

The REALL News

The official newsletter of the Rational Examination Association of Lincoln Land

"It's a very dangerous thing to believe in nonsense." — James Randi

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Quote Mining: The Tradition Continues

ICR Representative Frank Sherwin Visits Eureka College

by Karen E. Bartelt, Ph.D.

The Institute for Creation Research (ICR) disseminates its young earth/special creation message in a variety of ways, including radio programs, pamphlets, and their museum in El Cajon, California. They also sponsor speakers who give presentations in churches and other venues. Two of their most prominent speakers—Henry Morris and Duane Gish—are quite elderly and largely retired from speaking engagements. Critiques of Morris and Gish are available all across the Web, but not much is available on the “younger generation” of ICR speakers. Recently, I was afforded the opportunity to see one of them in action.

In March 2001, the Eureka (IL) College campus was notified by email of an upcoming visit by “Mr. Frank Sherwin III of the Institute for Creation Research”:

Have you ever been taught creationism??

Did you know that there is scientific evidence supporting creation??

If you are curious about how our world began and want to learn more than just the evolution theory, come to Becker Auditorium, Thursday, April 5 at 7:00.

Mr. Frank Sherwin from the Institute for Creation Research will be on campus lecturing “The Scientific Evidence Supporting Creation.” This lecture is sponsored by Eureka College Campus Crusade for Christ and there is no admission fee.

Thank you for you [sic] time and I hope to see you there!

Faculty members received a personal invitation. My response was to send an e-mail to the entire campus explaining that I had dealt with the ICR before and referencing several web pages with information that counters their claims. I further pointed to a book review that detailed the rather un-Christian practice of the ICR to quote scientists out-of-context.

Some students were appalled that I would send an email like this. However, the ICR has a tradition of quote-mining—searching the scientific literature for a sentence or two by some “noted evolutionist,” then using it out-of-context, so that it conveys a meaning which was not intended by the original author. Frank Sherwin himself was taken to task recently for his poor scholarship and quote-mining in “Creationist Mindblocks to

Whale Evolution” (Joiner 1999). The use of out-of-context quotations is, therefore, a well-known part of the ICR's repertoire. What would Frank Sherwin do?

Sherwin's Lecture—4-5-01

On April 5, 2001, a number of Eureka College faculty members, myself included, were present in the audience, and many of us took notes. Additionally, the Campus Crusade videotaped the event and sold the tape for just \$5 (\$3 if delivered on campus). At that bargain price it was a “no-brainer” to acquire a tape and revisit the lecture as often as necessary.

The lecture commenced at 7PM in an auditorium that can hold 500. I estimate the crowd was in the 250-300 range. Despite the advertising on campus, there were not a lot of Eureka College students.

Some biology majors were there, as were six of my students who could acquire extra credit for attending. There were quite a few adults, and a large number of middle- and high-schoolers. At least one school bus from a Baptist church was in the parking lot, so it is reasonable to assume that this event was also advertised in the fundamentalist community, and that many of the attendees were either homeschooled, or students at one of the area Christian schools. Overall, the audience was receptive to what Sherwin had to say.

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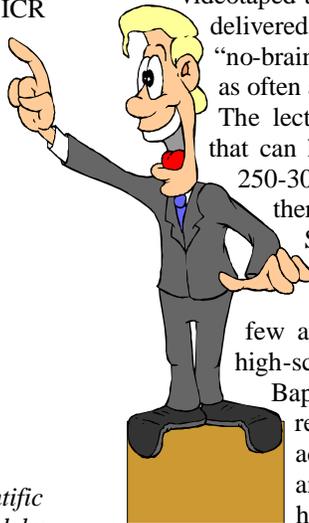
Introduction, Summary

Sherwin began the lecture in what appeared to be a conciliatory tone, saying, “We at the ICR are not a confrontational organization... We are here simply to give you what we believe to be the compelling case for creation.” And, “We at the ICR want to build bridges, not walls, to the secular community.”...

(“Quote Mining” continued on page 3)

In This Issue

Quote Mining: The Tradition Continues	1
New Fox Show Tries to Solve Non-Mysteries	6



Purpose

The Rational Examination Association of Lincoln Land is a non-profit, tax-exempt 501(c)(3) educational and scientific organization. It is dedicated to the development of rational thinking and the application of the scientific method toward claims of the paranormal and fringe-science phenomena.

