

# Creation Matters

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## Radiometric Cherry-Picking

by Carl R. Froede Jr., B.S., P.G.

**R**adiometric age-dates have long been held up by naturalists and even some Christians as something to be resolved by young-earth creationists to gain a seat at the table of naturalistic science. This belief is surprising because radiometric dating is based strictly in naturalistic philosophy and not biblical theology. The two different worldviews cannot be combined despite those who advocate some form of accelerated radioactive decay (e.g., Vardiman, et al., 2005).

The subjective nature of radiometric age-dating can always yield acceptable age-dates for rocks, minerals, and fossils because naturalists can adjust or disqualify them at will. This has recently been demonstrated by tests performed on a volcanic meteorite from Mars that gained wide notoriety in the mid-1990s.

### Naturalistic interpretation determines the radiometric age

In 1984, a meteorite (ALH84001) was discovered in Antarctica and was overlooked for 10 years before it was determined to be of Martian origin (Kerr, 1996). While unusual in mineral composition and organic content (i.e., polycyclic aromatic hydrocarbons were found in fractures) it sparked an international controversy because of small deposits of carbonate defined by some naturalists as evidence of extraterrestrial life (Figure 1). Much has been written by naturalists and creationists regarding the astrobiological implications of these carbonate traces and the interested reader can pursue further study through a keyword search at



Figure 1. Martian meteorite ALH84001. For scale, the cube on right side of the image is 0.4 inches (1.0 cm) on a side. The outer surface of the meteorite is partially coated with a fusion crust. The rock interior color is a uniform greenish gray. Photograph courtesy of the NASA Johnson Space Center.

Radiometric dating shows that ALH84001 congealed from magma to become part of the original Martian crust 4.5 billion years ago, just 100 million years after the planet formed, making it the oldest rock known from any planet. Still early in Martian history, a meteorite impact shattered the rock, leaving fractures where minerals — including the putative traces of life — formed perhaps 3.6 billion years ago. Much later, another impact launched the rock into space. Radioactive nuclei created by deep-space radiation show that it wandered there for 16 million years before blazing through Earth's atmosphere and crashing into the Antarctic ice cap. It lay buried for 13,000 years until scientists found it on wind-scoured ice in the Allan Hills region of Antarctica.

According to Wayman (2010), the original radiometric age of ALH84001 was derived from the meteorite's phosphatic minerals. Unfortunately, these minerals can weather in a manner that alters the isotope ratios, producing spurious age estimates.

the Creation-Evolution Literature Database: <http://bryancore.org/celd/index.html>.

This article will focus on the controversy around the radiometric age of ALH84001 and highlight problems that radiometric age-dating creates for those interested in following the biblical framework of Earth history. According to naturalistic scientist Richard Kerr (1996):

Lapen et al. (2010) redated the meteorite using orthopyroxene minerals and the results indicated that the meteorite is 400 million years younger than originally thought. Interestingly, other Martian volcanic meteorites of similar composition (i.e., Shergottites) range from 150 to 570 million

... continued on p. 2

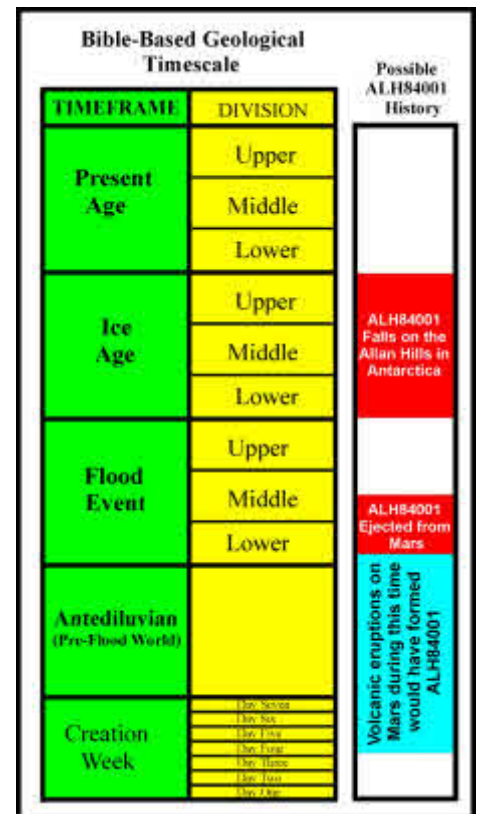


Figure 2. A young-earth creationist geologic column based on biblical history (Froede, 1995, 2007). We can use this geologic column to assign a hypothetical history to the Martian meteorite (ALH84001). It could have formed from Day 4 to near the onset of the Flood. It would have been ejected during impact events during the Flood and would have landed on Earth at some point during the Ice Age timeframe. Not knowing its specific location on the snow-field in the Allan Hills prevents subdividing its time of impact.

years in age – making ALH84001 the oldest Martian rock of this type found on Earth to date.

