvels of Roman and Indus civilizations, and the watery landscapes of Amazonia and Mesoamerica. The program includes National Geographic Society archaeologist Fredrik Hiebert, whose underwater research with Robert Ballard in the Black Sea identified the remains of ancient floods, and Vernon Scarborough from the University of Cincinnati, who discusses how sustainable water use by ancient civilizations can provide models for our current response to global climate change. Visitors also enjoy a new display of the Museum's famous ancient Sumerian "Flood Tablet" along with objects and photographs illustrating the power of water to both sustain and destroy life in ancient Mesopotamia. Admission: Free with Museum admission donation. Optional reception (\$10 fee) follows. Reservations requested. <http://www.penn.museum/events-calendar.html>

Sunday, October 3, 2010 - the Sheldon Harris Ginsberg Memorial Scholarship Fund Benefit Concert at Abington Presbyterian Church, 1082 Old York Road, Abington, PA 19001

There will be an all professional orchestra conducted by Blair Bollinger, bass trombonist of the Philadelphia Orchestra.

Program: Schubert's Overture, Die Freunde von Salamanka Beethoven's Piano Concerto No. 3 in 'c' minor performed by Claire Belkovsky and

Beethoven's Piano Concerto No. 5 in 'Eb' major performed by Marja Kaisla Art Show: by Sandy Day - 1/3 of any purchase will be donated to the scholarship fund.

Doors open at 7 pm to view the art show. The concert begins at 8 pm. Tickets: only \$30 for this wonderful fundraiser, Half price for children under 12 years of age, \$5 discount for groups of 10 or more

Reservations are recommended

Please call Regol Concerts at 215.528.0582 and leave your reservation on the tape. You may visit us at www.regolconcerts.org

Monday, October 4, 2010 - 5 - 7 p.m. - The Lois K. Cohen Endowed Lecture Series in Global Health at University of the Sciences, McNeil Science and Technology Center, 43rd Street and Woodland Avenue, Philadelphia, PA 19104

University of the Sciences' Mayes College of Healthcare Business and Policy is proud to present The Lois K. Cohen Endowed Lecture Series in Global Health. "Reaching Out to the World: The Role of Institutional Partnerships" is a lecture on the global health response to Haiti in the wake of the devastating earthquake by Dr. Mirta Roses Periago, Director of the Pan American Health Organization. Free and open to the public. Reception to follow. RSVP by calling 866.431.0845 or visit www.usp.edu/cohenlecture.

Wednesday, October 6, 2010 at 11:00AM - Allen Hornblum | The Invisible Harry Gold: The Man Who Gave the Soviets the Atom Bomb at the Free Library of Philadelphia

The most successful Soviet spy of the modern era was no James Bond. Harry Gold was a shy South Philly bachelor who delivered vital American atomic secrets to the Russians. Now, Temple University Instructor and author Allen Hornblum provides a fascinating look at a man no one understood--until it was too late!

No tickets required. For Info: 215-567-4341.

Friday, October 8, 2010 at 8:00 PM Mensa General Membership Meeting

Meeting is usually on the 2nd Friday of each month at the Police Administration Building at 750 Race Street in Philadelphia. Contact Pete Stevens at pete.stevens@phila.gov for more information or the Mensa calendar at <http://dvm.us.mensa.org>

Saturday October 9th, 2010 from 8am-5pm and October 16th 2010 from 10am to 6pm - UFO CONFERENCE - Pennsylvania leads the Nation in UFO Sightings:

"UFO's... Seeing is Believing". The Pennsylvania Mutual UFO Network will present its 3rd Annual UFO Conference's at the Sheraton Hotel 400 Oxford Valley Rd Langhorne Pa 19047 on Saturday October 9th, 2010 from 8am-and on Saturday October 16th 2010 from 10am to 6pm at the Westmoreland Community College, 145 Pavilion Ln, Youngwood, Pa 15697.

Pennsylvania has been the epicenter of the world's largest UFO wave since the summer of 2008. There have been over 650 UFO reports filed with MUFON from Pittsburgh to Philly over the past two years. John Ventre, the Pennsylvania State Director for MUFON stated, "We're getting clusters of sightings from every town from Pittsburgh to Philly along the southern half of the state. We have 151 reports in the Pittsburgh-Westmoreland County area and 355 in the Philly area. I get reports of UFO's coming in from Lake Erie in Ohio and across Wheeling, West Virginia into the Pittsburgh area and they are seen minutes later on the Eastern part of the state. The Conference will present a combination of expert Paranormal, Abduction and UFO speakers.

Speakers include Richard Dolan who has written numerous books on the government cover up, Bill Birnes of UFO Hunters, Budd Hopkins on Abductions, Kathleen Marden on Betty and Barney Hill, Peter Robbins who investigated the Rendlesham Forrest UK incident, John Ventre of the Mutual UFO Network, Stan Gordon will present Kecksburg then and Leslie Kean who sued NASA will present Kecksburg now on the 45th anniversary.

"The quality of speakers at this Conference rivals the larger pricier conferences that take place around the country", said Ventre. Professional presentations and vendor tables will highlight this conference in an academic setting. "We also have a few surprises for the audience and they are not Halloween tricks", said Ventre.