REALL shall conduct research, convene meetings, publish a newsletter, and disseminate information to its members and the general public. Its primary geographic region of coverage is central Illinois.

REALL subscribes to the premise that the scientific method is the most reliable and self-correcting system for obtaining knowledge about the world and universe. REALL does not reject paranormal claims on *a priori* grounds, but rather is committed to objective, though critical, inquiry.

The REALL News is its official newsletter.

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From the Chairman

David Bloomberg

You know how last month I made it a point to say that we'd be back on our usual first-Tuesday schedule for the August meeting? I was wrong.

Shortly after sending out the newsletter, I was contacted by CSICOP about a speaker they brought in from Italy and are putting on a cross-country tour, and he's making a stop right here in Springfield to talk to REALL:

Special August Meeting!

Massimo Polidoro: Saturday, August 11, 1:30,
in the Lincoln Library's Carnegie North Room.

Massimo Polidoro is one of today's leading skeptics on the paranormal and fringe sciences. Co-founder and Executive Director of the Italian Committee for the Investigation of Claims of the Paranormal, he holds a degree in Psychology from the University of Padua, where he graduated with an experimental thesis devoted to the study of the reliability of eyewitness reports of unusual events. He worked and studied with James Randi for over a year and has become an expert in the psychology of deception and in the duplication of apparent psychic phenomena. He is also the author of 13 books and about 200 articles dealing with science, pseudoscience and the paranormal.

His first book in English, *Final Séance—The Strange Friendship Between Houdini and Conan Doyle*, has recently been published, and his talk is entitled **Houdini: A Magician Among the Spirits**. Polidoro will discuss the life and times of Harry Houdini, through anecdotes and exciting adventures. He

(“Chairman” continued on page 3)

A Nod to Our Patrons

REALL would like to thank our patron members. Through their extra generosity, REALL is able to continue to grow as a force for critical thinking in Central Illinois. To become a patron member of REALL, please use the membership form insert. Patron members are:

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(“Quote Mining” continued from page 1)

“We do not want to get in a confrontational way that would alienate anybody.”

And just how did Sherwin propose to build these bridges? Apparently by taking quotations from “evolutionists,” using them completely out of context, and lulling the largely ignorant and sympathetic audience into believing that *even* evolutionists—in their own literature—admit there are serious flaws with evolutionary theory. Except for a short detour into the workings of the flagellum, Sherwin’s sole pieces of evidence allegedly supporting the “scientific evidence for creation” were overhead upon overhead upon overhead with short quotations by some “evolutionist,” apparently casting doubt on the evidence for evolution.

The main presentation lasted about an hour. During the break, 3x5 cards were available for anyone who wanted to ask questions. No direct questioning was allowed.

The rest of this review is organized in the following manner. When a quotation is given, the “Sherwin version” appears first, along with any comments he made. Then the context of the quotation is supplied. Finally, my comments are appended. What will be seen is a systematic and deliberate misuse of the original intent of author after author. The reader is encouraged to read the original papers, which are listed at the end of this article.

There are also sections on Sherwin and the flagellum, some of Sherwin’s social commentary regarding evolution.

The Quotations and Their Context

1. Sherwin showed an ICR version of a phylogenetic tree (the page bottom said “Creation-Life Publishers”) and quoted a recent paper by Nei (2001): “Estimates of ancient divergence times are subject to a substantial amount of error caused by the uncertainty of the molecular clock, horizontal gene transfer, errors in sequence alignments, etc.” He emphasized the word “error,” really got the audience to snicker at the word “etc.,” and said later, “I applaud the evolutionists...for being intellectually honest and putting it in print.”

