



*The North Texas*

# Skeptic

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## Darwin's dilemma

by John Blanton

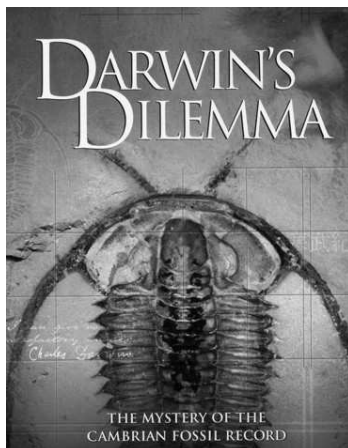
This year our May program involved a review of the latest creationist video from Illustra Media. *Darwin's Dilemma* refers to the Cambrian Explosion, an eruption of novel life forms that appeared during the Cambrian period, in the order of 488 to 542 million years ago. Charles Darwin considered this event to be the greatest hurdle for his newly-proposed theory of evolution.

Illustra Media previously produced the creationist videos *Unlocking the Mystery of Life*, *The Privileged Planet*, *The Case for a Creator* and *Where Does the Evidence Lead?* We have dealt with the first two in previous issues of this newsletter.

Creationists would like to convince viewers that the Cambrian Explosion is a strong argument against natural explanations: The time span is too short for random mutation and natural selection to work, and also the fossil evidence for this period represents a severe discontinuity that requires a supernatural explanation.

Modern creationist videos like this one do not present the viewer with fundamentalist preachers sporting phony academic degrees. The people in *Darwin's Dilemma* have real Ph.D. degrees. However, all but two are closely associated with the Discovery Institute Center for Science and Culture (CSC). The CSC is the major organization in this country pushing the argument for Intelligent Design, an evolved form of creationism. The only two speakers doing real science related to the Cambrian Explosion are not associated with the CSC. They are Simon Conway Morris and James Valentine.

Morris is a paleontologist who has made a career of studying Cambrian life forms. His book *The Crucible of Creation* gives a wonderful explanation of the topic and is



## EVENTS CALENDAR

### July program

Saturday, 17 July at 2 p.m.  
2900 Live Oak Street in Dallas

### TAM 8

James (The Amazing) Randi is a legend and skeptical icon. **The Amazing Meeting (TAM) 8** will be 8 – 11 July this year, and Jamey Johnston will be attending. She will present the full story at the July meeting.

### NTS board meeting and social dinner

Saturday 24 July 2010,  
at 7 p.m.

### Café Express

5307 East Mockingbird Lane  
Dallas, TX 75206

If you plan to attend, please call. We sometimes cancel or change these events.

214-335-9248

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highly recommended. Morris is a devout Christian, and indications are  
 he is also sympathetic to the concept of Intelligent Design.

James Valentine is an evolutionary biologist, currently professor  
 emeritus at UC Berkeley. His contributions include peer-reviewed sci-  
 ence as well as a number of books: <sup>1</sup>

- *On the Origin of Phyla* 2004 ISBN 0-226-84548-6
- *Phanerozoic Diversity Patterns : Profiles In Macroevolution*  
 1985 ISBN 0-691-08374-6, Editor
- *Evolving : The Theory And Processes Of Organic Evolution*  
 1979 ISBN 0-8053-0310-3, with Francisco J. Ayala
- *Evolution* 1977 with Theodosius Dobzhansky, G. Ledyard  
 Stebbins and Ayala
- *Evolutionary Paleocology of the Marine Biosphere* 1973 ISBN  
 0-13-293720-4

These two are solid scientists who do serious work and do not deny  
 demonstrated science.

Not so much so for the others appearing in the video.

Paul Nelson holds a Ph.D. in philosophy from the University of Chi-  
 cago and is a fellow of the CSC. He does not seem to do any research in  
 a scientific field. The odd thing about Nelson in connection with Intelli-  
 gent Design is he is a Young Earth Creationist. Significantly, Intelligent  
 Design proponents do not deny the age of the earth and generally ac-  
 knowledge common descent. The prominence of a Young Earth  
 Creationist at the CSC is an indication to many, me included, that sci-  
 ence is not so much their objective as promotion of a common religious  
 idea.

