

# Creation Matters

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## The First CRS National Conference

by Jean Lightner, D.V.M.

**T**orrential rainfall in the Carolinas could not stop those travelling to Lancaster, South Carolina to attend the first CRS conference. This historic event for CRS was held July 9-11 on the campus of the University of South Carolina-Lancaster.

The kickoff began Thursday evening with a cookout, a time of fellowship, and fireworks. Many participants were thrilled to finally put a “face to the name” as they met for the first time people whom they had previously known only through published articles or CRSnet discussions.

### Welcome from USCL Dean

The conference itself got underway Friday morning when approximately 75 participants were greeted by the college dean, Dr.



*Dr. John Whitcomb is pictured as he delivered the 1st Henry M. Morris Memorial Lecture.*

John Catalano. Although he is not a creationist, he recognizes the importance of academic freedom. He was very pleased that the college could host the event. His greeting was followed by a welcome from the mayor, Joe Shaw, who was thrilled to have us meeting in Lancaster. He encouraged us to return and even provided some Lancaster memorabilia as door prizes.

The sessions began with a plenary speaker each day. Friday we heard Dr. Jason Lisle of Answers in Genesis present “The Ultimate Proof of Creation” based largely on his recently released book by the same title. He highlighted the fact that, although scientific evidence can be useful, it can never actually prove creation is true.

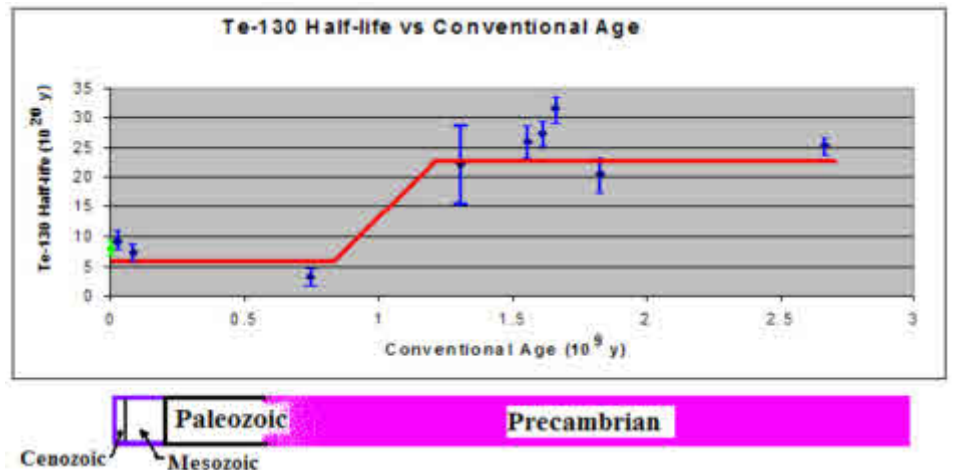
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## Double-Beta-Decay – The Smoking Gun of Accelerated Decay?

by Eugene Chaffin, Ph.D.

**T**he isotopes Tellurium-130 ( $^{130}\text{Te}$ ) and Selenium-82 ( $^{82}\text{Se}$ ) are known to undergo double beta-decay, a process in which two neutrons change into two protons with the emission of two electrons and two antineutrinos. The half-lives for these processes are some of the longest half-lives ever measured, meaning that such decays happen only very slowly. In calculating these half-lives from theory, physicists assume that certain laws of physics have operated in a well-formulated manner. In inferring the age of a rock using these decays, one must assume that the laws of physics have operated the same over the lifetime of the rock.

In science, and particularly in physics, it is easy to fall into the trap of thinking that there are principles outside of God, which we call “laws,” to which God must necessarily be subject. In a sermon of July 3,



*Figure 1. Half-life for double-beta-decay plotted against conventional sample age. Most of the data can be found in Bernatowicz et al. (1993) and references given therein.*

1881, C. Spurgeon addressed this subject:

God’s word is the manifestation of his secret thought. By it he reveals

his decree; by it he manifests his nature; by it he carries out his purpose. . . Our wise men are continually

... continued on p. 11

# The Tasaday Controversy: A Lesson in the Pitfalls of Evolutionary Expectations

by Jonathan Henry, Ph.D.

In 1971, the small Tasaday tribe of about 25 people was discovered on the island of Mindanao in the Philippines. They were “living the lives of cave men” and they were “unaware that there were other people on the planet” (Lerner, 1989; Hemley, p. 3).

Manuel Elizalde, former director of Panamin (the Filipino government’s agency for routing aid to minorities), and Ferdinand Marcos’ Special Assistant for Oversight of Minorities, claimed: “They didn’t realize there was a country; they didn’t realize there was a sea” beyond Mindanao; “they did not even know what [rice] was.”

## Fulfilling humanist preconceptions

The apparent primitivity of the Tasaday fit in with evolutionary ideas of man’s ancient past: “They have no words for weapons, hostility or war;” for most of history, the secular story goes, “we lived as the Tasaday,” in caves, using stone tools, and hunting and gathering. “Could the Tasaday have been alone in their caves for ten thousand years? It was a tantalizing idea.”

Further, “they couldn’t have come along at a better time.” An “interest in primal mankind” came out of the 1960s hippie movement. According to anthropologist

Alan Barnard, “People thought the Tasaday were primal,” thus satisfying the expectations that such cultures must have existed, if not now, at least in the distant past (Lerner, 1989; Hemley, p. 4).

But finding a primal culture in the present was much more exciting than theorizing about the past. According to the BBC, “*National Geographic* magazine devoted 32 pages” to the Tasaday who were “instant celebrities” (Lerner, 1989). One month later, NBC news correspondent Jack Reynolds introduced the Tasaday to a “national television audience.” The eventual page total in *National Geographic* exceeded 32 (MacLeish, 1971, pp. 220-255; Jones, 1971, pp. 881-882; MacLeish, 1972, pp. 219-249), and later a full-length book describing the Tasaday as a true stone age culture was also published (Nance, 1975). Nance continues to maintain that the Tasaday were genuinely as represented in 1971, claiming that “the Tasaday provide glimpses of human society before agriculture, giving us a hint of where we have been ...” (Nance, 2009).