Here is an in-context excerpt from Nei, *et al* (2001): “When many protein sequences are available for estimating the time of divergence between two species, it is customary to estimate the time for each protein separately and then use the average for all proteins as the final estimate. However, it can be shown that this estimate has an upward bias, and that an unbiased estimate is obtained by using distances based on concatenated sequences.” (They then went on to describe two successful measures). “Using these two distance measurements for 104 protein sequences, we estimated the time of divergence between mice and rats to be ca 33 million years ago...the time of divergence between humans and rodents was estimated to be 96 million years ago...Our best estimates of the times of divergence between eubacteria and eukaryotes, between protists and other eukaryotes, and between plants, fungi, and other animals were 3, 1.7, and 1.3 billion years ago. Estimates of ancient diver-

gence times are subject to a substantial amount of error caused by the uncertainty of the molecular clock, horizontal gene transfer, errors in sequence alignments, etc.” (Nei 2001)

The key word here is “ancient.” When taken in context, it is obvious that Nei was saying that mouse/rat and human/rodent divergence times were more accurate than those for groups that diverged earlier in geologic time, and this is apparent when looking at their data tables. Sherwin turned differences in relative error into an indictment of the whole method, and the audience never knew.

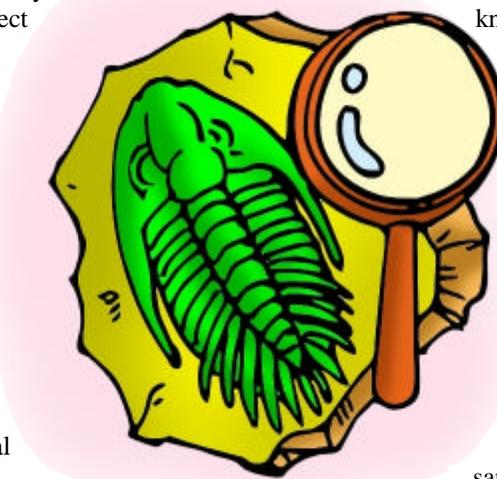
2. The next quotation came from Stephen Palumbi, an evolutionary biologist from Harvard: “The formation of species has long represented one of the most central, yet also one of the most elusive subjects in evolutionary biology.” (Palumbi 1994).

A colleague of mine, Dr. Michael Toliver, responded: “This statement seems to imply that scientists

know little about the processes of speciation, but when you actually read the article, Mr. Sherwin’s misuse of the quote becomes apparent. Dr. Palumbi’s article was about speciation in marine organisms, which Palumbi felt might be different from speciation on land. Speciation on land is well-known (it’s been observed) and the processes are well-established. Palumbi described one of those processes (allopatric speciation) in the paragraph following the disputed quote. Palumbi’s intent was to examine the process in marine organisms, whose larvae often have to disperse for thousands of kilometers in ocean currents. This

larval dispersal might take away one of the components of allopatric speciation (isolation by geographic barriers). But Palumbi found a number of instances where speciation did occur allopatrically, and in those where speciation seemed to work differently, there were other well-known processes which could explain the origin of those species. One could fault Dr. Palumbi for an excess of hyperbole in his opening sentence, but I’m sure he assumed his readers would read the entire article and place that statement in its proper context.” (Toliver 2001)

Palumbi concluded his article by suggesting an approach to speciation research: “Studies of gamete recognition show how a focus on the mechanisms of reproductive isolation can lead to the discovery of the genes for species recognition. This suggests a general approach to speciation research that is based on



(“Chairman” continued from page 2)

will tell the story of Houdini’s life and of his battle against psychic fakery making use of rare footage and audio clips.

We don’t have the opportunity to see speakers like this very often, so I hope to see you all there!

Skeptical Briefs

I should also briefly mention that we have received our first batch of *Skeptical Briefs* from CSICOP. As I’ve noted in previous columns, these will be sent, free of charge, to all RE-ALL members (this does not include those who only subscribe to the newsletter). Watch for it coming soon. 📧

investigations of the physiological, ecological, and sensory differences that give rise to species recognition and perhaps reproductive isolation.” (Palumbi 1994)

3. Sherwin then began a discussion of design in nature as the scientific evidence for creation. He pointed to the following “evidence” from the “secular publication,” *The Science Teacher*: “Teachers are nearly split over the existence of scientific evidence for creationism (48% agree or strongly agree there is much scientific evidence for creationism)” brushing off the last part of the quotation: “though most do not perceive creationism and evolution as equally viable scientific alternatives for explaining present life forms.” (Weld and McNew 1999).