In their examination of the mineralogy of ALH84001, Lapen and his team (2010) determined that it was derived from the Martian mantle. They believe that the volcanic rock can be linked to long-lived volcanic areas such as Tharsus and Elysium which have been active on Mars for the past 4.0 billion years. However, the real question is not the Martian origin of the rock, but how it came to reside on Earth.

Scientists have invoked a catastrophic event called the heavy bombardment (Appendix I) to explain the rock's journey. During the heavy bombardment, the solar system encountered swarms of impactors that cratered the terrestrial planets, satellites, and even asteroids. Using orthopyroxene minerals, Lapen et al. (2010) arrived at an age of  $4.091 \pm 0.030$  billion years, a time thought to be close to an alleged period of heavy bombardment — between 4.25 and 4.10 billion years ago (Frey, 2008; Lillis et al., 2008).

This extreme radiometric age for this volcanic meteorite is well beyond any acceptable age for application in the Creation-Flood framework. How can young-earth creationists respond to this seemingly scientifically-derived age-date for this meteorite? Do we question the philosophic assumptions of naturalism or examine the

“science” behind radiometric dating?

## How should creationists view the reliability of radiometric dating?

In noting the many claims of secular scientists, creationists need to be ready to address any radiometric age-dates that are clearly unacceptable to the biblical framework of Earth history. This begins with the naturalist claims that Earth is very old based on various forms of radiometric dating. This tool is used to defend secular deep time and to calibrate their geologic timescale.

Needless to say, creationists have long been interested in this topic and many have questioned the results because of the inherent subjectivity in the methods and selective use of the data (Woodmorappe, 1999). Other creationist studies have identified significant inconsistencies and errors. Some of these are listed below (A–G).

- A) Using the Rubidium–Strontium ( $^{87}\text{Rb}$ – $^{87}\text{Sr}$ ) method, Austin (1988, 1992) demonstrated that basaltic rocks from a Pleistocene (less than two million years old) lava flow on top of the Grand Canyon dated older ( $1.34 \pm 0.04$  billion years) than the Precambrian Cardenas Basalt (dated at 1.07 billion years) found deep within the canyon.
- B) In his examination of igneous rocks from the Grand Canyon, Austin (1994) documented several instances where radiometric ages were inconsistent with the naturalistic framework of Earth history. Rocks stratigraphically positioned above others consistently

dated older than the underlying rocks. Austin stated (p. 127):

We must question the assumptions of radiometric dating, and ask whether an alternate explanation is possible for Grand Canyon rocks.

In this same work, Austin documented that different radiometric age-dating methods provide different age-dates **for the same rock** (i.e., isochron discordance). Why do they differ? Austin stated that it is caused by the assumptions used to make the interpretation of great age (1994; p. 129).

- C) Snelling (1995) noted the failure of U-Th-Pb dating method for the Koon-garra uranium deposit in the Northern Territory, Australia, stating that:

Because no geologically meaningful results can be interpreted from the U-Th-Pb data at Koon-garra (three uraninite grains even yield a  $^{232}\text{Th}/^{208}\text{Pb}$  “age” of 0 Ma), serious questions must be asked about the validity of the fundamental/foundational basis of the U-Th-Pb “dating method.” This makes the task of creationists building their model for the geological record much easier, since claims of U-Th-Pb radiometric “dating” having “proven” the claimed great antiquity of the earth, its strata and fossils can be justifiably ignored.

- D) In 1996, Austin seriously challenged

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## When was the heavy bombardment in the inner solar system?

Impact craters on the many planets, satellites, and asteroids within our solar system document a period of heavy bombardment in the past. Determining the specific interval(s) of bombardment has proven elusive to naturalists despite the extensive use of radiometric dating that has been conducted.

For example, asteroid materials that fell to Earth as meteorites yielded dates for the heavy bombardment ranging from 4.1 to 3.4 Ga (McSween, 1999). New dating of rock derived from the crust of Earth's Moon defined the period of cataclysmic bombardment from 3.9 to 3.4 Ga (Cohen et al., 2000). More recent analysis of impact craters across Mars suggests an earlier period of bombardment ranging between 4.25 and 4.10 billion years ago (Frey, 2008; Lillis, Frey, and Manga, 2008).

The period of heavy bombardment continues to expand/shift as a new radiometric study of impact spherules collected around the Apollo 14, 16, and 17 landing sites indicates that the Moon was heavily bombarded as recently as 800 million years ago (Zellner et al., 2009). One has to wonder just how many periods of heavy bombardment have occurred in time past. Apparently radiometric dating can resolve this question for naturalists.

Of course, the answer depends on the dating method(s) and the mineral(s) being dated within the framework of an already accepted model. However, none of this is necessary when defining impact craters, ejecta, meteorites, or any other extraterrestrial debris within the context of the global Flood of Genesis (see Froede and DeYoung, 1996; Froede and Williams, 1999; Froede, 2002, 2009, and references therein).