Steven C. Meyer has a B.S. in physics and earth science and also a  
 Ph.D. in philosophy of science from Cambridge University. He does not  
 seem to do any research in a scientific field. His most recent book has  
 been *Signature in the Cell*, which we reviewed in a prior issue. <sup>2</sup>

Jonathan Wells is an interesting creationist. He is not a mainline  
 Christian, but is a member of the Unification Church of Reverend Sun  
 Myung Moon. Wells studied at the Unification Theological Seminary  
 and became convinced he should devote his life to “destroying Darwin-  
 ism.” <sup>3</sup> He subsequently obtained a Ph.D. in molecular and cell biology  
 from UC Berkeley. He does not seem to do any research in a scientific  
 field.

Wells’ most notable book has been *Icons of Evolution*, which takes  
 what Wells considers to be ten icons of modern biology and argues  
 against them. One of these icons is the “tree of life,” which he claims is  
 refuted by the Cambrian Explosion. The *Icons* video is inspired by the  
 book.

The *Icons* book and video prominently feature Paul Chien, who is one of the people in *Darwin's Dilemma* doing real science. Chien holds a Ph.D. from UC Irvine. "His research has involved the transport of amino acids and metal ions across cell membranes as well as the detoxification mechanisms of metal ions."<sup>4</sup>

In *Darwin's Dilemma* and also in *Icons of Evolution* Chien is seen expressing wonder at the recently discovered fossils. These are remarkably well-preserved impressions of Cambrian life, and in both videos we see Chien marveling at them and expressing doubt they could be compatible with Darwinian evolution.

Chien is a CSC fellow, and what is not mentioned in either video is that he studies these fossils only as a hobby. He is not a paleontologist, and he has not published any research related to the fossils.

Richard Sternberg is a real scientist associated with the creationist Biologic Institute, a creation of the CSC. He previously edited the *Proceedings of the Biological Society of Washington*, in which position he published a paper by Steven C. Meyer. The paper has no scientific merit, and its publication bypassed the journal's accepted editorial practice. Sternberg resigned as editor prior to publication of the disputed article, and much scorn from the scientific community came his way. He became a hero of the Intelligent Design movement for his supposed courage and subsequent tribulations. He is featured prominently in the anti-evolution video *Expelled: No Intelligence Allowed*.

Douglas Axe currently heads up the Biologic Institute. He holds a Ph.D. in chemical engineering from the California Institute of Technology, but while working at the Biologic Institute it is not likely he will publish any peer-reviewed science. Members of the Biologic Institute dominate a "peer-reviewed" journal called *BIO-Complexity*, and Axe may see fit to publish there. *BIO-Complexity* seems to have been set up by the CSC solely to publish papers favorable to Intelligent Design.

In the video Axe explains his argument against the viability of random mutation. He cites his paper "Estimating the Prevalence of Protein Sequences Adopting Functional Enzyme Folds" published in the *Journal of Molecular Biology*. According to Axe, creating new functionality in a protein by random mutation is too improbable to be of any use for Darwinian evolution. The Panda's Thumb blog presents a lengthy critique of Axe's argument.<sup>5</sup>

A significant point the creationists try to make in *Darwin's Dilemma* is that major animal phyla seem to spring up without precedent in Cambrian fossils, particularly in the Burgess Shale formation, which gets a lot of attention. Paul Nelson is shown saying Darwinian evolution should proceed from individual

species to multiple, divergent species to divergent phyla. Instead, in the Cambrian we have most of the animal phyla represented already, from which various species diverge. Nelson likens this to an upside down tree. Wells uses a field of grass metaphor, as he does in *Icons of Evolution*.

Nelson points out that the emergence of animal phyla does not show an orderly chronological progression, as predicted (according to Nelson) by Darwinian evolution. Again, this is curious from a person who does not believe in the very time scale he is discussing. Nelson and Meyer show a time plot with a spike in new phyla during the Cambrian and only five new phyla thereafter.