The article had nothing to do with design in nature per se, but was a general article on the attitudes of science teachers toward the teaching of evolution. Though Sherwin stated, “One out of every two people interviewed, and they’re on their way to becoming science teachers...” this proves that he did not read the article carefully, and that several important points were omitted. First, the participants were surveyed, not interviewed. Second, this survey was sent to 462 current biology teachers (not students), 228 of whom returned the survey. Who tends to complete surveys? Third, the survey was done in **Oklahoma**. That’s important, since Oklahoma tends toward religious conservatism, and these teachers may not be representative of all biology teachers in the US.

4. After a short discussion of arrowheads and Mt. Rushmore being examples of “purpose and plan,” Sherwin turned to the universe as a whole, attributing this quotation to Brad Lemley: “The universe is unlikely. Very unlikely. Deeply, shockingly unlikely.”

The article was authored by Lemley, but the statement was actually made by Martin Rees, British Astronomer Royal. The article was about Rees and his book *Just Six Numbers*, which discussed some of the fundamental constants in the universe. Hardly buttressing support for intelligent design, Lemley explained Rees’ position later: “Drawing on recent cosmology..., Rees proposes that our universe is a tiny, isolated corner of what he terms the multiverse. The idea is that a possibly infinite array of separate big bangs erupted from a primordial dense-matter state... ‘The analogy here is of a ready-made clothes shop,’ says Rees... ‘If there is a large stock of clothing, you’re not surprised to find a suit that fits. If there are many universes, each governed by a differing set of numbers, there will be one where there is a particular set of numbers suitable to life. We are in that one.’” (Lemley 2000)

Though Rees may also be guilty of hyperbole in calling the universe “unlikely,” he suggested purely naturalistic (if bizarre, to the layperson) origins for this universe. Rees’ answer to the question, “Why is there life?” was simply, “Because you happen to be in the right universe,” (Lemley 2000), not because there is evidence supporting the existence of a designer.

Next came a description and discussion about the bacterial flagellum. Sherwin described the parts of a jet engine, and made the Michael-Behe-like analogy that since the flagellum had the same parts as a jet engine, and because “Jet engines call for designers,” therefore the flagellum was designed. He de-

scribed the flagellum as a “constant torque protonmotive force reversible rotary motor,” but also made a fundamental mistake, saying “If you lick your two fingers and push them in an outlet, you will experience protonmotive force.” While proton pumps **do** involve the movement of charged particles (protons), this is **not** what comes out of a light socket. If it were, maybe we would call it “proticity.”

Sherwin fled into jargon repeatedly, overwhelming the audience with complicated metabolic flow charts and mentions of “pyruvate dehydrogenase,” “phosphorylation,” “Krebs cycle,” and “supercoiled DNA.” The point was that this cell was so small and so complicated that it just had to be designed. Sherwin concluded: “You want evidence for creation? I give you the flagellum and the fact it runs by electricity.”

Behe’s bacterial flagellum arguments have been addressed quite well by other authors, and Sherwin offered nothing new. Please see especially, *Finding Darwin’s God*, by Kenneth Miller, “A Biochemist’s Response,” (http://www.cbs.dtu.dk/dave/Behe_text.html) and “Evolution of the Bacterial Flagella” (<http://minyos.its.rmit.edu.au/~e21092/flagella.htm>).

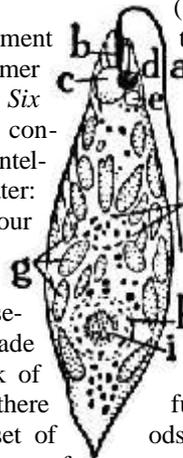
Sherwin summarized this portion of the presentation by saying that this was a “head vs. heart issue,” that “Very few people can honestly say they can’t believe in creation science. Most people simply won’t believe in creation science,” and “I’ve given you, in the brief time we’ve had, some, I think, pretty compelling evidences for the hand of a creator.” He then returned to some serious quote-mining, mostly related to mutations, and their power to induce macroevolutionary changes.