Admission price's are \$20 in Pittsburgh and \$30 in Philadelphia. Advance orders and the Conference Agenda can be obtained at John Ventre's website at www.johnventre.com or www.mufonpa.com. John Ventre can be reached at 724 836 1266 or at jventre1@comcast.net. The Mutual UFO Network was founded in 1969 after the US Air Force concluded their 17 year Project Blue Book study of UFO's and concluded that UFO's are not a threat to National Security. "They never said UFO's don't exist. There is overwhelming evidence that they do. I believe this is an aviation safety issue. The only reason there are not more collisions is because of their ability to maneuver, not ours", said Ventre. Mufon has 2700 members worldwide and over 900 certified investigators. The Pennsylvania MUFON branch has 129 members and 21 certified investigators. Anyone interested in joining MUFON can speak to John Ventre or one of the many investigators that will be at the conference from Pa, WV, NY, NJ and Ohio. "One thing I know from conducting my investigations: if you've seen one, you believe", said Ventre.

Thursday, October 14, 2010 at 12:00PM - Tariq Ramadan | What I Believe - at the Free Library of Philadelphia

A leading scholar of Islam in the Western world, Tariq Ramadan is one of the most important innovators of the 21st century, according to Time magazine. He is a professor of Islamic Studies at Oxford University and author of several books including Radical Reform and In the Footsteps

of the Prophet. Deemed a "Muslim Martin Luther" by Paul Donnelly of the Washington Post, Ramadan was barred from entering the United States for several years by the Bush administration. "Deliberately brief, sensible, and accessible," praises Publisher's Weekly. "What I Believe is not just a summary of Ramadan's own views but a primer on modern Western Muslim life." Tariq Ramadan will be interviewed by Carlin Romano, Critic-at-large, Chronicle of Higher Education. No tickets required. For Info: 215-567-4341

Saturday, October 23, 2010 at 7:00 PM. Opera Jeopardy!

A robust evening of fun for audience and singers combined. There will be lots of music as well as a lot of audience participation. If you have a question pertaining to opera that you would like to submit, please send it to Tim Oliver at Ttimoliver@aol.com. Tickets are \$40 and dinner is included. Reservations are a must. At Keenan's Valley View Inn, 468 Domino Lane, in the Roxborough section of Philadelphia. For Information:Phone: 215-725-4171 - Email: info@dvoopera.org



Saturday, October 30, 2010 - 02:00PM - At University of Pennsylvania Museum. Pompeii 79 CE: The Treasure of Rediscovery

During the course of two days in August, 79 CE, the thriving Roman cities of Pompeii and Herculaneum were buried by thick layers of ash and mud when the volcanic Mt. Vesuvius erupted, capturing one moment in the cities' history. The cities lay buried for nearly 1,700 years, until excavations sponsored by the Kings of Naples gradually brought them to light once more, and with them a wealth of bronze and marble statues that attracted travelers on the Grand Tour.

Dr. C. Brian Rose, Penn Museum Deputy Director and Curator-in-Charge of the Mediterranean Section, provides an overview of what Pompeii was like 2,000 years ago, and considers the colorful lives of its 18th century excavators. Join us afterwards for an afternoon tea and dim-sum reception to celebrate the upcoming exhibition Secrets of the Silk Road, opening Saturday, February 5, 2011.

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

Tuesday, November 2, 2010 at 7:30PM - Simon Winchester | Atlantic: Great Sea Battles, Heroic Discoveries, Titanic Storms, and a Vast Ocean of a Million Stories with Ian Frazier | Travels in Siberia - at the Free Library of Philadelphia

Simon Winchester explores topics from the urbane to the catastrophic in his New York Times bestselling nonfiction books, which include The Professor and the Madman, Krakatoa, and The Man Who Loved China. His writing also appears in National Geographic and Smithsonian magazine. From the Purple Islands off the coast of Morocco to the tip of Antarctica, Winchester's new book Atlantic takes readers on an armchair expedition across the breadth and depth of the Atlantic Ocean, documenting its dynamic history along the way.

Recipient of the James Thurber Prize for American Humor, Ian Frazier is a frequent contributor to The New Yorker, and the author of Great Plains, On the Rez, Dating Your Mom, and Lamentations of the Father, a collection of essays. Brimming with fur seekers, tea caravans, and exiles of every kind, Travels in Siberia is part travelogue, part history, and part personal reflection on the grim and much storied region of Russia—in Frazier's hands, humor is still to be found along the way.

Cost: \$10 General Admission, \$7 Students. For Info: 215-567-4341

Saturday, November 6, 2010 - P.I.R.A (Paranormal Investigators and Research Association) will participate in a one night fund raising event for Fort Mifflin, a historic Revolutionary War site in Philadelphia. All proceeds collected from this event will go directly to Fort Mifflin. For more information, please contact Fort Mifflin by calling 215-685-4167 ask for Lorraine Irby, or you can email her at irby.lorraine@gmail.com



Science on Tap, A Science Café

Science on Tap is a monthly gathering in Philadelphia for anyone who is interested in

getting together with other people to discuss a range of engaging science topics.

Held at National Mechanics, a relaxed, convivial bar in Old City, *Science on Tap* features a brief, informal presentation by a scientist or other expert followed by lively conversation. The goal is to promote enthusiasm for science in a fun, spirited, and accessible way, while also meeting new people. Please come join the conversation! On the **second Monday of each month at 6:00 PM**.

What's On Tap

Monday September 13, 2010

Beauvais Lyons, Director of the Hokes Archive, will talk about "The Association of Creative Zoology"

Join us for a one-of-a-kind presentation combining visual art and performative dialogue. In playing with and even parodying conceptions of the history of life on earth, artist Beauvais Lyons, self-appointed Director of the Hokes Archives, provokes skepticism and critical thinking on the part of audiences of all persuasions, whether proponents of evolution, creationism, or intelligent design. In confusing the boundaries between art and science, and between the imaginary and the real, Lyons challenges the ways that beliefs about the world are formed. Lyons's installation, The Association for Creative Zoology, will be on view at the American Philosophical Society's Jefferson Garden at 105 South Fifth Street (near the corner of Fifth and Chestnut) in September. Please check www.apsmuseum.org/lyons for exact dates and hours.