It's hard to imagine what case the creationists are trying to make from this argument. While being able to show that all the phyla emerged during the short period of the Cambrian might make their point of special creation, the subsequent emergence of others, including my favorite, chordata, would seem to show these evolved from Cambrian survivors.

Jonathan Wells makes much of the brief period of the Cambrian Explosion. It is short compared to the history of life on Earth. Very short, Wells emphasizes. Only a few million years. Maybe even "overnight."

Now the creationists are getting down to the business they do best. Maybe some intelligent force has been at work.

Steven C. Meyer gets to chime in, not so much about Cambrian life, but about his own piece of the creationist pie. His *Signature in the Cell* argues for the information needed to create complex life. He recapitulates this briefly in *Darwin's Dilemma*.

Without much forethought he repeats the claim that new information can only come from intelligent sources. I have already treated this argument. It's still dead, and it only reminds us of the intellectual shallowness of the Intelligent Design argument.<sup>6</sup>

Regarding Darwin's dilemma, Cambrian fossils do remain a challenge to biologists and paleontologist. Stephen Jay Gould devoted *Wonderful Life* to a discussion of the Burgess Shale. Furthermore, while the creationists would like to stop looking right now and declare a miracle, real scientists continue to work the problems of the fossil record and to produce new, informative results. Since *Darwin's Dilemma* came out, Derek Briggs, Patrick Orr and Peter Van Roy have published their studies from fossils in Morocco in *Nature*. The *Irish Times* related some background:<sup>7</sup>

There was an explosion of new life forms during the Cambrian Period, with the shales revealing soft-bodied animals, according to Orr, "and then the record went blank."

Now the evolutionary story continues with the Moroccan fossils showing that many of these Cambrian animals survived and multiplied into the next period, the Ordovician.

The original animals were there but the Ordovician Period saw a rapid diversification of related species and so the mix is much more varied, Orr says.

This research does not address the creationists' boast that scientists have not established links from Cambrian life to earlier fossils. The creationists in *Darwin's Dilemma* imply this indicates a creation event during the Cambrian.

Meanwhile, other scientists have weighed in with more detailed critiques of *Darwin's Dilemma*. The reader is invited to follow the thread. Here is a typical comment from Martin Brasier:<sup>8</sup>

The film makes a familiar mistake. There is a misplaced fixation upon beasts of the Burgess Shale. So antiquated is this view that the screenplay for this film could have been written by teachers in 1954, or even by Mack Sennett at Keystone studios in 1912, just after the Burgess Shale biota was first reported by Walcott. It needs to be remembered that the Burgess Shale appears far too late in the fossil record to tell us much about emergence of animals. Modern data shows that the explosion of modern phyla was beginning by about 545 Ma ago, with forms like *Cloudina* and *Sabellidites*. Since the Burgess Shale is a mere 505 Ma old, this gives us palaeontologists some 40 million years to play with. What a gift!

You won't see much like this in *Darwin's Dilemma* or in any of the creationist videos. These videos are not meant to be informative. They are works of propaganda, and grand ones at that. These are slick, well-executed productions and would be a joy to watch if it weren't for the jarring factual conflicts that continually afflict the viewer.

What can I say? I got mine. I spent my money on *Unlocking the Mystery of Life, Icons of Evolution, The Privileged Planet, Expelled* and now *Darwin's Dilemma*. Don't bother to spend your own money. Borrow my copies.

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## References

- 1 See Wikipedia at [http://en.wikipedia.org/wiki/James\\_W.\\_Valentine](http://en.wikipedia.org/wiki/James_W._Valentine).
- 2 <http://ntskeptics.org/2009/2009september/september2009.htm#myth>
- 3 [http://en.wikipedia.org/wiki/Jonathan\\_Wells\\_\(intelligent\\_design\\_advocate\)](http://en.wikipedia.org/wiki/Jonathan_Wells_(intelligent_design_advocate))
- 4 [http://en.wikipedia.org/wiki/Paul\\_Chien](http://en.wikipedia.org/wiki/Paul_Chien)