5. The next quotation came from an article by Klein *et al* (1998): “It is notoriously difficult to determine whether a mutation is neutral, semideliterious, or moderately advantageous.” Sherwin called this “a very, very important quote this evening.”

There are several words one would not wish to see beginning the next sentence should one not wish to be accused of taking this out of context. “However” would be one of those words. The next sentence: “However, mutations in certain regions of the genome, such as intergenic segments, introns, or parts of the 3’ untranslated region have a high probability of being neutral.” The entire article discussed “trans-species polymorphism,” and concluded that while TSP “complicates phylogenetic analysis,...it is a useful tool for the study of speciation.” Many examples of methods that could be used to determine the effects of mutations were discussed.

6. Cambridge’s David Stern was quoted next: “One of the oldest problems in evolutionary biology remains largely unsolved. Which mutations? Which genetic mistakes generate evolutionarily relevant phenotypic variations? What kinds of molecular changes do they entail?” (Stern 2000) Sherwin went on to say: “I applaud Dr. Stern. We’re not condemning anybody here this evening. I applaud Dr. Stern for being intellectually honest to ask these questions.” With this disingenuous statement, Sherwin implied to the audience that Stern was admitting defeat—that biologists are totally in the dark about what phenotypic changes result from mutations.

The quotation came from Stern’s abstract. The rest of the abstract and the data make it obvious that this was merely a



lead-in for his research contributions: "Recent developmental studies of gene function provide a new way of conceptualizing and studying variation that contrasts with the traditional genetic view that was incorporated into the neo-Darwinian theory and population genetics. This new approach in developmental biology is as important for microevolutionary studies as the actual results from recent evolutionary developmental studies. In particular, this approach will assist in the task of identifying the specific mutations generating phenotypic variation and elucidating how they alter gene functions. These data will provide the current missing link between molecular and phenotypic variation in natural populations." (Stern 2000)

Perhaps Sherwin should have finished the abstract (and maybe read the whole paper!). But then, of course, the audience would have learned something about mutation and evolution!

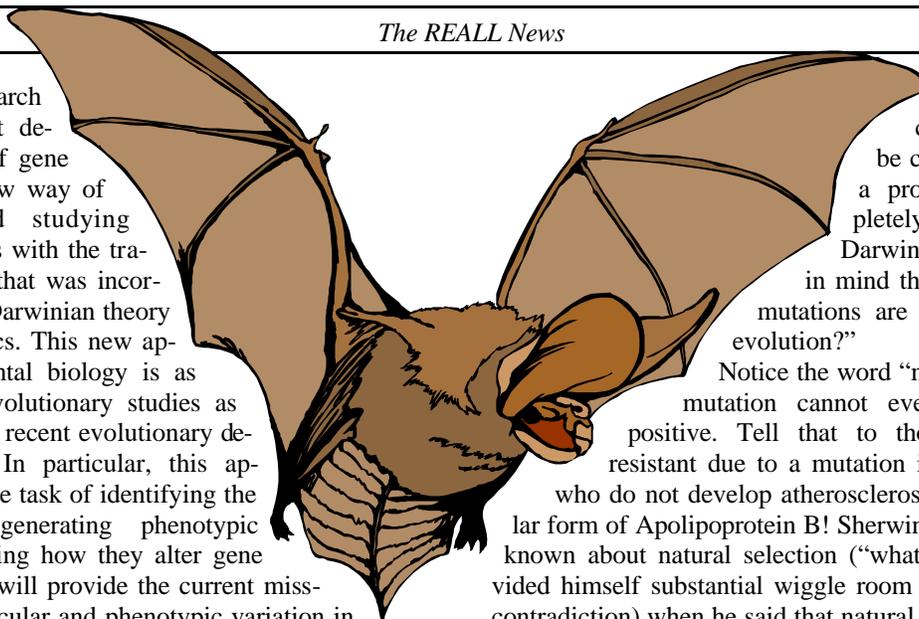
7. Sherwin then quoted Sir John Maddox in *Nature*: "So it is disappointing that the origin of the genetic code is still as obscure as the origin of life itself." (Maddox 1994) The intent here was to convey (again) that, when pressed, scientists admit that they don't know "jack."