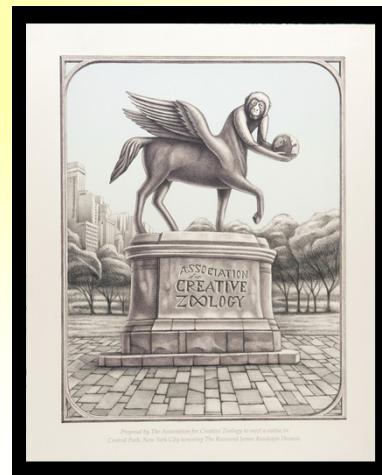
This month's Science on Tap is presented by the APS Museum

National Mechanics 22 South Third St. Philadelphia PA 19106
215-701-4883

Free and Open to the public (age 21+) or minors accompanied by a chaperone 25+. Want to join the Science on Tap mailing list? Contact us at scienceontapphilly@gmail.com and include "subscribe to mailing list" as the subject line

Science for what ales you

The science café movement began in Leeds, England in 1998 when a local pub decided to foment a new kind of barroom brawl—a scientific debate. The idea took off as a unique way to advance public understanding of science. Now, there are locations from Maine to California where, for the price of a beer or a glass of wine or a cup of coffee, anyone can discuss scientific ideas with leading experts in their fields and learn about developments that are changing our lives.



2009-10 Penn Science Café Schedule

The Penn Science Café, the lecture series that hauls science out of the lab and treats it to a night on the town. Free and open to the public, it's an opportunity to pitch questions to leading scientific experts.

7:00 P.M. @ the MarBar, 40th and Walnut street location, 2nd floor of the Marathon Grill, menu items available for purchase RSVP to Jordan Reese, jreese@upenn.edu or 215-573-6604.

Sept 22, 2010 Do Genomes Compute? Junhyong Kim, Edmund J. and Louise W. Kahn Term-Endowed Professor of Biology

Oct 20 Nature's Nanotechnology: Biomolecules Explored One at a Time Yale Goldman, Associate Director of the Nano/Bio Interface Center

Nov 17 Gravitational Lensing: Einstein Rings and Dark Matter.

Bhuvnesh Jain, Professor of Physics and Astronomy

Dec 15 Mathematics: Created or Discovered? Robert Ghrist, Andrea Mitchell University Professor of Math & Electrical Systems and Engineering

Jan 25, 2011 The World Water Crisis Stan Laskowski, President of the Philadelphia Global Water Initiative

Feb 16 Why You Can Hardly Swing A Dead Cat Without Hitting A Dead Cat In an Animal Shelter Today. The Obvious, the Occult, and the Counterintuitive World of Animal Sheltering Michael Moyer, VMD, Rosenthal Director of Shelter Animal Medicine

March 16 Stealing the Past: Collectors and Museums of the 21st Century Richard Leventhal, Curator, Penn Museum

April 20 From Barbershops to Basketball Courts: Culturally Relevant Interventions in the African American Community Howard Stevenson, Associate Professor of Applied Psychology, Graduate School of Education

May 18 Neuroeconomics: Decision Making and the Brain Joe Kable, Associate Professor of Psychology



1700 West Montgomery Avenue
Philadelphia, PA 19121
ph 215-763-6529 www.wagnerfreeinstitute.org

Adult Education - Fall 2010 Courses

Wagner courses are free but contributions are greatly appreciated

► **The Scientist as an Explorer: Makings of adventures, heroes, and scientific knowledge**, Professor Sylvester Ratowt. 8 Wednesdays, September 29 through November 17, 2010, 6:30 to 7:45 PM. Independence Branch of the Free Library, 18 S. 7th Street (between Market and Chestnut). This course will examine the contexts in which travels were turned into scientific knowledge and travelers were turned into heroes. No preregistration required.

► **An Introduction to Insects and Related Arthropods**, Professor Robert T. Allen. 8 Thursdays, September 30 through November 18, 2010, from 6:30 to 8:00 PM. The Academy of Natural Sciences, 19th Street and the Benjamin Franklin Parkway. This class will explore the diversity of insects, examining the features that have made them the most successful group of organisms on earth. This course requires preregistration and is limited to 15 students. To preregister, call 215-763-6529, ext. 23, beginning Wednesday, September 15, 2010.

► **Forensic Anthropology**, Professor Janet Monge. 6 Mondays, October 4 through November 8, 2010, from 6:30 to 8:00 PM. University of Pennsylvania Museum of Archaeology and Anthropology, 33rd and Spruce Streets. This course will discuss the skills used by forensic anthropologists and how they are applied to forensic cases. There will be a field trip to a local cemetery on a Saturday. No preregistration required.

► **Physics and Chemistry in the Kitchen**, Professor Paul J. Angolillo. 8 Tuesdays, October 5 to November 23, 2010, from 6:00 to 7:30 PM. Wynnefield Branch of the Free Library, 5325 Overbrook Avenue. This course, designed for "geek foodies," will explore the scientific foundations of cooking and cooking practice. No preregistration required.