## Early doubts about the Tasaday

“The image of the Tasaday was firmly fixed,” but in August, 1972, ethnobotanist Douglas Yen visited the Tasaday to study how they used plants in their culture. Yen’s

analysis of the Tasaday diet showed “low levels of carbohydrates and proteins.” Evidently the Tasaday did not lead the easy life initially depicted in news reports but had to search long and hard for sustenance. In addition, the Tasaday claimed never to have met the nearby Blit or T’boli tribes, “but maybe their ancestors had” (Lerner, 1989). Yen checked on this possibility, finding that the Tasaday had no agriculture and used a smaller variety of plants than would normally be expected for a culture situated in the tropics for millennia.

In September, 1972, linguistic anthropologist Carol Molony accompanied Yen in a visit to the Tasaday. Molony and Yen planned to “learn about their past from their language,” but 80% of the Tasaday vocabulary was like the Manobo language, so “the idea that the Tasaday had been lost in their caves” for thousands of years “disappeared.” The Tasaday language, it was decided, must have split from the Manobo about 1200 AD. They were “not originally cave men at all, it seemed,” but they “had become them” (Lerner, 1989; Johnston, 1992, pp. 144, 151).

Now Elizalde put limits on visits and prevented certain questions from being asked of them. “Meanwhile, there always seemed to be time for the press and their helicopters.” In 1974, Elizalde prohibited all visits. Finally in 1986, the Marcos regime collapsed, and visits were possible again. A Swiss journalist went to the old Tasaday site. The Tasaday told him that

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“they were really from the T’boli and Blit people, and [the ABC news program] 20/20 exposed the hoax [in a program] ‘The Tribe That Never Was’ ” (Lerner, 1989).

20/20 producer Judith Moses said that the Tasaday were warned when visitors were coming so they could pretend to be primitive. According to rumors in the Philippine press, the Tasaday hoax was part of a plot by Marcos and Elizalde to strip tribal peoples of their lands. On the other hand, Elizalde accused loggers of lying about the Tasaday being fake, so the loggers could resume the harvesting of timber which had been stopped when the Tasaday were discovered. However, the Elizalde family was one of the richest in the Philippines, with investments in land and logging.

In 1988, Elizalde brought the Tasaday to Manila to prove their authenticity in court. Was he saving face, or was he sincere? Fourteen scientists in the early 1970s who saw the Tasaday never suggested that they were a hoax. Were the scientists victims of evolutionary expectations, believing in the primitivity they expected to see, or were the suspicions of a Tasaday hoax unwarranted sensationalism?

## The doubts continue

In 1989, Yen and Molony continued to insist that the Tasaday are genuine. Yet the Tasaday claimed to be ignorant of other tribes only a three-hour walk away.

In 1988, at the World Congress of Anthropology, Gerald Berreman noted that observers meeting the Tasaday “went” with “an *idée fixe*” in love with the concept of the noble savage (Berreman, 1988). Their caves had no remains of food, “an impossibility” for a tribe living in the caves for thousands of years. They had no fishing technology, they had to catch fish by hand, and they had no “carrying” technology — no nets or baskets, and no rituals or folklore. These deficiencies are not “anthropologically believable” and are “not authentic.” The Tasaday seem to have been invented by Elizalde “perhaps just for glory” (Lerner, 1989).

In Berreman’s view, “The evidence leaves no doubt in my mind that the entire Tasaday episode has been a deliberate deception, a hoax ... Vulnerable villagers ... were induced to cavort, clad in leaves, as cave-dwellers before outsiders during brief, preannounced visits” (Berreman, 1991, p. 34).

Duke University professor Martin Lew- is summarized the Tasaday episode by writ-

ing: “Most glaring is the case of the Tasaday ... famed for both their gentle ways and their total freedom from corrupting exterior contact. The discovery of this stone-age remnant now appears to have been an outright fraud” (Lewis, 1992, p. 67).

The Tasaday site had no traces of old stone tools either. “[W]here did the stone tools go? If they had been using them for hundreds of years, wouldn’t there be at least a few left lying around? None were reported found” (Lerner, 1989). The Tasaday had no agricultural foods at all, a condition very much unexpected for a people living in the wild for centuries or millennia. “Were [the Tasaday] simply lying about their primitivity?” Yet Molony saw the lack of agricultural foods as evidence that the Tasaday are genuine. According to Molony, “they would have to carefully exclude from their speech” all the “rich complex” of agricultural metaphors present in all languages, if in fact they really were modern farmers. And children would need to have been accomplices in this hoax, watching their vocabulary, too — “even more impossible,” Molony asserted (Lerner, 1989).

Yen claimed that the Tasaday children could not even identify a rice plant he showed them; their “surprise could not have been faked.” Were Molony and Yen victims of evolutionary expectations of primitivity that caused them to overlook tell-tale clues they should have noticed? Or are their assertions valid? On the other hand, “[I]f the T’bolis lived so close to their Tasaday neighbors,” how could they not have known of them? “... [T]he Tasaday story remains a perplexing one. ... They told NBC they were real ... they told ABC they were fake ... They’ve told Philippine television they were real ... and British television they were fake” (Lerner, 1989).

## Assessing the evidence

*The Tasaday Controversy: Assessing the Evidence* is the title of a book by anthropologist Thomas Headland (1992). According to Headland, the Tasaday were not paid performers, but there were gross exaggerations because scientists were “excited” about what they were finding. Headland pointed out that ideas about hunter/gatherers have changed since the late 1960s. In 1968, anthropologists decided that hunter/gatherers, though primitive, “lived a very affluent lifestyle” (Lerner, 1989), and it was then that the Tasaday were discovered.