Maddox's article began: "The problem of the genetic code has several facets, of which the most compelling is why it is just what it is." He then mentioned that an understanding of the origin of the genetic code would be a big step in the understanding of the origin of life. However, Sherwin did not even quote Maddox accurately, leaving out a significant phrase: "So it is disappointing, **but not surprising**, that the origin of the genetic code is still as obscure as the origin of life itself." (Maddox 1994)

After summarizing the state of knowledge up to 1994, Maddox continued: "...when more is known of the dynamics of the genome, it should be possible to unravel the evolution of the code from the regulation and placing of t-RNA genes and from the properties of defective pseudogenes."

The point of his article was to suggest that biologists might do well to explore group theory as a method of elucidating the origin of the genetic code, that "...the problem of the genetic code is simply a problem of symmetry breaking...and therefore best described by group theory." Maddox did nothing more than lament that elucidating the origin of the genetic code is complicated (though let's not forget we have only been working on this for 50 years), but he suggested a procedure for doing so when more is known about the genome, and offered another pathway from the field of mathematics.

Sherwin then discussed bats as examples of design, saying "The fossil record shows that bats have always been bats." His lone piece of support for this was a 1966 article from *Scientific American*, showing "the oldest bat." He implied that bat sonar was a great unknown, saying, "How do genetic mistakes and natural selection, whatever that is, account for the sophistication of bat sonar?" and "Can a system, for example, the bat so-



nar, that we don't completely understand, be constructed by means of a process we cannot completely specify? That is, neo-Darwinian evolution, keeping in mind that natural selection and mutations are not the mechanism of evolution?"

Notice the word "mistakes," implying that mutation cannot ever contribute anything positive. Tell that to those who are malaria-resistant due to a mutation in their hemoglobin, or who do not develop atherosclerosis because of a particular form of Apolipoprotein B! Sherwin implied that nothing is known about natural selection ("whatever that is") and provided himself substantial wiggle room (not to mention a self-contradiction) when he said that natural selection and mutations were suddenly not the mechanisms of evolution. There is no one mechanism of evolution, but an interplay of mutations, natural selection, and other factors, all described very well in the articles Sherwin should have read before he lifted quotations. Though we may know little about bat sonar, some progress has been made using fossil and molecular data (Springer 2001).

The ICR seems to have backpedaled on its favorite mammal. Years ago, the typical mantra was "Whales have always been whales." Now that so many intermediate forms between whale and land mammal have been found, bats seem to be the current favorite mammal-without-transitions!

While it is true that (probably due to fossils' fragility), there does not exist a nice bushy set of transitional forms (as is seen in horses, whales, and humans), it is inaccurate and misleading to conclude that all evidence is tied up in a 1966 article. For example, Mark Hamrick has studied *Phenacolemur*, a mouse-sized flightless animal contemporaneous with early bats. The bones from its rear foot resemble those that flying lemurs use to hang from trees. "Nobody had realized this was hanging from its hind feet before" (Hecht 1998). Eventually bats will go the way of whales, as more information about their evolution becomes known.

8. The attack on what is known about mutation continued with this quotation from Endler and McLellan (1988): "Although much is known about mutation, it's still largely a black box relative to evolution. Novel biochemical function seems to be rare in evolution, and the basis for their origin is virtually unknown."

Endler and McLellan published a long review and an admonishment—for scientists to get out of their little boxes, and view evolution as the product of many factors. They said: "It is time to try to glimpse evolution as a whole. Evolution consists not of one or two all-important processes, ...but rather an aggregate of processes of various sorts affecting different taxa differently. It is our purpose to identify some of the major processes in organismal evolution and to point out some major gaps in our knowledge."

The sentences prior to Sherwin's snippet provide the con-

("Quote Mining" continued on page 7)

New Fox Show Tries to Solve Non-Mysteries

by David Bloomberg

Million Dollar Mysteries is a new Fox “reality-based” show in the same vein as *Unsolved Mysteries* and all of its copycats (it airs irregularly as specials). The unseen narrator speaks in a breathless heavy whisper throughout, as if he is revealing the inner-most secrets of the world. The show supposedly focuses on crimes that have large cash rewards that viewers can claim if they help solve those crimes. By way of its name, you would think the rewards are all for a million dollars. This thought would be enhanced by the host introducing the show by saying it is “up to you to solve these baffling cases” and if you do, “you could be a millionaire.”