— C.F.

the Potassium–Argon ( $^{40}\text{K}$ – $^{40}\text{Ar}$ ) dating method. A porphyritic dacite formed in 1986 at the Mount St. Helens lava dome yielded radiometric age-dates ranging from 350,000 ( $\pm 50,000$ ) to 2.8 ( $\pm 600,000$ ) million years. Austin concluded (p. 342):

Argon analyses of the new dacite lava dome at Mount St. Helens raise more questions than answers. The primary assumption upon which K–Ar model-age dating is based assumes zero  $^{40}\text{Ar}$  in the mineral phases of a rock when it solidifies. This assumption has been shown to be faulty.

This dating method has also been challenged by naturalists for submarine pillow basalts from Kilauea Volcano, Hawaii where the subaqueous volcanic rocks believed to be less than a thousand years old dated between 160,000 and 42.9 million years (Dalrymple and Moore, 1968). This finding has serious implications for oceanic crust dated using the potassium-argon method in defense of Plate Tectonic Theory.

- E) Snelling (2000) documented the subjective nature in using the U–Th–Pb dating of zircon grains for igneous rocks found around the world. He stated (iii):

Clearly, the results of U–Th–Pb mineral dating are highly dependent on the investigator's interpretations.

- F) Snelling (2004) documented discordant radiometric age-dates for the Brahma amphibolite found deep within the Grand Canyon. He stated (p. iii):

The radiometric methods, long touted as irrefutably dating the earth's rocks as countless millions of years old, have repeatedly failed to provide reliable and meaningful absolute ages for Grand Canyon rock layers.

- G) Baumgardner (2005) discovered measurable  $^{14}\text{C}$  in diamonds believed by naturalists to be over a billion years in age. He stated (p. 624):

...we note the presence of detectable levels of  $^{14}\text{C}$  in natural diamonds, formed deep within the earth during its early history, hints the age of the planet itself may likewise be constrained by the brief life span of  $^{14}\text{C}$ . We therefore conclude the  $^{14}\text{C}$  data provide noteworthy support for a recent global Flood and a young earth.

With a half life of 5,730 years, radiometric  $^{14}\text{C}$  would be nearly exhausted

in 57,300 years, or ten half lives. Finding  $^{14}\text{C}$  in a specimen whose age is clearly beyond acceptable secular dating limits should raise serious questions. While  $^{14}\text{C}$  contamination can and does occur, finding it in billion-year-old diamonds appears to seriously question the assumptions of this dating method.

## Discussion and conclusion

The Martian meteorite ALH84001 was originally dated by naturalists to 4.5 billion years (Ga). Unfortunately, the minerals that were used to age-date the volcanic rock were purportedly weathered yielding an incorrect age. It was then redated using different minerals to adjust its age to be consistent with a perceived period of heavy bombardment in past history. If cosmological theories change, will the dating change again? It would not be surprising; many terrestrial dates have been shown to have been driven by investigator bias. This is not good science as much as it is an attempt to provide support for the ruling paradigm.

Clearly, naturalistic radiometric age-dating is inconsistent because it yields a variety of dates that can be selected based on expectations of age. For a century, secular natural historians have used this to extract dates most favorable to the prevailing theory. Different minerals and different methods can all alter the final result. Logically, these demonstrated errors add uncertainty to any reported result. Many of the problems have been shown by research by creationists. Clearly, radiometric dates are orders of magnitude too great (or small) for biblical history, yet the inconsistencies also argue against a consistent inconsistency — that a correction for something like accelerated decay in the past can make dates useful for diluvial studies.

Young-earth creationists have applied naturalistic radiometric age-dating methods to various igneous rocks and the results are inconsistent and incorrect even within the naturalistic framework of Earth history. Such work demonstrates that radiometric age-dating is not science as much as it is a means of defending the uniformitarian, geologic column model, both of which are unnecessary for diluvial studies. We do not need to use naturalistic radiometric age-dating methods to define meteorites, minerals, rocks, or fossils within a creationist, geological column model (Figure 2). Rather, field work, logic, and reason are sufficient to assign geologic materials to their respective places within biblical history. It is time to



get out and begin defining the rock record consistent with a creationist geologic column model.

## Acknowledgments


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*CRSQ* = *Creation Research Society Quarterly*


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## Math Matters

by  
Don DeYoung, Ph.D.



## A Math Error in Scripture?

In 1 Kings 7:23 (see also 2 Chronicles 4:2), a large circular vessel is described in the temple complex in Jerusalem, built by King Solomon about 900 B.C. Called the *Sea*, the metal container is described as 10 cubits in diameter and 30 cubits around. For any circle of diameter  $d$  and circumference  $C$  ( $C=\pi d$ ), the ratio  $C/d$  is the constant pi,  $\pi = 3.14$ . However, the  $C$  and  $d$  ratio for Solomon's vessel gives  $C/d = 30/10 = 3$ . Critics therefore claim that scripture gives an incorrect value for  $\pi$ , exactly 3 instead of 3.14, an error of nearly 5 percent (Meritt, n.d.).