According to Headland, “for some reason they broke off” from the Manobo people in the nineteenth century, possibly because

they were hiding from slave traders or fleeing a plague of disease. Headland (1992, pp. 136, 138) also proposed that the Tasaday in fact occasionally traded with their farming neighbors down the river. Despite sporadic contact, “Perhaps by 1971, the Tasaday really did believe they were the only human beings on the planet” (Lerner, 1989). By 1989, intermarriage with the Manobo had increased the number of Tasaday to 62 people.

Were the Tasaday a deliberate hoax engineered by Elizalde, or is Headland’s milder judgment correct? Regardless of the answer, one sobering fact remains. The false premise that there must be primitive evolving races conditioned scientists to “see” what they believed. The Tasaday were seen as an ancient stone age people, when they were no such thing (Hemley, 2003, p. 306; Montalvan, 2004, para. 12; Boese, 2008, para. 27).

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**...without excuse!**

by Timothy R. Stout

# The Testimony of Chemical Equilibrium

Suppose you were to flip a coin with someone. Every time you win, they give you one dollar. Every time you lose, you give them one hundred dollars. It will be very hard for you to make any money with these rules.

This parallels the situation with amino acids and proteins. Proteins are the building blocks of life. They are made from long strings of amino acids connected by what are called "peptide bonds." However, there is a fundamental problem facing those who believe that natural processes are adequate to account for the origin of physical life. A string of amino acids is far more likely to split apart than it is to lengthen spontaneously. This observation is significant enough to make a natural origin of life effectively impossible.

In 1976, Reven Evard and David Schrodetzki wrote about this problem in the journal *Origins* (Evard, 1976). Amino acids require an aqueous environment in order to form a proper protein shape. This is problematic, though, because whenever a peptide bond is formed between two amino acids, a water molecule is produced by the reaction and released into the solution. However, this is also a reversible reaction. In the reverse scenario, a water molecule reacts with a peptide bond to split the bond connecting two amino acids. In an aqueous solution, the water molecules will be far more abundant than isolated amino acids. This means that the laws of chemical equilibrium will act to favor the splitting of existing peptide bonds as opposed to isolated amino acids finding the ends of a chain and joining to them.

Then, in 1981 biochemist Duane Gish calculated from thermodynamic principles the ratio of splitting versus lengthening. His calculations showed that in a forming chain, each time a new amino acid is added to an existing chain, its concentration decreases by a factor of one hundred (Gish, 1981). This makes it essentially impossible to form a chain longer than a handful of amino acids.

Since then, various experiments have confirmed in principle Gish's theoretical calculations. The results of the experiments vary somewhat depending on the actual amino acids used, the temperatures, the pH of the solutions, and the presence or absence



of various metallic ions in the solutions. However, the pattern is consistent of an extremely rapid decrease in product concentration with each additional amino acid added to a chain. For instance, an experiment by Claudia Huber and Gunter Waechtershaeuser reported a maximum detectable chain length of four amino acids (Huber, 1998). An experiment by Ei-Ichi Imei et al. reported a maximum detectable chain length of six amino acids (Imei, 1999). Of course, when a species is so dilute as to be barely detectable and when it has a relatively short lifetime, it is useless as a component of a prebiotic soup leading to a formation of life.

The very short lengths of these barely-detectable species is important because proteins are made from specific substructures of coils and sheets. Coils usually average about 10 or more amino acids each and sheets 36 or more. A tiny protein of only a few sheets and coils can quickly add up to a hundred amino acids. Typical proteins average about 400. Thus, a chain of only four to six amino acids is useless.

If brilliant scientists using sophisticated laboratory equipment and experimenting to find the most ideal conditions to make chains of amino acids can only produce chains too short to be of use, it is ludicrous to claim that uncontrolled conditions in the wild would give better and more consistent results. The truth is that the laws of chemical equilibrium teach against the formation of the hypothetical soup talked about with such great certainty in the literature.

Chains degenerating about 100 times as fast as they can form is similar to a gambling scenario in which you lose money 100 times as fast as you win it. In both cases, it does not matter how much you start with.

Time is your enemy; you will eventually lose whatever you started with. Evolutionists like to claim time is on their side. This is nothing more than wishful thinking; it is not the product of scientific calculation.

Thus, if a person is to believe in a natural origin of life, and if he is to reject life as the direct creative efforts of a living God, then he must throw away the laws of chemical equilibrium. This may not mean a lot to a lay person who has little understanding of chemistry. However, to a scientist trained in these laws it represents a high price to pay, particularly if he has any intellectual integrity.

In fact, God says that such a person is "without excuse" for not acknowledging Him as Creator (Romans 1:20).

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— CM —

**If you have not renewed  
your CRS membership,  
this will be  
your final issue of  
*Creation Matters*.**

## CRS Conference

He focused attention on the fact that the atheist has no logical foundation within his own worldview for belief in science, rules of logic, or morals. Those who reject Scripture hold beliefs that only make sense if Scripture is true. Understanding how to point this out to skeptics is an important apologetic tool.

On Saturday morning Rob Carter from Creation Ministries International presented "The Dawning of Creationist Genetics." In his talk he reviewed some of the recent creationist literature that highlighted advances in our understanding of genetics. The evolutionary concept of chance, random processes forming life is constantly being shown to be more and more absurd. There has been an explosion of information that has become available with new DNA sequences constantly being added to databases. This wealth of information opens a large door of opportunity for creationist researchers in the future.

### Two tracks

The remaining talks on Friday and Saturday were divided into two tracks. Some participants found it difficult to choose between the two simultaneous sessions; they wanted

to go to both. The presenters ranged from CRS board members to CRS members who had recently joined. Topics included biology, geology, paleontology, radioactive decay, astronomy, biblical exegesis, and philosophy. A number of different viewpoints were presented, a few being somewhat controversial. Excellent discussion and even a few interesting debates followed as participants were able to ask questions and later discuss what they had heard.

Lunches and snacks were provided during each day by Danny Faulkner's wife, Lynette, and his sister, Linda Henley and her husband Charles. Between sessions we were able to enjoy delicious South Carolina peaches, apples, other snacks, and drinks. Lunch was conveniently served in the same building as the meetings, allowing extra time for discussion during this hour-long break.