But if you thought that, you’d be wrong. In fact, there is only one “case” mentioned that has a reward of a million dollars, and that has nothing to do with crime, or even reality. It’s an offer for a genuine piece of an extraterrestrial spacecraft. We’ll get to that later in more detail. But the rest of the rewards don’t even come close to a million dollars. Apparently, there are no standards for naming shows. But it’s a bad sign right off the bat when a “reality” show can’t even be real in its own name.

In addition to featuring several unsolved crimes and several large unclaimed bank accounts (which there is no point in my going over further), the May 30 episode discussed a legendary hidden treasure and, of course, UFOs. The International UFO Research Center in Roswell, New Mexico (where else?), is offering a million dollars for a scientifically verifiable piece of an alien craft. Their money is safe.

This “reward” offer gave the show an excuse to go into a hopelessly pro-True-Believer discussion of UFOs, with nary a skeptic in sight. They talked briefly about several cases and showed some photos and videos that looked either obviously fake or like some balloons floating into the sky. Then they moved on to everybody’s favorite case, Roswell. They talked about it as if it hasn’t already been debunked time and time and time again. They said the truth behind Roswell is “hotly debated.” No, not really – at least not by anybody reputable. They did mention the Air Force report that cited Project Mogul – a secret project that would have used balloon-borne devices to detect Soviet nukes, and which just happened to lose one of its balloon targets right when the Roswell item was found. But they didn’t talk about the overwhelming evidence pointing directly to Mogul as the explanation. After all, if they did, they wouldn’t have a mystery anymore. Too bad the reward is for a piece of alien spacecraft and not for solving the mystery – skeptics could use the money.

Speaking of rewards, the following week’s show featured a \$2,000,000 reward for anybody who can prove the existence of Noah’s Ark. Another reward that will go unclaimed.

The segment began with the same old information about satellite images showing boat-shaped rock formations on Mt. Ararat in Turkey, and people from the Biblical Archaeological Search & Exploration (BASE) Institute going on expeditions to examine these. Imagine my surprise when it turned out that the boat-shaped rock formations were found to be boat-shaped rock formations!

In that aspect, the show allowed some reality to creep in – more than usual when this topic is put on TV. Indeed, they ran through several of the satellite images and showed how they were just the formations of rock or ice or whatever. The founder of BASE said that with so many false leads, he was tempted to give up.

But then he heard about a first-person account of a man who claims to have seen, back in the 1940s, a large wooden ship on a mountain in Iran. While he didn’t know the name of the mountain, BASE folks went to Iran to do some information-gathering. They say they found historical documents claiming the boat was there, on Mt. Savelon. Indeed, old documents even say these mountains used to be referred to as the Mountains of Ararat – which is how the Biblical story of Noah refers to the mountains (people have commonly misinterpreted this to mean Mt. Ararat, which is not in that area). So maybe they found it!

But, of course, that’s as far as it goes. They haven’t actually got any evidence that it’s there. I’ll make a prediction, though: They will find satellite photos that look boat-shaped. But when they eventually get to that point, they will find it to be a rock or ice formation.

Another portion of this segment included mention of a recent discovery of a massive ancient flood. Well, yes, that was indeed discovered, in the Black Sea. But that was a *local* flood, not a world-wide one. Some scientists have theorized that the Black Sea flood did indeed serve as the basis for the Noah’s flood story, but they are not suggesting that Noah really had an ark!

Moving on from the story of Noah, we get to the story of a princess. While many people wanted her life to be a fairy tale, Princess Diana’s story definitely was not. Her life ended on August 31, 1997, in a Paris car crash – but her story lives on.

She was, of course, killed along with her boyfriend, Dodi Al Fayed. Al Fayed’s father has put up a \$1,000,000 reward for information leading to finding out what “really happened” that night – he does not believe it was an accident. The official finding was that, in an attempt to avoid the press, Di and Dodi, plus a bodyguard and a driver who had been drinking, sped along Paris streets and entered a tunnel at over 80 miles per hour. They apparently swerved to avoid a white car – never found – and ended up hitting a concrete pillar. All except the bodyguard ended up dead.