Family Open House
Saturday, September 11, 2010
Noon to 4:00 PM
Lesson at 1:00 PM
Pollinator Power! at the Wagner
Free Institute of Science

The Wagner will be open from 12 - 4 on Saturday, September 11 and at 1:00 will present "Pollinator Power!" a lesson for children ages 6-12 about the importance of pollinators, like the honey bee, in our lives. Sip honey-sweetened iced tea and listen to local folk rocker, Liam Gallagher, while you peruse goods from local book-sellers, bee artists and beekeepers, and view live bees in an observation hive. Beeswax candle-making, free Häagen-Dazs ice cream,

scavenger hunts, and the debut of the Institute's new native pollinator garden will sweeten the day for all!

The 2010 Philadelphia Honey Festival

A full schedule of family-friendly activities, both fun and educational, is being planned throughout the city for easy access by all. Beekeepers across the United States and the rest of the world celebrate the 200th birthday of Philadelphian Lorenzo L. Langstroth, The Father of Modern Beekeeping, born at 106 South Front Street in 1810 and inventor of the movable frame hive. Philadelphia's 2010 Honey Festival will begin by commemorating the life and work of Rev. Langstroth (LLL) for his invention with the placement of an historic marker on Friday September 10 at 3:30 p.m. The Wagner Institute, Bartram's Garden, and Wyck Historic House are all hosting events. There will be something for everyone at the festival.

Weeknights at the Wagner

Thursday, October 14, 2010

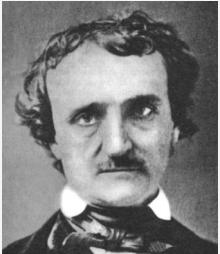
4:00 - 7:00 PM - Lecture at 5:30 PM

The Experiments of Edgar Allan Poe

An Illustrated Presentation By

Dr. John Tresch, University of Pennsylvania

Edgar Allan Poe is usually thought of as a fantasist, more at home in the realm of imagination than the world of fact and reason. Yet many of his tales of mystery and the grotesque show the impact of the scientific and technological discoveries of his day.



This talk will reveal a lesser-known side of Poe. Before he began writing, Poe received some of the best scientific training available at the time as a cadet at West Point. He also worked as an early science journalist, reporting and evaluating new discoveries and inventions to readers curious about the universe and hungry for novelty. Poe took special pleasure in debunking scientific hoaxes, such as the Chess-playing Turk, and even more in inventing his own. Poe's writings share his age's enthusiasm for natural history and the classification of specimens (gold bugs and others); for electricity, magnetism and mesmerism; and for theories about the origin and destiny of the solar system. The obsession of many of his best-loved tales is nothing other than an exploration of the power and the limits of calculation and reason.

Poe invented and contributed to new, scientifically-influenced literary genres - the detective story and science fiction. This talk will consider the literary experiments of this singular author, in both familiar and lesser-known works, as a reflection - and critique - of a society being transformed by science and industry.

John Tresch is Assistant Professor in History and Sociology of Science at the University of Pennsylvania. He is the author of *The Romantic Machine: Technology and Metamorphosis in Paris*, 1821-1851 and is currently working on a book on Poe and American Science.

Wagner courses and events are free. Tax deductible contributions are greatly appreciated.

The Academy of Natural Sciences Center for Environmental Policy “Philadelphia’s Window on the Environment”

Center for Environmental Policy
The Academy of Natural Sciences
1900 Benjamin Franklin Parkway, Philadelphia, PA 19103
www.ansp.org/environmental/
215-299-1108 cep@ansp.org

Upcoming Public Events

September 20, 2010 - 6:00 to 8:30 p.m.

Global Warming 2010: Creating Jobs and Saving the Planet Featuring: Bill McKibben

The Academy of Natural Sciences, PennFuture, the American Cities Foundation and 350 Philly are teaming up to explore the threat of climate change, and why we need to act now for the sake of our environment and our economy.

Join us as we cover the who, what, when, where, and why of climate change, and the opportunities it provides to expand the economy, create green jobs, and preserve the planet. Speakers will provide details of global warming initiatives and state and federal legislation and how they would move us forward.

Our featured speaker is the brilliant Bill McKibben, world-renowned environmentalist, author, and founder of the international climate campaign 350.org.

Admission is free but seating will be limited. Auditorium seating will be available on a first-come/first served basis. Preferred seating will be available for Academy and Penn Future members. To register, please visit:

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

September 27, 2010 6:00 PM - 8:30 PM

How To Create Your Condo's Green Committee

Presented in collaboration with the Green Condominium and Co-op Initiative

Join us for a special workshop on developing the tools to bring sustainable practices to your condominium. The program will feature condominium managers and residents describing the development and use of green committees, the challenges the might occur and the techniques for building a consensus for sustainability. To register, visit:

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

**Wednesday, September 29, 6:30–8:30 pm at the Academy
Saturday, October 2, 8:30 am–5 pm, field study in the Pine Barrens, N.J. (More details on the field trip will be discussed in class on September 29.)**

Beginning Nature Photography

Harness the power of your digital camera to capture amazing nature photographs! This two-part course will examine the basics of nature photography. We will use light, design principles, and natural subjects to create appealing, expressive photographs. The Academy's Doug Wechsler will demonstrate some of the tricks of the trade to help you improve your technique. The course will include one evening session at the Academy and a day-long session in the New Jersey Pine Barrens.

Doug Wechsler is director of VIREO, the Academy's worldwide collection of bird photography. His nature photography has appeared in hundreds of publications including 20 children's books he has authored.

Fee: \$75/members; \$80/nonmembers (one cost for both programs, not sold separately)

Equipment not included; bring your camera, its owner's manual, and extra batteries.

Space is limited to 12 participants. Call 215-299-1060 to register.