### H.M. Morris Memorial Lecture

On Friday evening there was a special "Henry M. Morris Memorial Lecture" presented by Dr. John Whitcomb. This well-attended event was open to the public. After the conference, Dr. Whitcomb also spoke at an area church on Saturday evening and Sunday. Dr. John Morris attended the conference and spoke at a different area church on Sunday morning.

After the Friday night lecture, people were able to do some stargazing. Steve Miller brought his 20-inch telescope which provided an excellent view of Saturn with its rings. As we were waiting in line, Jason Lisle pointed out some of the brighter stars and an Iridium flare. We were also able to see the space station travel across the sky.

An outing to the Carolina Sandhills occurred after the conference on Sunday afternoon. About 15 people who attended the conference went on this field trip, on which participants examined several dunes and climbed two of the more prominent dunes. This trip was most timely, given that a presentation Saturday morning featured the first creationist examination of the Carolina Sandhills.

### Town hall meeting

At the close of the conference on Saturday we had a Town Hall meeting. This was held in the large meeting room and allowed participants to provide feedback on what they liked and how the conference could be improved. The response to the conference was overwhelmingly positive. Many helpful suggestions were made, and we plan to hold a second CRS conference July 30–31, 2010 at the same location. Begin to make plans now to attend.

—CM—



## Math Matters

by

Don DeYoung, Ph.D.



### Fundamental Numbers in Nature

Several intriguing physical constants are embedded in nature. Some of these numbers have no dimensions attached, so they are independent of particular systems such as metric or British units. One might suggest that these numbers were selected by God to shape the fabric of creation. Several examples follow.

**1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377...** This is the sequence of Fibonacci numbers. They are found throughout nature, both in the living and nonliving world.

**1.61803...** The *golden ratio* appears frequently in nature and is a proportion especially pleasing to our eye.

**2.7182818284...** This universal constant is the base of natural or Napierian logarithms. Given the symbol  $e$ , the number has applications in exponential growth and decay. It

also appears in the solution of probability and calculus problems.

**3.14159...** This number is defined as the ratio of the circumference to the diameter of a circle. It is an irrational number, thus having a non-repeating decimal. Given the symbol of the Greek letter pi ( $\pi$ ), this may be the best known and most used constant in mathematics.

**137** This number is the inverse of the *fine structure constant*, called  $\alpha$ . It results from combining several other constants from physical science,

$$\alpha = \frac{2\pi k e^2}{hc}$$

Here  $k$  is the electrostatic constant,  $e$  is the electron charge,  $h$  is Planck's constant, and  $c$  is light speed. The fundamental constant  $\alpha$  determines how atoms and the universe are constructed.

**$10^{40}$**  Paul Dirac (1902–1984) was a physicist interested in large, dimensionless numbers from nature. One example is the ratio  $N$  between the electric and gravitational forces for an electron and proton in a hydrogen atom. This number  $N$  evaluates to approximately  $10^{40}$ . The value is well chosen. If the electric and magnetic force ratio was different, atoms, and life itself, could not exist. Interestingly, Dirac found that values close to  $10^{40}$  also arise in several other ratios of physical entities (Barrow, 2002).

Each of the dimensionless numbers described here is fundamental to mathematics and to physical reality. The numbers, by God's choice, determine the kind of universe we live in.

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## Matters of Fact...

by Jean K. Lightner, DVM, M.S.

# The Role of Science

*Editor's note: In this feature, Dr. Jean Lightner will answer questions from a variety of sources, including those from our readers. It will not be possible for her to answer each question, but she will choose those which have a broad appeal and lend themselves to relatively short answers. You may submit your questions to Dr. Lightner at [jean@creationresearch.org](mailto:jean@creationresearch.org).*

**Q** Can Creation or the existence of God be scientifically proven?

**A** No. In reality, science doesn't prove things. Science is a useful tool that helps us learn about the world around us. Science can also refer to the accumulated knowledge that has been gained through such study. However, science involves the activity of finite, fallen, fallible human beings. So science cannot prove things in an absolute sense. It is always theoretically possible that there are some observations that we haven't made that will demonstrate that our current understanding is wrong. This is why our scientific understanding is constantly changing and developing over time. The tentative nature of science is taught even within the secular scientific community (Anonymous, n.d.).

To further complicate matters, Creation deals with events in the past. This means it falls within the realm of history. To obtain the most accurate view possible of history, primary sources are used. In other words, we learn about what happened in the past by listening to those who were there. After all, they are the ones who observed what happened. In this respect, the biblical Creation account is on very solid ground. Not only is the account of Creation recorded from the testimony of an eyewitness, but this eyewitness is the One who actually created, the faithful and true witness (Revelation 3:14). In our culture today many people choose to disregard the biblical account and assume that it is unreliable. However, the opinions of culture cannot change the reliability of the source.

Science can still be useful in dealing with historical issues. For example, forensics is used to help solve criminal cases. Scientific investigation can help us arrive at plausible scenarios and/or reject implausible scenarios. This is important when attempting to build models that help us understand what may have happened in the past. Creationists use scientific observations to construct models of what may have happened during the Flood or how life on earth may have developed over time. They combine this with the historical record

found in Scripture. This is much like police investigations which combine eyewitness testimony with data from laboratory tests to establish what likely happened during a possible crime. Still, there is often a fair amount of conjecture necessary to build models, so we need to be cautious and know what part of our model is based on direct evidence and what is from inference.

Since God is a spirit (John 4:24), it is not possible for science to directly test for His existence. However, there are many reasons to believe that God exists. One reason is because science is indeed a useful tool for understanding the world around us. Science relies on some basic assumptions: that our senses are generally reliable, that we can comprehend the world around us, that uniformity exists in the natural world, and that logic works (Anonymous, n.d.; Lisle, 2009).