There are at least three possible explanations for this apparent discrepancy. *First*, the diameter and circumference values in 1 Kings 7:23 may be rounded off and approx-

imate, a common practice still today. *Second*, the vessel may not have been perfectly circular. If made with a slightly elliptical shape, the scripture numbers would not be

$\pi$

expected to give  $\pi$  exactly. *Third*, the stated diameter may have been an outside measurement, with the circumference measured from inside the container.

Regarding the third possibility, suppose a cubit is 18 inches and that the vessel wall thickness was 3 inches. Then the actual

inside diameter would be  $180 - 6 = 174$  inches, and the inner circumference would be  $30 \times 18 = 540$  inches. The ratio then gives  $C/d = 540/174 = 3.1$ , a value within one percent of the actual value of  $\pi$ . Whatever the case, those who search for errors in scripture are to be pitied. The Bible is the Creator's message to us, and stands far above its critics.

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# 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.

## Darwin Dethroned by Geologist

Gradual evolution seems synonymous with Charles Darwin, but a geologist at New York University disagrees. According to an article on *PhysOrg*,<sup>1</sup> Michael Rampino thinks Patrick Matthew deserves the credit for a different, more realistic view of evolution — a catastrophist view:

“Matthew discovered and clearly stated the idea of natural selection, applied it to the origin of species, and placed it in the context of a geologic record marked by catastrophic mass extinctions followed by relatively rapid adaptations,” says Rampino, whose research on catastrophic events includes studies on volcano eruptions and asteroid impacts. “In light of the recent acceptance of the importance of catastrophic mass extinctions in the history of life, it may be time to reconsider the evolutionary views of Patrick Matthew as much more in line with present ideas regarding biological evolution than the Darwin view.”

By emphasizing catastrophic events, Rampino is also discrediting one of Darwin's best friends — Charles Lyell, the uniformitarian geologist. Rampino thinks Patrick Matthew was far ahead of his time, but escaped the notice of the scientific community of his day.

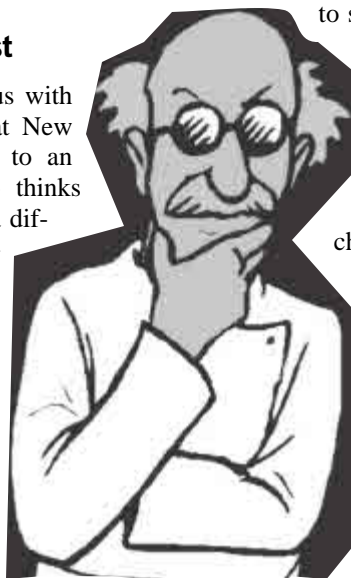
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## Oldest Shrimp Looks Shrimpy

*PhysOrg*<sup>1</sup> shows a picture of a fossil shrimp, found in Oklahoma, next to a live shrimp. They look identical, yet the article claims the fossil is 360 million years old — the oldest known decapod (a group containing shrimp, crabs, and lobsters). The fossil shrimp even has fine preservation of the muscles of its tail, “extremely rare in fossils.”

The article claims it was preserved so well because it landed on the seafloor in acidic water with low oxygen, and then was “buried rapidly.” As to what this find signifies, “The fossil is a very important step in unraveling the evolution of decapods,” one of the scientists from Kent State said. “However, more finds are necessary.”

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## Venus Flytrap Uses Chemical “Brain”

There's a lowly plant that has a botanical version of muscles and a brain — the Venus flytrap. It has muscle in its ability to snap its traps shut faster than a bug can escape. And it has a brain in its ability to distinguish between debris and edible prey. More about its chemical brain has come to light through the efforts of Japanese researchers, reported *LiveScience*.<sup>1</sup>

The researchers isolated the chemicals that tell the traps to shut by a process of elimination: collecting all the chemicals in the plant and then trying them out, one by one, to see which ones triggered the action. They found that two potions are responsible.

The new findings suggest that a **Venus flytrap's chemical signals work much like those in the human brain.** Like **neurotransmitters**, the plant chemicals accumulate until they affect the plants' cell membranes, creating **electrical imbalances that cells use to communicate.** In the brain, these so-called “action potentials” are the language of neurons. In a Venus flytrap, they're **the signal that spells dinnertime** for the plant and slow digestion for its hapless prey.

Earlier experiments, the article said, showed that the traps' ability to snap shut in less than a second works because “they snap from convex to concave the same way that a contact lens can flip inside out.”

1. Pappas, S. (2010, November 8). How Venus Flytraps avoid snapping up lousy meals. *LiveScience*. Retrieved November 11, 2010, from [www.livescience.com/animals/venus-flytraps-chemical-signals-101108.html](http://www.livescience.com/animals/venus-flytraps-chemical-signals-101108.html)

## Cells Can Be Transformed

An astonishing feat has been performed in a Canadian lab: scientists turned human skin cells into blood cells. Bypassing the need for stem cells, the technique provides hope for a supply of blood from a person's own skin.