But Al Fayed’s father is not satisfied with that answer. Like so many other people who have lost family members to accidents, he wants to blame somebody. In fact, he thinks the white car plus a couple of motorcycles seen near the tunnel were part of a plan to *cause* them to crash – an elaborate plan, to be sure. I mean, it would require knowing that their car was going to speed into the tunnel with an intoxicated driver who could not maneuver as quickly as he should have. Quite a conspiracy!

He doesn’t have evidence, but he does have a motive. He says extremists in Britain didn’t want the mother of a future king to marry a Muslim man. So they planned this all out. Al Fayed’s father even says he has uncovered secret wiretaps of

(“Fox Show” continued on page 7)

(“Quote Mining” continued from page 5)

text: “Evolution fundamentally depends on variation. The processes that generate variation can be collectively be called mutation... Recently it has been shown that mutator loci and... unequal crossing-over, slippage, transposable elements, and hybrid diagenesis can be significant sources of mutations... These factors...are only well-characterized in a few genera and classes of organisms... Although much is known about mutation, it’s still largely a black box relative to evolution. Novel biochemical function seems to be rare in evolution, and the basis for their origin is virtually unknown. Is there a difference in the kinds of mutations producing minor modifications of function and those producing completely novel functions at a biochemical level?”

Note that Endler and McLellan pointed out that some processes that generate mutation were well-characterized in some organisms. Also, this is a 1988 paper, and one wonders whether the authors would ask the same questions in 2001.

In their summary, Endler and McLellan exhorted scientists to take a less myopic view, and look at all of the causes of evolution: genes, environment, behavior: “Evolutionary biology would benefit from a more even-handed attack on the various processes, fewer instances of assuming that only one process causes evolution, a greater integration of all biology, and a greater understanding of the biology of organisms and their internal and external environment.” Scientists were encouraged to get to work on specific questions to fill gaps in knowledge, not abandon evolution! There is no sense in this article that the authors were willing to concede defeat to the “black box” of 1988.

9. Sherwin concluded his attack on mutation and natural selection with this quotation from Yokoyama (2000): “How natural selection operates at the molecular level is a major problem in evolutionary biology,” which he said was from a paper entitled “The Color Vision of the Coelacanth.”

Here is the complete quotation: “How natural selection operates at the molecular level is a major problem in evolutionary biology. About 30 years ago, Kimura proposed that most sequence changes in DNA’s and proteins are selectively neutral. This ‘neutral theory’ is still controversial and we need to demonstrate convincingly the consequences of adaptive evolution and neutral evolution at the molecular level. However, it is not an easy task to elucidate experimentally the molecular mechanisms of adaptive evolution in the vertebrates. This is because it is extremely difficult to find genetic systems where the functional effects of adaptive mutations can be rigorously assessed. **The visual pigments represent one of a very few model systems for studying adaptive mechanisms in vertebrates. Here I shall describe one example of adaptive evolution, color vision of the coelacanth (*Latimeria chalumnae*).**” (Yokoyama 2000). The full title of the paper is “Color Vision of the Coelacanth and Adaptive Evolution of Rhodopsin (RH1) and Rhodopsin-like (RH2) Pigments.”



It is painfully obvious that Yokoyama intended the shorter quotation as a lead-in to his research, which showed exactly “how natural selection operates at the molecular level.” Sherwin took this quotation completely out-of context, and conveniently shortened the title.

In Part 2 of this article, I will look at Sherwin’s social commentary and the questions and answer session, as well as some of the fallout in the form of e-mails I have received after the lecture.

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(“Fox Show” continued from page 6)

discussions between his son and Princess Di that were recorded by the CIA at the urging of the British Secret Service. Um, yeah. So where are they? We weren’t told.

I guess for a network that has aired a show telling us that the moon landing was a conspiracy, making the claim that this accident was engineered is not a big deal. Heck, the two incidents are probably related in the minds of some conspiracists. But putting items like these on a show that’s supposed to be about real mysteries merely shows how far the Fox network is continuing to sink in terms of credibility. 🐾

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