The assumptions necessary for doing science are quite reasonable if the Bible is true. God created us in His image and gave us the job of caring for creation (Genesis 1:26-28; 2:15), so we would expect that our senses are basically reliable and that we can understand the world around us in order for us to do what we were created to do. We know that He upholds all things (Colossians 1:17, Hebrews 1:3) and that certain cycles can be expected to continue (Genesis 8:22; Jeremiah 33:20-21), so we expect to see uniformity in the natural world. All truth is found in God who is unchanging and cannot lie or deny Himself (John 14:6; Colossians 2:3; Numbers 23:19; 2 Timothy 2:13), so the law of non-contradiction makes sense.

In contrast, non-Christian worldviews cannot provide a rational basis for why science should be useful. If life came about by unguided chemical reactions, then why should our senses be reliable? Why should the world follow regular laws? Why should we be able to understand the world around us? Why should there be laws of logic? Evolutionists accept these presuppositions, but their worldview cannot explain why these should be true. A more detailed explanation of why only a biblical worldview can provide a logical foundation for science is given in a recent book, *The Ultimate Proof of Creation* (Lisle, 2009), which is carried in the CRS bookstore.

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**Q** Isn't it best to present science as *definitively proving* Creation since we know Creation is true and it helps people believe the truth?

**A** It is fine to show that scientific evidence is consistent with Creation. It is fine to say that the Creation model explains the majority of the evidence far better than does the evolution model. However, there is a serious problem when someone claims that science *definitively proves* something. This claim is not true, and God calls His people to be honest. So we should avoid this misrepresentation of science that is, unfortunately, fairly common in western culture. It ascribes characteristics to science that it does not have and opens the door to idolatry. To understand this concept, perhaps an example from another culture would be helpful:

In a well-drilling project on the edge of the Sahara, a community watched a soil scientist and a hydrologist converse in highly technical language as they did soil chemistry and studied a hydrological survey. When asked what these two men were doing, the community replied that they were witch doctors. One was consulting the spirit of the earth and asking it where the spirit of the water lived. The other was reading magic texts in the search of power, just as their marabouts did with the Qur'an. Asked if these witch doctors were any good, the villagers replied that they were very good, better than their own witch doctors. "After all, they always find water."

When confronted with this interpretation of their actions, the men decided to go back the next day and explain the science behind their work in simple terms the village could understand. Explaining the miracle of finding water in the desert

... continued on p. 11

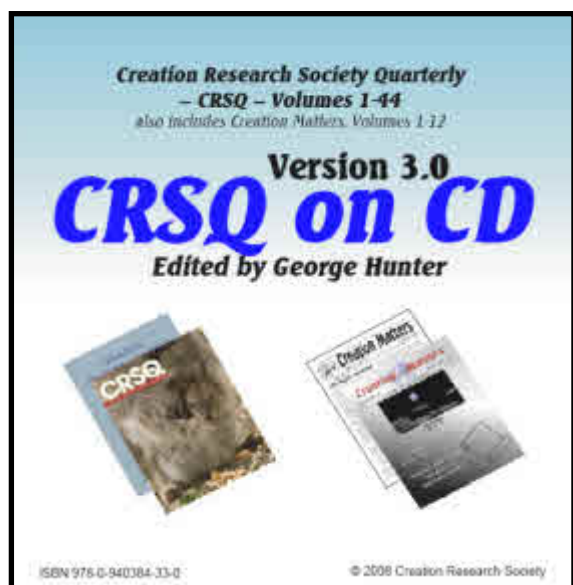




## 2009 CRS Board of Directors and Professional Staff

The CRS Board of Directors met for their annual meeting in Los Angeles, CA on June 18–20. Pictured from left to right are: Mike Oard, Gary Locklair, Danny Faulkner, Ron Samec, Dave Kaufmann, Don DeYoung, Mark Armitage, Gene Chaffin, Ted Aufdemberge, Russ Humphreys, Glen Wolfrom, Kevin Anderson, Jean Lightner, and Diane Anderson. Kevin Anderson\* is Director of the CRS Van Andel Creation Research Center, and his wife Diane\* is Administrative Assistant. Board members not pictured are John Reed and David Rodabaugh.

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# Creation Message Taken to Norway

by Peter Klevberg, B.S., P.E.

In 2008, a couple of Norwegian creationists contacted me and asked me to come lecture in Norway in 2009. I dismissed their pleasant invitation and told them to find a native speaker with a Ph.D.; no one would want to listen to me. “No,” they replied, “We want you. You do actual field work.” I prayed about the trip, they bought my plane ticket, I begged my boss for time off, and in February of 2009, off I went.

I had visited the land of my father’s birth twice before: in 1978 and 2002. The changes have been profound in the past three decades. I am witnessing the demise of a people, the death of a nation, the pallor of ignorance that has settled upon Norway and the rest of the “Dark Continent” of Europe. A century or two ago, Norway was arguably more Christian than the United States ever was; today, at least a third of its population is atheist. The vestiges of its Christian heritage are being rapidly shredded by the socialist government. My belief is that evolutionism, inculcated through government schools, has been the most effective means of bringing this about.

The Norwegian media exhibit the same ideological slant as is commonplace in America. *Dagsavisen*, a major paper, ran an article on the Answers in Genesis museum while I was in Norway. Amidst the pejorative terms and emotive descriptions, they crowed that while creationism plagues that odd and backward nation of America, and even afflicts Great Britain to a minor extent, Norwegians are too enlightened and scientifically literate to fall for such superstition. (They used the word *kreasjonisme*, a transliteration from English, not *skapelse*, the Norwegian word for belief in creation.) To say one believes the world to be about six thousand years old strikes the typical Norwegian something like saying one believes the moon is made of green cheese. Stereotypes, prejudice, ignorance, and misinformation are hammered home incessantly by the media.

These few Norwegian Christian brethren are spots of light in that darkness. In 2002, I was hard-pressed to find many committed Christians, and found no one with a background in how science supports the



*Peter Klevberg (right) is pictured discussing creation with a Norwegian student.*

veracity of the Bible. In the intervening seven years, God has raised up several individuals and put us in touch with each other. Norway even has its first creationist geologist!