- 5 <http://pandasthumb.org/archives/2007/01/92-second-st-fa.html>  
See also *Journal of Molecular Biology* 341, **1295-1315**, 2004.
- 6 Refer again to <http://ntskeptics.org/2009/2009september/september2009.htm#myth>
- 7 <http://www.irishtimes.com/newspaper/sciencetoday/2010/0513/1224270275890.html>
- 8 <http://whyevolutionistrue.wordpress.com/2010/02/13/a-paleobiologists-response-to-darwins-dilemma>  
See also  
<http://whyevolutionistrue.wordpress.com/2010/01/20/darwins-dilemma-i-watched-it-so-you-dont-have-to/>  
<http://whyevolutionistrue.wordpress.com/2009/12/29/big-creationist-mess-in-l-a/>

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## Joe Nickell

by John Blanton

*This is part of a series for The North Texas Skeptic honoring notable and beneficial skeptics.*

We haven't been covering Joe Nickell's activities much in this journal, mainly because we have been concentrating a lot on creationism (Intelligent Design) and alternative medicine (altmed). Joe's area of interest is no less interesting, and his revelations are a tremendous benefit to society, if by *society* you include people who read.

Nickell is a senior research fellow of long standing of the Center for *Skeptical Inquiry*. He is a consummate investigator and regularly reviews bizarre claims of the paranormal, including most recently "ghost whisperer" Mary Ann Winkowski in the July/August issue of *Skeptical Inquirer*. His expertise derives partly from his Ph.D. in English at the University of Kentucky, where his research involved literature investigation and folklore. Most notably he has investigated the authenticity of the supposed diaries of Jack the Ripper and Adolph Hitler, both of which turned out to be bogus.

The Winkowski case is typical. If you watch the *Ghost Whisperer* drama series on television you may want to know that Winkowski is the inspiration. She claims to "see and talk to earthbound spirits." She says, "I talk to the spirits and find out who they are and why they didn't cross over."<sup>1</sup>

Nickell writes that Winkowski's beliefs are closely tied to traditional Catholic religious dogma, briefly related to the concept of purgatory. Winkowski was raised as a Catholic and began "freeing earthbound spirits" when she was four years old. More recently she has grown up, gotten married and now charges a fee for these services. Apparently somebody else pays for her services, not the spirits.

Nickell classifies Winkowski as fantasy-prone, and he elaborates on those he calls *fantasizers*. His review includes the likes of Sylvia Browne, Dorothy Allison, Jeane Dixon, Edgar Cayce and also alien abductee Whitley Strieber. He cites the work of Sheryl Wilson and Theodore Barber, who provide the following description of a fantasy-prone personality:<sup>2</sup>

Characteristics of a "fantasy prone personality" include vivid waking dreams, susceptibility for hypnosis, possessing imaginary friends as a child, having psychic experiences, having out-of-body or floating experiences, encountering apparitions, visions or hallucinations and receipt of special messages. Many believe that reports of paranormal events or experiences are more likely from such individuals.

According to Nickell, Winkowski has the following attributes:

1. Imaginary playmates as a child
2. Receives special messages from paranormal entities
3. Good hypnotic subject
4. Fantasy identities through past-life regression
5. Experiences walking dreams
6. Classic strange imagery
7. Frequently encounters apparitions
8. Believes she channels energy, creates "White Light" and lifts curses

Mary Ann Winkowski is one of those who first deceive themselves, then others.