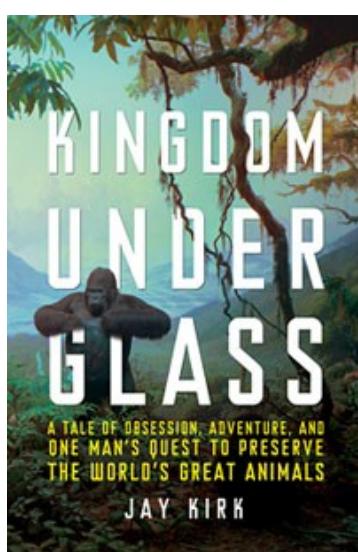
Wednesday, October 27, 2010, 6:30-7:30 pm

An Evening with Author Jay Kirk

Book signing to follow

Spend an evening with author and Philadelphia resident Jay Kirk as he discusses his newest book, Kingdom Under Glass: A Tale of Obsession, Adventure, and One Man's Quest to Preserve The World's Great Animals.

In this epic account of an extraordinary life lived during remarkable times, Kirk follows the adventures of the brooding genius Carl Akeley who revolutionized taxidermy in the late 19th century. Akeley's artistic methods were used in natural history dioramas across the country, including the Academy of Natural Sciences.



Kirk's nonfiction has been published in Harper's, GQ, The New York Times Magazine, and The Nation. His work has been anthologized in Best American Crime Writing 2003 and 2004, and Best American Travel Writing 2009 (edited by Simon Winchester). He is a recipient of a 2005 Pew Fellowship in the Arts and is a MacDowell Fellow. He teaches in the Creative Writing Program at the University of Pennsylvania.

Starting at 5:30 pm, visitors are invited to view rarely seen specimens and hear the stories behind the Academy's own dioramas. See photos and field sketches from the pioneering Academy explorers who followed in Akeley's footsteps.

Please RSVP to 215-299-1060 or reservations@ansp.org



Laurel Hill Cemetery

3822 Ridge Avenue - Philadelphia, PA 19132.

215-228-8200 <http://www.thelaurelhilccemetery.org>

Hours of Operation:

Monday-Friday 8:00am-4:30pm

Saturday-Sunday 9:30am-4:30pm

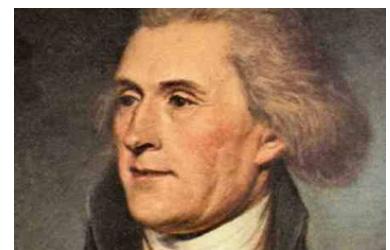
Closed Major Holidays

Admission to Laurel Hill Cemetery is always free

Sunday, September 26th at 2:00 PM - The Worlds of Thomas Jefferson at Laurel Hill

Adopted sons, Signers of The Declaration, Painters, Sculptors, Men of Science, Ladies of Belle Letters, Famous Physicians, Pariahs of Free Press, Purveyors of Fine Wine and, of course, political provokers both friend and foe: recognized by Thomas Jefferson as luminaries in our nation's early "Constellation of Worthies," they all rest peacefully in Laurel Hill Cemetery.

Join Bill Barker - foremost Jefferson scholar and acclaimed portrayer of America's third president - on this historical exploration of the worlds of Thomas Jefferson at Laurel Hill. The tour will be held on Sunday, September 26th at 2:00 PM. The cost is \$15 per person; \$12 for members; \$10 for students and seniors; and children under the age of 12 are free.



Saturday, October 2, 6:00pm THE GHOSTS AMONG OUR GRAVES: A Paranormal Investigation of Laurel Hill



Free Spirit Paranormal Investigators recently conducted several revealing investigations of historic Laurel Hill Cemetery in search of the site's haunted history. Join FSPI for this unique workshop, as they reveal the findings of their investigations, and discuss some of the basics in the field of ghost hunting, including types of hauntings; equipment and debunking; EMFs (electromagnetic fields); EVPs (electronic voice phenomena); space weather; and psychic protection. Participants will have the opportunity to join FSPI members on group investigations of some of the Cemetery's most reportedly active sections. The program will conclude with a wine and cheese reception and social gathering in the Laurel Hill Cemetery Gatehouse.

Tickets are \$30 per person; \$27 for members; \$25 for seniors and students. Children under twelve years of age are free. Advance reservations are requested. To reserve, call (215)228-8200 or email tours@thelaurelhilccemetery.org.

Saturday, October 9, 2010, at 5:00pm 2nd Annual Rest in Peace 5K Run



Trick or treat...move your feet! The 2nd Annual Rest In Peace 5K is a unique and challenging run through the grounds of Laurel Hill Cemetery, a National Historic Landmark site located in the East Falls neighborhood of Philadelphia. With over 78 acres of grand architecture, stunning statuary, rolling landscapes, and majestic views of the Schuylkill River, Laurel Hill provides an appropriately cool albeit creepy course for runners – or walkers – of all ages and fitness levels. Participants and spectators alike are encouraged to attend in Halloween attire. Following the run, join us for our after-party at the Marketplace at East Falls, where prizes will be given for the best costumes as well as to the winners of the run!

Organized by East Falls Fitness, the Rest In Peace 5K is a charity run benefitting the diverse communities served by Gearing Up and the Friends of Laurel Hill Cemetery, two nonprofit groups working to enhance lives and further opportunities within the Philadelphia region.