God will not be mocked. While the Establishment prepared to celebrate the 200<sup>th</sup> anniversary of Darwin’s birth and 150<sup>th</sup> anniversary of the publication of *On the Origin of Species*, God was calling and enlightening and raising up scientists and lay workers to further the truth and to stand boldly against ridicule and ostracism. One was a student at what is probably the most conservative Bible college in Norway, who objected to an evolution-promoting curriculum and managed to get us in to talk to some of the students.

I ended up speaking on the Bible and geology six times: in Byremo (Vest Agder), Oslo (three times), Valldal (Sunnmøre), and Lillestrøm. In all, I had the privilege of speaking to at least 175 people, of various ages but mostly college students. That may seem few to Americans, but it was huge for Norway! Both Christians and nonchristians attended the meetings. In most cases, I was not the only speaker (and certainly not the best!), but I probably ended up fielding most of the questions. While I still have an ugly accent and a meager vocabulary, the Lord blessed my tongue anyway, and it seems I was able to communicate effectively.

There is still no Bible-based Norwegian creationist organization, just this loose group of people who have found each other. There is a Danish-Norwegian creationist organization, *Origo*, which promotes the Intelligent Design movement, excludes the Bible, and takes an old-earth position (there

is a link to their web site on the CRS web site). But at least they are a thorn in the side of the Establishment during this “Year of Darwin” (check out the web site Darwin2009.no). Their chief spokesman, Peder Tyvand, released a book, *Darwin 200 År — en Festbrems*, on Darwin’s birthday. It is very well-written and decimates Darwinism. While he defends a non-biblical “old earth” chronology, it is presented fairly, and is not a major part of the book. The first Norwegian creation science book, *Darwins Lære Faller* by CRS member Per Larssen, has been out now for five years; it was on our book sale tables.

I also spent most of a week with some geologists and entrepreneurs involved with mining properties in Nord Trøndelag. They are not Christians, but as is true in America also, those in industry generally tend to be more open-minded and science-oriented than those in academia.

After a very short seven weeks, it was a most melancholy morning when I boarded the train to the airport and left the old country. I now have some fine new friends and colleagues — and a couple of new subscribers to the *Quarterly*!

Creation science will not save Norway, but God-honoring scientific work can be used by God to lay the foundation for respect for His written revelation. Norway is at least forty years behind the United States in this regard. But ironically, in the “Year of Darwin,” a light has dawned in the northern tip of the Dark Continent that promises that Norway can catch up to the U.S. in solid, Christ-honoring science.

Meanwhile, what has happened there in terms of moral and cultural decay appears to be happening in America. Let us pray that God sends spiritual awakening to Norway — and to North America — but whether He does or not, let us who are called by His name be found faithful!

*Mr. Klevberg, a first generation Norwegian-American, has a B.S. in Engineering Science from Montana Tech and 20 years of experience in geologic exploration, hydrogeology, and geotechnical engineering.*

—CM—



# Speaking of Science

Editor's note: Unless otherwise noted, S.O.S. (Speaking of Science) items in this issue are kindly provided by David Coppedge. Opinions expressed herein are his own. Additional commentaries and reviews of news items by David, complete with hyperlinks to cited references, can be seen at: [www.creationsafaris.com/crevnews.htm](http://www.creationsafaris.com/crevnews.htm). Unless otherwise noted, emphasis is added in all quotes.

## News Roundup

Here's a quick collection of recent news articles bearing on questions of origins, morals, fossils, outer space, science, health, and Darwin.

**Mars risks:** The dust on Mars may be toxic to humans. *NewScientist*<sup>1</sup> reported that evidence from the rovers shows the electrically-charged dust clinging to everything. "If the dust is toxic and you bring it inside" a human habitat, a NASA scientist said, "it could be extraordinarily bad."

**Stem cell breakthrough:** The tools for repairing a broken heart may be inside you. An optimistic article in *ScienceDaily*<sup>2</sup> reported on a proof-of-concept study at the Mayo Clinic that shows a patient's own stem cells (induced pluripotent stem cells, or iPS) could be injected into the heart to repair damage. "This study establishes the real potential for using iPS cells in cardiac treatment," Dr. Timothy Nelson said of this first-ever application of iPS technology to heart disease therapy. In the tests, "Bioengineered fibroblasts acquired the capacity to repair and regenerate infarcted hearts."

**Fathers get respect:** "Fathers are not dispensable just yet," headlined a story in *NewScientist*,<sup>3</sup> as if that would cheer up Dad. Their "biological programming" to help raise children may have profound effects on the health of the young. The article is accompanied by a picture of an infant feeling very happy getting nurturing attention from Daddy. When Linda Geddes began her article, "You may be tempted to think men are becoming an optional extra in the mating game," who was she talking about?

**Tiny furry feet:** Mammal tracks have been discovered at Dinosaur National Monument says *PhysOrg*.<sup>4</sup> Hundreds of prints smaller than a dime were discovered in an area open to the public on the park grounds. According to the article,

The tracks are a rare find, mostly because they were left at a time when the area was a hostile, vast Sahara-like desert where towering sand dunes seldom preserved signs of animal life.

A park paleontologist called the find "astonishing." Mammal tracks are apparently interspersed with the dinosaur tracks.

**Ammonia moon:** Enceladus has ammonia, announced a press release from Jet Propulsion Lab.<sup>5</sup> The ion and neutral mass spectrometer found the molecule emitted from the south pole geysers of Saturn's little hyperactive moon. Planetologists believe that ammonia, by suppressing the melting point, indicates the possible presence of an ocean under the crust. Jonathan Lunine provided the automatic response: "Where liquid water and organics exist, is there life?"

**Origin of Speciation still debated:** *ScienceDaily*<sup>6</sup> pointed out that a debate you thought Darwin solved is still going on. "The tremendous diversity of life continues to puzzle scientists, long after the 200 years since Charles Darwin's birth," the article began. "However, in recent years, consistent patterns of biodi-

versity have been identified over space, time, organism type, and geographical region." Then they launched into a study that supports the controversial view of sympatric speciation — the idea that speciation can occur within a population without geographic barriers.