Joe Nickell is the author of many items for *Skeptical Inquirer* in addition to a number of interesting books:

- *Adventures in Paranormal Investigation*
- *Secrets of the Sideshows*
- *Looking for a Miracle: Weeping Icons, Relics, Stigmata, Visions & Healing Cures*
- *Real or Fake: Studies in Authentication*

- *Relics of the Christ*
- *Real-Life X-Files: Investigating the Paranormal*
- *Missing Pieces: How to Investigate Ghosts, Ufos, Psychics, & Other Mysteries*
- *The Mystery Chronicles: More Real-Life X-Files*
- *Entities: Angels, Spirits, Demons, and Other Alien Beings*
- *Unsolved History: Investigating Mysteries of the Past*
- *Lake Monster Mysteries: Investigating the World's Most Elusive Creatures* (with Benjamin Radford)

You can get these books from Amazon.com. Go to our Web site and click on the link to order. The NTS gets a commission.<sup>3</sup>



#### References

- 1 Joe Nickell, "The Real 'Ghost Whisperer,'" *Skeptical Inquirer*, Volume 34, No. 4, July/August 2010. p 16
- 2 [http://atheism.about.com/library/glossary/paranormal/bldef\\_fantasyprone.htm](http://atheism.about.com/library/glossary/paranormal/bldef_fantasyprone.htm)
- 3 <http://ntskeptics.org/books/nickell.htm>

### Future Meeting Dates

- 17 July (NTS program meeting)
- 24 July (NTS social dinner)
- 21 August (NTS program meeting)
- 28 August (NTS social dinner)
- 18 September (NTS program meeting)
- 25 September (NTS social dinner)
- 16 October (NTS program meeting)
- 23 October (NTS social dinner)
- 13 November (NTS program meeting)
- 20 November (NTS social dinner)

## Level of competence

by John Blanton

Recently the Institute for Creation Research (ICR) moved its headquarters and “school” from Santee, California, to Dallas. While in California, the ICR had been able, after some wrangling, to obtain state sanction for their graduate degrees in science. In Texas they attempted the same thing.

In 2008 the Commissioner of Higher Education, Raymund Paredes rejected the ICR’s request for authority to “offer a Master of Science degree with a major in Science Education from ‘a Biblical scientific creationist viewpoint’ in Texas.”<sup>1</sup> The ICR sued, and in June of this year federal judge Sam Sparks dismissed their suit. And he did more.

A particular excerpt from his 39-page ruling is telling of the level of competence available to an organization that employs people with real college degrees and purports to correct real scientists on matters of science. Specifically, Judge Sparks wrote:<sup>2</sup>

It appears that although the Court has twice required Plaintiff to re-plead and set forth a short and plain statement of the relief requested, Plaintiff is entirely unable to file a complaint which is not overly verbose, disjointed, incoherent, maundering, and full of irrelevant information.

Visits to the former location in California and to the ICR’s new digs by members of the NTS and other science-friendly people reveal a brick and mortar shrine to religious dogma with little appreciation for real science.<sup>3</sup>



### References

- 1 <http://ntskeptics.org/creationism/ICR/Sparks-Ruling.pdf>, page 2
- 2 Ibid., page 12.
- 3 <http://ntskeptics.org/2010/2010march/march2010.htm>

## What’s new

by Robert Park

*[Robert Park publishes the What’s New column at <http://www.bobpark.org/>. Following are some clippings of interest.]*

### Magical thinking: dowsing is not illegal in the US or the UK.

In spite of the heinous nature of the ATSC crime, it may be difficult to obtain a conviction. The defense of those charged with selling fake bomb detectors will be that they believe the devices work. The defense can point to the hundreds or thousands of people who openly market their services to dowse for water or other substances. Sometimes called water-witching, dowsing is said to rely on supernatural influence over the muscles of the person holding a willow fork or an ADE 651. Dowsing doesn’t always work, but what does? The prosecution will find itself hip deep in arguments over how dowsing differs from prayer. Magical thinking will be with us until we teach our children that observable effects result only from physical causes. It must be taught when they are learning their first language.

### Cell phones: do the laws of nature trump epidemiology?

I don’t like cell phones and I don’t like writing about cell phones but the damned issue just won’t go away. It generates more mail than any other issue. I have explained in irrefutable detail why individual microwave photons do not create mutant strands of DNA. Yes, but microwaves do cook meat even though they can’t break chemBonds directly. They start them vibrating, which means the atoms get hot. How hot? Not very. First of all, cell phones do not emit a lot of energy. Secondly, evolution found ways to keep our brain cool even if we go hatless under a summer sun, and run marathons besides. Heatstroke is rare. We hardly even run a fever. We have a great coolant called blood and capillaries that quickly expand to increase the flow rate if needed.