Saturday, October 9, 2010 at 10:00-12:00 - Woof, Wag n' Walk

West Laurel Hill Cemetery's annual Woof, Wag n' Walk will benefit Main Line Animal Rescue and Montgomery County SPCA. People and pooches alike are invited to enjoy a mile-long guided tour of our magnificent grounds where you'll visit the burial places of some of our most famous residents. Join us after the walk for a raffle and free doggie goodie bags.

The tour will depart from the Conservatory on the grounds of West Laurel Hill Cemetery, 215 Belmont Avenue, Bala Cynwyd. Donations support Main Line Animal Rescue and Montgomery County SPCA. Special thanks to Braxton's Animal Works for their continued generous support!





The College of Physicians of Philadelphia

BIRTHPLACE OF AMERICAN MEDICINESM

e College of Physicians of Philadelphia
19 South Twenty-Second Street
Philadelphia, PA 19103
(215) 563-3737 x304

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

College of Physician lectures and programs are free. There may be a fee at some receptions.

Saturday, September 11 & Sunday, September 12, 2010 The Nevermore Theater Project presents The Tell-Tale Heart

Saturday, September 11 at 1PM and 2:30PM

Sunday, September 12 at 2PM and 3:30PM

Nevermore Theater Project presents the classic Tell-Tale Heart in a word-for-word stage adaptation that captures Poe's harrowing short story for live audiences. This gripping production is part of the 2010 Philadelphia Fringe Festival and will be staged at the historic Mütter Museum of The College of Physicians of Philadelphia. Breathing life into Poe's spellbinding story, a seemingly rational and lucid man (Barrymore-award winning actor John Zak) tells his tale and, in doing so, slowly descends into madness. Nevermore Theater Project is a joint venture between Zak and Domenick Scudera, the theater director who has a history of bringing Poe's work to the stage.

Tickets are \$10 (NOTE: admission to this performance does not include admission to the Mütter Museum; admission to the Mütter Museum does not include admission to this performance.)

For tickets, contact the Festival Box Office at (215) 413-1318 or visit www.livearts-fringe.org.

Hosted by the Mütter Museum of The College of Physicians of Philadelphia.

Tuesday, October 12, 2010 at 10:30AM

The Many Faces of Health Care Reform: Consumers (Older Adults)

Speakers: Ray Landis, AARP; Joanne Grossi, Deputy Health Director of PA Department of Health

Co-sponsored with PA AARP and Delaware Valley Health Council

Monday, October 18, 2010 at 6:30PM

DISSECTION: Photographs of a Rite of Passage in American Medicine 1880 – 1930

Featuring 138 rare, historic photographs, Dissection is a "landmark book" (Ruth Richardson) that reveals a startling piece of American history, the rite of passage into the mysteries of medicine captured in photography.

From the advent of photography in the 19th century and into the 20th century, medical students, often in secrecy, took photographs of themselves with the cadavers that they dissected: their first patients.

The photographs were made in a variety of forms, from proud class portraits to staged dark-humor scenes, from personal documentation to images reproduced on postcards sent in the mail. Poignant, strange, disturbing, and humorous, they are all compelling.

These photographs were made at a time when Victorian societal taboos against intimate knowledge of the human body were uneasily set aside for medical students in pursuit of knowledge that could be gained only in the dissecting room. Dissection, writes

Mary Roach, "documents—in archival photographs and informed, approachable prose—a heretofore almost entirely unknown genre, the dissection photograph."

Speakers: John Harley Warner and James M. Edmonson

Co-sponsored by the College's Sections on Medicine and the Arts and Medical History.

Tuesday, October 19, 2010 at 6PM

16th Annual Thomas Langfitt, Jr. Memorial Symposium on Health Care Policy: Accountable Care Organizations

Panelists:

- ◆ Troyen A. Brennan, MD, MPH, Head of CVS Minute Clinic
- ◆ Michael J. Dandorph, UPHS Senior Vice President for Business Development
- ◆ Samuel R. Nussbaum, MD, CMO of Wellpoint

Moderator: Mark V. Pauly, PhD, The Wharton School of the University of Pennsylvania; Bendheim Professor; Professor of Health Care Management; Professor of Business and Public Policy; Professor of Insurance and Risk Management; Professor of Economics

Co-sponsored with the University of Pennsylvania.

Saturday, October 30, 2010 All Day

The Mütter Museum's 3rd Annual Day of the Dead Festival

Come celebrate this traditional Mexican holiday with an all-day event at the Mütter Museum! Decorate sugar skulls, enjoy traditional food and drink, visit the Museum, hear from guest speaker, artist Joanna Ebenstein and see an exclusive show by local personality Grover Silcox!

10AM: Museum opens and sugar skull decorating begins

12PM and 4PM: Talk by Artist Joanna Ebenstein

5 - 6:30PM: Guided museum tour, exclusively for Friends of the Mütter -

6:30 and 8PM: Exclusive performance by Grover Silcox

Sponsored by the Mütter Museum of The College of Physicians of Philadelphia.

(NOTE: Registration is not required for daytime festivities and is free with Museum admission; registration IS required, with additional cost for admission, to Silcox production.)

The Mutter Museum
19 South 22nd Street
Philadelphia, PA, 19103

Hours of operation: Monday-Friday, 10am-5pm

Saturday & Sunday, 10am-5pm

Closed on Thanksgiving Day, December 25th, and January 1st.

General Admission (Ages 18-64): \$14

Children (Ages 6-17): \$10

Senior Citizens (Age 65+): \$10

Students with valid ID: \$10

Military with valid ID: \$10

Fellows of the College: FREE

Children under 6: FREE

The Mütter Museum was founded to educate future doctors about anatomy and human medical anomalies. Today, it serves as a valuable resource for educating and enlightening the public about our medical past and telling important stories about what it means to be human. The Mütter Museum embodies The College of Physicians of Philadelphia's mission to advance the cause of health, and uphold the ideals and heritage of medicine.