Jeremy Hsu at *LiveScience*<sup>1</sup> calls it a “modern miracle.” The technique avoids “the ethical concerns concerning embryonic stem cells and the immune system complications that might reject foreign biological material.” Reprogrammed adult stem cells were tried, but they are difficult to make in quantity and cannot be transplanted. Bypassing the stem cell stage, the team at McMaster University found they can create larger quantities of blood cells. They also found that the technique works with skin from young and old individuals.

Does this open the door for creating other types of cells by this method? “We'll now go on to work on developing other types of human cell types from skin, as we already have encouraging evidence,” said Mike Bhatia, a lead study author and scientific director of the Stem Cell and Cancer Research Institute at the University. *ScienceDaily*<sup>2</sup> added that this method offers hope also for cancer patients, who in the future may no longer need to find bone marrow transplants that are a perfect match.

Cynthia Dunbar at the National Institutes of Health said,

“Bhatia’s approach detours around the pluripotent stem cell stage and thus avoids many safety issues, increases efficiency, and also has the major benefit of producing adult-type I blood cells instead of fetal blood cells, a major advantage compared to the thus-far disappointing attempts to produce blood cells from human ESCs [embryonic stem cells] or iPSCs [induced pluripotent stem cells].”

In another cell story, *ScienceDaily*<sup>3</sup> reported that researchers at Johns Hopkins found “a protein mechanism that coordinates and regulates the dynamics of shape change necessary for division of a single cell into two daughter cells.” A protein designated 14-3-3 “sits at an **intersection** where it **integrates** converging **signals** from within the cell and **cues cell shape change** and, ultimately, the splitting that allows for normal and abnormal cell growth, such as in tumors.” This controller protein influences the actions of molecular motors: “myosin II, a complex of **motor proteins** that **monitors** and **smoothes out the shape changes** to **ensure accurate division**.”

This very welcoming news about blood cells from skin has the potential of being called a breakthrough of the year (or decade). It is important not only for the tremendous health benefits it can offer, but for showing that ethically-clouded practices like the use of human embryos are not needed or justified. Even more amazing are the insights this technique will provide into the workings of the cell — insights that required no help from Darwin — that promise even more health benefits in coming years. People who care about the value of human life will also welcome this finding that may take some of the pressure off the stem cell gold rush.

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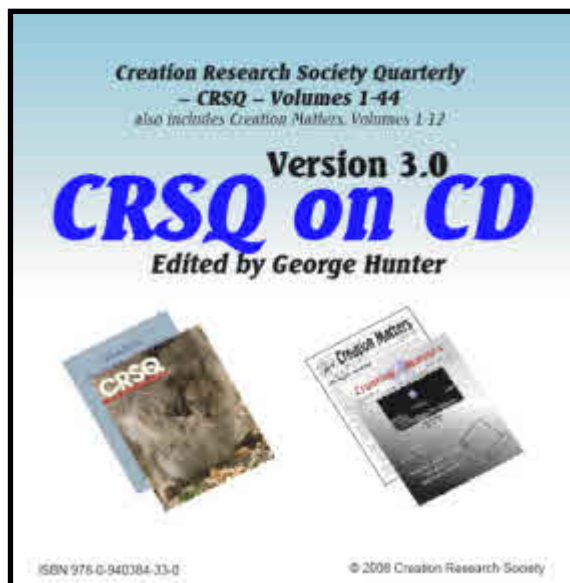
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## Purpose-Driven Science Ignores Darwin

While some Darwinists feel that the Intelligent Design (ID) movement is a major threat to science, many scientists unconnected to ID are acting as if it provides for them a more fruitful approach to research. Several recent examples illustrated what might be called a silent “de facto” intelligent design movement.

1. Purposeful proteins: *PhysOrg*<sup>1</sup> reported work at the RIKEN Advanced Science Institute in Japan with the eye-catching title, “**Searching for purpose in proteins**.” It’s not that the team is invoking a deity or searching for ultimate meaning in their work; they just want to understand what some enigmatic proteins do. Going on a kind of “fishing expedition” with fishing tackle known as bioprobes, they have demonstrated the ability to watch how proteins bind, and deduce their role in biological processes. The case reported in the article concerns tumor progression in cancer, but the methodology assumes that enigmatic proteins have a purpose and are not just cellular junk.
2. Imitating insects: Meanwhile, inventors at Penn State, Harvard and the Naval Research Laboratory have their eyes on water striders and butterflies.<sup>2</sup> They have developed “an engineered thin film that **mimics the natural abilities of water striding insects** to walk on the surface of water, and for **butterflies to shed water** from their wings.” The natural

... continued on p. 8



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## ...without excuse!

by Timothy R. Stout

# THE TESTIMONY OF THE HUMAN FOOT

Recently I saw a brief news clip on television showing an athlete “barefoot running.” He claimed that barefoot running was easier on a properly trained person’s body than running with shoes, particularly if the shoes have thick cushions in the heel. Furthermore, the harder the surface the more suitable barefoot running is. Concrete is best of all.