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## Nanotech Blurs Line with Biophysics

Machines on the molecular scale — in the literature these days, one needs to dig to find whether a news article is talking about man-made machinery or the living cell. Both employ laws of physics to do work. Notice how seamless the connection is in the following examples.



**Kinesin tightrope walk:** Scientists at Northwestern University are figuring out how kinesin "walking machines" in the cell are able to stay on track. Writing in *PNAS*,<sup>1</sup> they said,

Kinesin I can walk on a microtubule for distances as long as several micrometers. However, it is still unclear how **this molecular motor** can remain attached to the microtubule through the hundreds of mechanochemical cycles necessary to achieve **this remarkable degree of processivity**.

They found that these tightrope-walking machines keep two feet (actually dubbed "heads") on the rope (microtubule) at a time (so to speak), keep one foot tightly bound, move the other foot quickly, and keep the toes dug into the rope. "These 4 features reduce the likelihood that a kinesin I motor will dissociate and contribute to **making this motor so highly processive**," they concluded.

**Molecular mass spectrometer:** Caltech scientists are inventing a single-molecule mass spectrometer, *ScienceDaily* reported.<sup>2</sup> Michael Rourkes was quoted in the article saying,

...the next generation of instrumentation for the life sciences — especially those for **systems biology, which allows us to reverse-engineer biological systems** — must enable **proteomic analysis** with very high throughput.

**Myosin sober navigation:** Another cell motor that walks is myosin. Like kinesin, it can travel long distances on its highways

of actin without falling off. Scientists have wondered if the motors employ a random walk, like a drunken pedestrian. That wouldn't make sense for a cargo delivery system like the myosin-actin process, so scientists at the Institut Curie in Paris used quantum dots to watch them in real time. They found that the apparent random walk is the motor checking out each intersection in the criss-cross network of actin tracks. In a report in *ScienceDaily*,<sup>3</sup> Dr. David Warshaw cast Mother Nature in the role of nanotechnology engineer in his explanation:

Cargo delivery in cells **can't totally be a random process, therefore**, using the approach described here we can characterize how motors and cargo link up and **understand the engineering design principles Mother Nature uses to guarantee efficient and effective delivery** of cargo within cells.

**Carbon nanotube scale:** Carbon nanotubes have been all the rage in nanotech for several years now. They're stiff and strong for their extremely small size. *ScienceDaily*<sup>4</sup> reported a new use for them: weighing single atoms. "But the real excitement would be in tracking chemical and **biological reactions** involving individual atoms and molecules reacting right there on the vibrating nanotube," the report said. "That could have applications in **molecular biology**, allowing scientists to study the basic processes of life in unprecedented detail."

**Purposeful tumble:** *Science* reported this week that the flagella of *Chlamydomonas* (an alga) may go into tumble mode on purpose: for stealth.<sup>5</sup>

One of the most **remarkable** and **pervasive feats** in the microscopic world is the **coordination of flagella**, the slender, **whiplike structures** that protrude from many types of cells. The **collective motion of flagella** (also known as **cilia** when they occur in large numbers in eukaryotes) **drives fluid transport**, and **permits individuals to save energy through cooperation**. Because the internal structure of cilia is **highly conserved among eukaryotes from algae to humans**, free-swimming organisms like *Chlamydomonas* ... have long been powerful **model systems**. ... Polin *et al.* show how **synchronization** of the flagella in *Chlamydomonas reinhardtii* **governs the movement** of this green alga through water, a key determinant of its ecological fitness.

It turns out that the cells synchronize their flagella for about 11 seconds, performing a kind of breaststroke. Then, they desynchronize them and tumble, making sharp turns. The scientists think this is actually an evasion strategy to escape from predators.

**Light control.** The bright colors on a scarab beetle are due to nanotechnology. In another report in *Science*,<sup>6</sup> Sharma *et al* figured out that the structures in the scale cells of a scarab beetle

...are structurally and optically analogous to the focal conic domains formed spontaneously on the free surface of a cholesteric **liquid crystal**. These textures provide the basis for the **morphogenesis** as well as key insights for emulating the **intricate optical response** of the exoskeleton of scarab beetles.

Liquid crystals are prominent structures in many man-made objects, too, like wristwatches.

In the same issue of *Science*,<sup>7</sup> Pete Vukusic commented on the discovery, saying it adds to the technologies the beetle uses. The scales also display a helical nanostructure that may provide mechanical strength. "However, the beetle helical ultrastructure

is arguably **too complex and too costly to produce** without the **benefit of a suitable optical selection advantage**," he said, "such as effective signaling. The strong circularly polarized reflection observed in the beetles may, for example, play a role in intraspecific communication."

How these technologies came to be, Vukusic had no idea. "With a few noteworthy exceptions," he said, "the **formation processes** of these **insect systems** are **not as well understood** as are their photonics."



The discovery that biological systems use the same laws of physics on the molecular scale as do artificial systems has at least two important consequences for philosophy. One is a continuation of the demise of a form of vitalism that asserted that biological stuff is fundamentally different from non-biological stuff. A long trend away from that began when Wohler synthesized urea in the lab in 1828, proving that an organic substance could be manufactured with known laws of chemistry. This consequence might seem antithetical to theism, but the other trumps it: the discovery that life uses coded instructions and manufacturing *processes* to employ those laws and arrange those materials in purposeful ways.

If we humans employ design principles in our nanotechnology, then detect those same principles at work in biological systems, the inference to the best explanation is that design principles were involved in their origin as well. That theme is explicated thoroughly in Steven Meyer's new book *Signature in the Cell*. The conclusion is amplified when our best scientists cannot figure out how "Mother Nature" did it. Maybe they've got the wrong Engineer in mind.