Chemical Heritage Foundation

**Events and exhibits at
Chemical Heritage Foundation
315 Chestnut Street
Philadelphia, PA 19106**

Tel: 215-925-2222 • Fax: 215-925-1954
<http://www.chemheritage.org>

Events and exhibitions are free and open to the public unless otherwise noted.

Thursday, September 16, 2010 at 11:30 a.m. to 2:00 p.m. - Joseph Priestley Society Luncheon, featuring Magid Abou-Gharbia

At Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

The 2010–2011 Joseph Priestley Society (JPS) lecture series begins with "Realities of Drug Discovery and Development in Today's Environment," a presentation by Magid Abou-Gharbia, director, Center for Drug Discovery Research, Temple University, and retired senior vice president, Wyeth Pharmaceutical.

The pharmaceutical industry is facing enormous challenges, including tarnished image, declining efficiencies, patent expiration of key drugs, fierce price competition from generics, mergers and acquisitions, and high regulatory hurdles.

In order to face the current grim realities, pharmaceutical companies have adopted new strategies aimed at restoring public trust and confidence, addressing declining productivity, and cutting cost, while ensuring a steady stream of innovative therapeutics for patients.

Open to the Public. Registration Required. Cost \$25 includes lunch

RSVP: nvonada@chemheritage.org or 215.873.8226.

Magid Abou-Gharbia is associate dean for research, professor of medicinal chemistry, and director of the Moulder Center for Drug Discovery Research at the School of Pharmacy, Temple University.

Prior to joining Temple in 2008, Abou-Gharbia spent 26 years at Wyeth Pharmaceuticals, where he was senior vice president and head of chemical and screening sciences. In that role he was responsible for overseeing and directing Wyeth chemistry and the screening-research efforts of 500 scientists at four U.S. research facilities and 150 chemists in Hyderabad, India, in support of drug discovery.

Abou-Gharbia's group research efforts led to the discovery of five marketed drugs and many compounds currently under clinical evaluation.

Abou-Gharbia has a B.S. in pharmacy and pharmaceutical sciences and an M.S. in medicinal chemistry from the School of Pharmacy, Cairo University. He holds a Ph.D. from the University of Pennsylvania.

His scientific contributions include over 200 invited lectures, presentations, and publications. He is listed as inventor on 99 U.S. patents and over 350 patents worldwide.

Tuesday, September 28, 2010 - 12:00 to 1:00 p.m.

Brown Bag Lecture: John Stewart - "Chemical Affinity in Eighteenth-Century British Mineralogy" at CHF. 315 Chestnut Street, Philadelphia, PA 19106

The doctrine of affinity, which says that substances have different levels of chemical attraction to various substances, was central to 18th-century experimental chemistry. Much of the work done on affinity thus far has focused on the theoretical chemistry of Newton, Geoffroy, Bergman, and Fourcroy.

This talk focuses on the appropriation of affinity by those interested in chemical mineralogy. Drawing on the work of Ursula Klein and Matthew Eddy, Stewart will explore the ways in which doctors, fossil collectors, artisans and natural historians used affinity in the commodification of natural resources and at the same time contributed to a complex and ever-changing affinity doctrine.

John Stewart received a B.A. in letters, with a minor in the history of science, and an M.A. in the history of science from the University of Oklahoma. He continues to work on historical understandings of chemistry at the University of Oklahoma, now with a focus on affinity. His dissertation, currently titled "Affinity across the Disciplines, The Centrality of Chemistry in 18th-Century Science," will include analysis of both the appropriation and production of affinity theories in British agriculture, mineralogy, and physiology.

When not working on his dissertation, John works for Isis bibliographer Stephen Weldon on the Current Bibliography database.

For more information, please call 215.873.8289, or e-mail bbl@chemheritage.org.

Thursday, September 30, 2010 at 6:30 to 9:00 p.m.

Ig Nobel Prizes Live Streaming - at CHF, 315 Chestnut Street, Philadelphia, PA 19106

Join the CHF community as we revel in the joys and surprises of science through a live, Web-streamed viewing of the 2010 Ig Nobels.

The Ig Nobel Prizes honor achievements that first make people laugh and then make them think. The prizes celebrate the unusual, honor the imaginative, and spur interest in science, medicine, and technology.

Each year, in a gala ceremony at Harvard University, 1200 splendidly eccentric spectators watch the winners step forward to accept prizes handed out by genuinely bemused genuine Nobel laureates.

Watch it all on the big screen at CHF. As an added bonus, the Museum at CHF will stay open late to excite and delight attendees. Registration is strongly encouraged. This event is free and open to the public

Ongoing exhibitions

Gallery hours are 10:00 a.m. to 4:00 p.m., Monday-Friday.

(Free and open to the public)

Transmutations: Alchemy in Art (exhibit) :

Monday-Friday, 10:00 a.m. to 4:00 p.m.

The Whole of Nature and the Mirror of Art: Images of Alchemy (exhibit)

Du Pont Gallery

Marvels and Ciphers: A Look Inside The Flask

1 March - 10 December 2010



APS Museum Calendar:

Museum Exhibition

Philosophical Hall
104 South Fifth Street
Philadelphia, PA 19106 Donation Requested: \$1

Friday, September 10, 2010 to September 18, 2010

The Association for Creative Zoology

Beauvais Lyons - (All day) at The American Philosophical Society's "Jefferson Garden", 105 Fifth St. (just south of Chestnut St.)