Knee injuries are common among runners who wear shoes during their workouts. Many of these runners can resume their running if they simply start going barefoot. The human foot is superbly designed for running.

Current research is confirming much of what the runner said. In particular, significant work in this area is being done by Daniel Lieberman, Ph.D., who manages the Skeletal Biology Laboratory at Harvard University. His findings concerning barefoot running were recently featured in a cover article of the esteemed British journal *Nature* (Lieberman et al., 2010). He has a faculty web page at Harvard that discusses the same material (Liebermann et al., n.d.). *Nature* has made a video of his results and the video is currently available on YouTube (Lieberman, 2010). All three sources discuss the information we will only summarize here.

When a trained person runs barefoot, he typically first lands on the ball (toes) of his foot, and then settles on to his heel. Lastly, he pushes off from the toes. The ground contact sequence is toe—heel (flat)—toe. In this case the ball of the foot and the foot’s arch act together as an efficient shock absorber. Figure 1) shows the vertical ground force presented by the foot over time. Notice how smoothly and gently the force curve rises on its upward slope as weight is transferred onto the foot.

By contrast, when a runner wears a typical, modern training shoe with a thick, well-padded heel, he will invariably land heel first. When this happens, the natural cushioning inherent in the design of the foot is lost. Thick heel cushions do *not* help. A very sharp impact transient takes place that jars the entire body. The impact transient is represented by the spike added to the leading edge of the curve. Notice the steepness of the rising edge of the spike. This steepness indicates a large, sudden change of force. It

is currently suspected, but not yet rigorously proven, that this impact transient is what causes many running injuries when runners wear shoes.

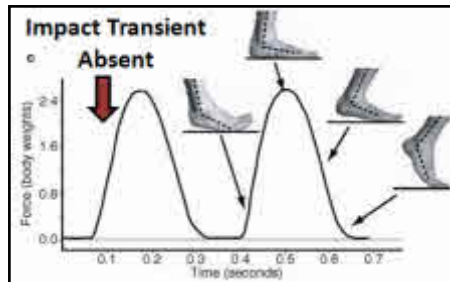


Figure 1. A chart showing vertical downward force versus time for a barefoot runner. The curve has no transient spike. From Lieberman, et al. (n.d.), used under a Creative Commons License.

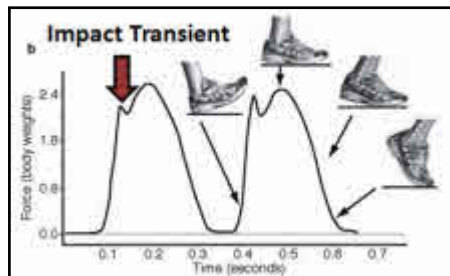


Figure 2. A chart showing vertical downward force versus time for a shod runner. The curve has a significant transient spike. From Lieberman, et al. (n.d.), used under a Creative Commons License.



Figure 3. Cast of a chimpanzee foot from a display at the Museum of Man, San Diego, CA. This foot would be effective for gripping and walking on tree branches, but is not effective as a shock absorber during running. Image courtesy of Wikimedia Commons under a Creative Commons License.



Figure 4. A human foot. This foot is an efficient shock absorber during running, but is not effective for gripping tree branches. Image courtesy of Wikimedia Commons under a Creative Commons License.

Although Dr. Lieberman attributes the superb design of the foot to evolution, I believe he has missed the point. Let’s compare a chimpanzee’s foot (Figure 3) to a human foot (Figure 4). Notice the fundamental differences in the design of a chimpanzee foot and a human foot. One is perfectly designed for walking on tree branches while the other is perfectly designed for running on the ground. Consider this (Anonymous, n.d.):

The human foot and ankle is a strong and complex mechanical structure containing more than 26 bones, 33 joints (20 of which are actively articulated), and more than a hundred muscles, tendons, and ligaments .

All of these components, plus various bones, muscles, tendons, and ligaments in the rest of the body, need to change simultaneously and in a coordinated manner in order to convert a foot suitable for tree-walking to one suitable for ground running.

The problem facing the evolutionist is that there is neither a straight-forward path nor a plausible mechanism to bring about such changes. God designed each to work well for the purpose for which He intended it to be used. We should marvel at His wisdom in how well He did His work and give Him the glory for the perfection we observe. We are without excuse for doing less than this.

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material has what is known as “superhydrophobic properties” and is an **“active area of research”** because producing artificial materials with those properties would have many applications: “The nanofilm produced by this technique, called oblique angle deposition, provides a microscale smooth surface for the transport of small water droplets without pumps or optical waves and with minimal deformation for **self-powered microfluidic devices for medicine and for microassembly.**” Inherent in biomimicry is the belief that the thing being imitated is well designed.