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## Smoking Gun? ...continued from page 1

talking of the laws of nature, and we know that there are such laws, or, in other words, it is a fact that God usually acts in such and such a way; but to suppose that there is any power in the mere laws of nature is absolutely absurd. You may make laws in your household that things are to be done in such and such a way; but unless somebody carries them out laws are nothing... (Spurgeon, 1971, pp. 377–378)

Spurgeon was right on track. The accelerated decay hypothesis asserts that half-lives of radioactive elements changed at certain periods in the history of the earth, including perhaps that decay rates were much larger during the Genesis Flood. As part of the research for the RATE project (RATE is an acronym meaning Radioisotopes and the Age of the Earth), it was shown that enhanced decay rates are produced by assuming a change in a certain number called the coupling constant (see endnote) for the strong nuclear force. For alpha decay, this occurred via enhancement of the tunneling rate for certain values of the coupling constant, while for beta-decay, the change in coupling constant leads to changes in nuclear spin. The change in nuclear spin can change the order of magnitude of the beta-decay rate by several orders of magnitude (Chaffin, 2005).

In single beta-minus-decay, a single neutron changes into proton with the emission of an electron and antineutrino. A double-beta-decay is not two single beta-decays following one another, since the states of the intermediate nuclei are higher in energy than either the parent or daughter nucleus.

Thus, when a double beta-decay is observed to occur, as in the case of  $^{130}\text{Te}$  decaying into Xenon-130 ( $^{130}\text{Xe}$ ), the decay must proceed in one step without involving the intermediate nucleus Iodine-130 ( $^{130}\text{I}$ ) which is higher in energy.

Since 1949, the half-life of  $^{130}\text{Te}$  has been inferred from geological samples by measuring the amount of the decay product  $^{130}\text{Xe}$  (the daughter nucleus) and the parent nucleus  $^{130}\text{Te}$ . However, in recent years a direct measurement of the rate of decay has been performed at the *Neutrino Ettore Majorana Observatory (NEMO)* which is located underground in a tunnel on the French-Italian border. A Russian theoretical physicist, A.S. Barabash, acting as a spokesman for this collaboration, released the value for the half-life of  $^{130}\text{Te}$  at a conference in Columbia, South Carolina in the summer of 2008 (Barabash, 2008). The result is:

$$T_{1/2} = 7.6 \pm 1.5 \text{ (stat)} \pm 0.8 \text{ (syst)} \times 10^{20} \text{ y}$$

Here the inferred statistical errors (stat) as well as systematic error limits (syst) are indicated. At the recent Creation Research Society Conference in Lancaster, SC, I presented the graph shown in Figure 1. It indicates the half-lives calculated for these various samples plotted against conventional geologists' age shown on the uniformitarian time scale. Barabash's recent measurement is also plotted (shown in green on the y-axis). It can be seen that the values for the more recent samples agree with the NEMO collaboration result, but the older samples do not. The older samples show a larger result, differing from recent samples by a statistically significant amount.

Of course, if the accelerated decay hypothesis is correct, the x-axis of the figure would not represent a true age, but rather

represents a relative age. However, the figure seems to indicate that a significant amount of accelerated decay occurred at the onset of the Flood, as represented by the dropping of the graph as one goes from right to left across the figure. In murder mysteries, the detectives are very fortunate if they can catch the crook with the gun in his hand with smoke exiting the barrel. Could this graph be the "smoking gun" indicating accelerated decay?

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## Endnote

A **coupling constant** is a number that multiplies other factors that determine whether a decay process will be likely. There is a coupling constant for the so-called strong interactions — the interactions which hold the nucleus together but have no effect on the electrons that reside outside the nucleus. A possible change in the strong interaction coupling constant seems to be a good hypothesis for explaining accelerated decay without disturbing the electrons and hence the chemistry of life.

—CM—

## The Role of Science ...continued from page 6

as "just science," however, is a witness, only this time to the efficiency of modern science and technology.

Development technology continually creates this problem in traditional cultures. Whether water is found in the desert or children do not die who normally would die, an explanation is demanded. With no explanation, the traditional worldview provides an animist explanation. Or, if the modern development professional reduces the good news to "just science," the explanation is a secular

one. Either way, a witness is made that is not Christian and an invitation to idolatry has been extended. (Myers 1999, p. 207)

Scientific investigation is fascinating because we get to learn more about the world God created. Science is a wonderful gift for which we should be thankful to God, just as we should be for food, clothing, shelter, friends, and family. However, science should never be presented as having all the answers, since that is a characteristic of God, not of science. Any benefits we receive from science are properly attributable to God, since He is ultimately the source of every good gift (James 1:17).

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## All by Design

by Jonathan C. O'Quinn, D.P.M., M.S.

## How Not To Be Seen, Part 1

**T**he mesopelagic zone of the sea extends from a depth of about 200 m to 1000 m, from a twilight zone at more shallow depths approaching absolute darkness at 1000 m. During the day, there is a variable amount of down-welling light in this zone of the sea. Consequently, there is always the chance that animals may be exposed by this light, their silhouettes visible to other predators below them.

Many mesopelagic animals (fishes, cephalopods, and crustaceans) have specialized, bioluminescent, light-emitting organs known as photophores along their ventral surfaces. This system is known as bioluminescent counter-illumination, and it mimics the color, intensity and even the angular distribution of down-welling light, effectively neutralizing an animal's silhouette.

The hatchetfish is one such animal. Photophores cover the entire ventral surface of this fish's body. These light-producing,



tubular structures are lined with a reflective, silvery coating and have many small exit apertures, similar to the light emitting surface of a flashlight. These exit apertures each have a magenta-colored filter that results in blue bioluminescent light matching the color and angular distribution of available daylight. An additional photophore points into each eye of the fish. The fish's control of this bioluminescence is remarkable in that the fish's eyes automatically

adjust the level of emitted bioluminescence to perfectly match the intensity of down-welling light and counter-illuminate the silhouette at any depth and ambient light level.

Let the evolutionist try to explain how this perfect system developed in stages!

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*Figure caption:* Silver hatchetfish (*Argyrops auxilator*). Courtesy of NOAA (National Oceanic and Atmospheric Administration).

—CM—