Was God the first collage artist? Does God have a sense of humor?

Duck-billed platypuses, centaurs, and chimeras answer "Yes!" according to artist Beauvais Lyons. Lyons's performance features prints, taxidermy, and fossils from his fanciful Association for Creative Zoology as evidence of weird evolution.

Sunday, September 19, 2010 at 3:00 PM - Artist panel: "A Priest, A Rabbi and Charles Darwin Walk Into A Bar..." at the APS Museum, 104 S. 5th St.

The APS Museum will host a panel discussion titled "A Priest, A Rabbi and Charles Darwin Walk Into A Bar..." Three artists, actor Brett Keyser (Darwini: the Comeuppance of Man, a one-man show), sculptor Eve Andrée Laramée (Luminous Darwin, a mixed-media installation) and printmaker Beauvais Lyons (The Association of Creative Zoology, part installation, part performance) will discuss their artistic response to Darwin, evolution, and the APS Museum's exhibition, Dialogues with Darwin. Questions to be addressed: Why did all three choose to take an ironic stance in relation to Darwin and evolution, given the controversy they still generate today? What did they learn from the process? How have audiences responded to it?

Linda Hutcheon, (University of Toronto) a leading scholar on the theory of parody, will chair the panel.

Please rsvp to museum@amphilsoc.org

Friday, September 24, 2010 at 5:30 PM

The Liberty Bell

GARY B. NASH

Benjamin Franklin Hall, 427 Chestnut Street

A lecture, reception, and book signing co-sponsored by The Library Company of Philadelphia

Friday, September 24, 2010 •

Reception: 5:30 p.m. • Program:
6:00 p.m.

Gary B. Nash is professor of history and director of the National Center for History in the Schools at UCLA. He is former president of the Organization of American Historians and has been the recipient of many awards for his writing and teaching. Dr. Nash is also a member of the American Philosophical Society. Each year,

more than two million visitors line up near Philadelphia's Independence Hall and wait to gaze upon a flawed mass of metal forged more than 250 years ago. Since its original casting in England in 1751, the Liberty Bell has survived a precarious journey on the road to becoming a symbol of the American identity. In *The Liberty Bell*, Gary B. Nash, reveals how this voiceless bell continues to speak such volumes about our nation. Nash excavates the myths that have surrounded the Liberty Bell and explicates the many and varied roles it has played-and is still playing-in the life of our nation.

Library Lectures at the American Philosophical Society are free and open to the public. Reservations are necessary. All events take place in Benjamin Franklin Hall, 427 Chestnut Street, Philadelphia, PA 19106. Each event will be followed by a book signing where authors' books will be available for purchase.

RSVP: <http://www.amphilsoc.org/library/events/09242010>

Friday, October 29, 2010 at 5:30 PM

Sabotage in the Arctic: Fate of the Submarine Nautilus of 1931

STEWART B. NELSON

5:30 PM

Benjamin Franklin Hall, 427 Chestnut Street

A lecture, reception, and book signing • Reception: 5:30 p.m.

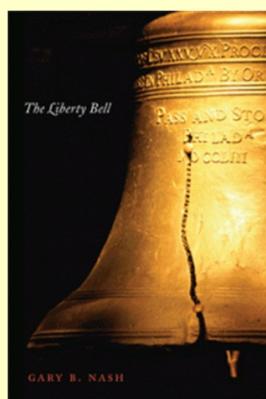
• Program: 6:00 p.m.

Dr. Stewart B. Nelson is an oceanographer and former president of the American Oceanic Organization. He holds a doctorate degree from the University of Southern California, as well as numerous awards and honors. Dr. Nelson will present a lecture and illustrated presentation about the 1931 expedition of Nautilus, the world's first Arctic submarine, and his rediscovery of the vessel in 2005 off Bergen, Norway. Many considered it

foolhardy, others a publicity stunt, but Australian adventurer Sir Hubert Wilkins was determined to be the first to use a submarine to cross the Arctic Ocean by way of the North Pole. When at the Pole, he planned to drill up through the ice and rendezvous with the German airship Graf Zeppelin. A decommissioned U.S. Navy World War I submarine was leased and extensively modified for under-ice operation. Christened the Nautilus, it eventually reached the icepack but sabotage by some crew members forced a return to Bergen, Norway. Dr. Nelson's talk will explore how he used a manned submersible to re-discover and document the largely forgotten Nautilus of the Wilkins-Ellsworth Trans Arctic Submarine Expedition of 1931.

Library Lectures at the American Philosophical Society are free and open to the public. Reservations are necessary. All events take place in Benjamin Franklin Hall, 427 Chestnut Street, Philadelphia, PA 19106. Each event will be followed by a book signing where authors' books will be available for purchase.

RSVP: <http://www.amphilsoc.org/library/events/10292010>



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: _____

Address: _____

Phone: _____ E_mail _____

Mail checks to:
PhACT
639 W. Ellet Street
Philadelphia, PA 19119

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

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

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

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

PhACT's High School Science Fair Student Prize Funds

Total contributed for 2010 prizes	= \$318.00
2010 Goal	= \$300.00

Leftover funds from 2010 fund contributions to 2011 prizes	= \$ 18.00
Total 2011 Prize Fund	= \$355.00
2011 Goal	= \$373.00

Please donate. Small contributions are preferred and donations in excess of the 2011 goal will be applied to the 2012 Prize Fund or some other youth science education project not yet determined.

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

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The PhACT website is: www.phact.org