3. **Biophysics on birds:** Researchers in Australia were curious why ostriches are such good runners compared to humans, so they compared their leg physics with a computer analysis. *PhysOrg*<sup>3</sup> summarized the resulting paper by saying it’s spring in their step. Ostriches store so much elastic energy in their tendons, they can run as if on pogo sticks. The *BBC News*<sup>4</sup> includes a video showing the difference in gait efficiency.

Only the third team even mentioned evolution. A leader of the team from the University of Western Australia hoped that “the findings could provide insight for biologists looking at the evolution of bipedalism, both in humans and in dinosaurs,” but clearly the focus of the story was on the biophysics, not the phylogeny.

Join the silent ID revolution. You don’t have to use the maligned phrase, or declare your allegiance to the Discovery Institute. Just stay focused on the design in your subject, and gradually say less and less about Charlie D. After enough good design science, fewer people will even miss him.

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## Early Man in Trouble

New findings (or claims) are throwing long-held beliefs about human ancestors into disarray. Early people were smarter, and traveled farther, than paleoanthropologists had previously thought.

One report summarized by *PhysOrg*<sup>1</sup> says, “A highly skillful and delicate method of sharpening and retouching stone artifacts by prehistoric people appears to have been developed at least 75,000 years ago, more than 50,000 years earlier than

previously thought, according to a new study led by the University of Colorado at Boulder.” The technique is called pressure flaking. It allows finer control over the sharpness of stone tools. “Pressure flaking adds to the repertoire of technological advances during the Still Bay (period) and helps define it as a time when novel ideas were rapidly introduced,” wrote researchers studying the stones in a South Africa cave. “This flexible approach to technology may have conferred an advantage to the groups of *Homo sapiens* who migrated out of Africa about 60,000 years ago.”

That story about migrating out of Africa, though, took a falsifying hit. *ScienceDaily*<sup>2</sup> reported, “An international team of researchers, including a physical anthropology professor at Washington University in St. Louis, has discovered **well-dated human fossils in southern China** that markedly **change anthropologists perceptions of the emergence of modern humans in the eastern Old World.**”

Maybe it was out of Asia instead of Africa. The *BBC News*<sup>3</sup> has a photo of the cave in China where the bones were found. *National Geographic News*<sup>4</sup> said that these bones, 60,000 years older than previous finds, present “a strong challenge” to the out-of-Africa theory and the “traditional early-human time line.”

Speaking of changing directions in migration, another story in *ScienceDaily*<sup>5</sup> claims that fossil evidence is showing anthropoid apes colonized Africa 39 million years ago rather than evolving there.

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## The Blue and Red States of OOL

When it comes to the origin of life (OOL), some scientists color it blue; some color it red. *NewScientist*<sup>1</sup> votes for the blue state. “LIFE may really have been created by a spark, one that came as a bolt from the deep blue.” Inspired by visions sent from Ryuhei Nakamura at the University of Tokyo, reporter Jon Evans looked deep into the deep blue ocean and envisioned electrical currents down in dark, hydrothermal vents. Evans wrote,

The team thinks that the chimney walls catalyse the conversion of sulphides into elemental sulphur as the hot vent fluid travels through them. The reaction releases electrons which pass through the wall to the salt water outside, where they convert **dissolved oxygen** into hydrogen peroxide. Nakamura postulates that **this electrical current could provide a source of energy for bacteria.**





Unfortunately for this notion, even Nick Lane, who makes OOL sound simple, points out that there was hardly any oxygen at the time. Nakamura quickly substituted carbon dioxide. “If this was the case, then the CO<sub>2</sub> would have been converted directly into carbon-based molecules, **making complex organic molecules** on the early Earth’s sea floors — **perhaps the chemical precursors of life.**”

Others find a red state in the deep of space. *Space.com*<sup>2</sup> opined, “**Icy Red Objects** at Solar System’s Edge **May Point to Life’s Building Blocks.**” Indeed, “The reddish hue of many objects in our solar system’s frigid outer reaches may be evidence of **complex organic molecules, perhaps even the building blocks of life**, new research **suggests.**” John Cooper (NASA) quickly backpedaled, “We’re **not saying that life is produced in the Kuiper Belt,**” just that “the **basic chemistry** may start there, as **could also happen** in similar Kuiper Belt environments elsewhere in the universe, and that is a **natural path** which **could** lead toward the **chemical evolution of life.**”

Cooking by radiation could produce delicious morsels like formaldehyde, acetylene, and ethane. Cooper hoped for more: “In **some** cases you **may** be able to produce the **components of life** — not just organic materials, but **biological molecules** such as amino acids.” In this, he failed to clarify that amino acids have no meaning without ribosomes and a genetic code.

The second article tried to be patriotic. “About 1,000 Kuiper Belt objects have been directly imaged so far, and these bodies appear to be a wide range of colors, from **red to blue to white**, researchers said.”