### Cell phones: long-awaited cancer study released this week.

No link to brain cancer was found in a 10 year, \$14 million epidemiological study of cell phone use in 13 countries (the US was not among them); the study was led by the World Health Organization (WHO). So is it safe to use cell phones? Uh, the report doesn’t exactly say, instead it concludes that “more study is needed.” On the contrary, the WHO study itself was not

## Skeptic Ink — by Prasad Golla and John Blanton. © 2010. Free, non-commercial reuse permitted.



needed. I remind you that flawed epidemiology led to the great power-line scare more than 20 years ago. Publicized by a series of ignorant articles in the *New Yorker* <http://bobpark.physics.umd.edu/WN89/wn082589.html>, it was a costly diversion that morphed into the cell-phone scare on *Larry King Live* <http://bobpark.physics.umd.edu/WN93/wn012993.html>. Epidemiology is a useful tool for identifying possible environmental hazards, but it is not science, or a substitute for science. The science of electromagnetic radiation is clear: photons with energies below the photoelectric threshold (extreme blue-end of the visible spectrum) are not cancer agents. The energy of the photoelectron threshold is about 1 million times the energy of a microwave photon. Blueberry consumption would have a greater chance of being linked to cancer. Even as I send this off, however, my mail is full of warnings from nonscientists about the dangers of cell phones.

### Stephen Hawking: a brief history of crime.

They are out there somewhere, and the computer of the world's most famous physicist says in a vaguely Norwegian accent that we should keep low so they won't notice were here. In a new documentary for the Discovery Channel, Hawking says, "To my mathematical brain the numbers alone make thinking about aliens perfectly rational." That depends on what you think about them. He suggests that aliens might raid Earth to take our resources. Actually, our resources are draining away into the Gulf of Mexico. Or maybe the aliens analyzed the Hubbert peak and decided we weren't worth the trouble. "We have only to look at ourselves to see how intelligent life might develop into something we wouldn't want to meet." I'm sure the series will be a great commercial success, but this is totally irresponsible. All this paranoid society needs is the world's most famous scientist telling us that the obesity epidemic was engineered by the space aliens to fatten us up for the feast. Not only is Prof. Hawking profiling with a totally imaginary profile, he screwed up the mathematical physics. Let's run the numbers for him.

### Food allergies: maybe you just don't like broccoli.

On Tuesday in the *New York Times* Gina Kolata, who is a good writer, writes about food allergies that aren't. In a recent report done for the government, Marc Riedl, an allergist at UCLA, finds that the field is rife with poorly done studies, misdiagnoses and misleading tests. For their report Dr. Reidl and his colleagues reviewed more than 12,000 articles on food allergies in the last 10 years. Only 72 could be confirmed as real allergic reactions. Some of which, such as the allergy to peanuts, can be life-threatening. But others, such as lactose intolerance, just lack an enzyme.

### Acupuncture: gimpy mice bamboozle *Nature* magazine.

A team at Rochester University led by neuroscientist Maiken Nedergaard studied the production of adenosine when pain is inflicted on the hind paw of a mouse. Adenosine is a neuromodulator that reduces pain. If the mouse is then stuck with an acupuncture needle, the production of adenosine persists for a longer time. I suppose it might last longer still if the mouse's tail is pulled. Nedergaard says her study may open the way to making acupuncture more effective. Even Daniel Cressy writing in *Nature* said the study "makes acupuncture seem less alternative," but I can't see how. The acupuncture needle was inserted just below the knee in the Zusanli point, which is for the stomach, not for paws. This study does nothing to answer the basic scientific questions: what is the evidence for the meridians or for the mysterious qi, and how are acupuncture points determined? Pressed on these points, acupuncturists fall back on the *Yellow Emperors Classic of Medicine*, but that book is at least 2000 years old. No matter, they freelance a lot.

*Bob Park can be reached via email at [opa@aps.org](mailto:opa@aps.org).*

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