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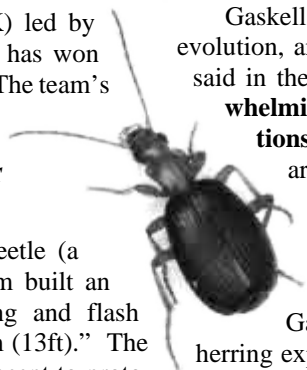
## Design Science Scores

A team of scientists at Leeds University (UK) led by well-known design scientist Andy McIntosh has won an award for innovative design inspired by nature. “The team’s work has received the outstanding contribution to innovation and technology title at the Times Higher Education awards in London,” reported the *BBC News*.<sup>1</sup>

By studying and imitating the Bombardier beetle (a long-standing creationist icon), McIntosh and team built an environmentally-friendly sprayer that uses heating and flash evaporation “to propel a variety of liquids up to 4m (13ft).” The team worked on this project for five years from concept to prototype. The device, it was reported,

...may lead to improvements in the automotive and health industries.... it could inspire new types of nebulisers, needle-free injections, fire extinguishers and powerful fuel injection systems.

To what does McIntosh owe his award-winning success? “Nobody had **studied the beetle from a physics and engineering perspective** as we did, and we didn’t appreciate **how much we would learn from it.**”



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## Best-Qualified Candidate Expelled Over Views on Evolution, Design

For daring to question evolution, an astronomer who was the best-qualified candidate to become director of a new University of Kentucky (UK) observatory lost out. As reported on *Courier-Journal.com*,<sup>1</sup>

**No one denies** that astronomer **Martin Gaskell** was the **leading candidate** for the founding director of a new observatory at the University of Kentucky in 2007 — **until his writings on evolution came to light.**

Martin Gaskell is suing the University, claiming that his views on evolution, religion and intelligent design cost him the position.

“UK, in a legal brief, acknowledged that **concerns over Gaskell’s views on evolution played a role in the decision** to chose [sic] another candidate,” the article said. The strategy seems now to paint him in a bad light:

But it argued that this was a valid scientific concern, and that there were other factors, including a poor review from a previous supervisor and UK faculty views that he was a poor listener.

Gaskell’s lawsuit, however, claims that “UK officials repeatedly referred to his religion in their discussions and e-mails” as the real reason. One astronomy professor, for instance,

...**feared embarrassing headlines** about Kentucky’s flagship university hiring a ‘creationist’ in a state already home to the controversial Creation Museum.

Three biology professors and a geology professor also hammered that theme, that hiring Gaskell would be a “disaster” and an embarrassment to the university, even though Gaskell disagrees with the young-earth position of the Creation Museum. Some of his views, which resemble those of old-earth astronomer Hugh Ross, are published on his personal webpage.<sup>2</sup>

Gaskell’s academic opponents worried about his denial of evolution, and his support for intelligent design. “UK biologists said in their e-mails that **evidence for evolution was so overwhelming** that Gaskell had **no scientific basis to raise questions about it.**” They also pointed to the Dover case to argue that intelligent design is not science, though that regional ruling did not apply to the state of Kentucky. Since concern over his views on evolution and intelligent design appears to constitute the bulk of their objections over his hiring, their concerns about Gaskell’s social skills appears to be a distraction, a red herring expressed after the lawsuit was filed.

According to the article, “a federal judge says Gaskell has a **right to a jury trial over his allegation** that he lost the job **because he is a Christian and ‘potentially evangelical.’**” The case is being represented by the American Center for Law and Justice.<sup>3</sup> Gaskell’s academic page is posted on the University of Texas website,<sup>4</sup> where it is also noted that he is also a classical composer in his spare time.

The pattern is the same everywhere. If you have watched Ben Stein’s documentary *Expelled*, you’ve seen how the evolutionists

refuse to debate the evidence, but instead retreat to character assassination, association, glittering generalities, fear-mongering, and sidestepping and subversion to keep out anyone who dares to defy the “party line.”

Gaskell lost a prestigious job, even though he was the best qualified, because of worry that he could be “potentially evangelical” — an unlawful prior restraint on free speech. Would the opposite situation have concerned his colleagues, if a staunch atheist were to be judged “potentially evangelical” about his theological position? (Of course not; such a candidate would probably be honored by academia and the media.)

Even the “potential” exposure was enough to expel this man, without any evidence he had *actually* tried to influence anyone at the university or observatory about his views. This can only mean one thing: the Darwin Party, whose hardcore stance on secular evolution represents a small fraction of American opinion, is running scared. They cannot afford to give a platform to anyone who *potentially* might expose to the public the existence of alternative views. They will destroy careers to keep ideological purity in their ranks.

This tactic cannot work forever, because it is self-refuting; it violates academia’s own ostensible commitment to the Enlightenment ideals of reason and tolerance. If Darwinists’ beliefs are so fragile that they worry exposure to alternative viewpoints is intolerable, then their beliefs are not worth believing. And if they think that the public must be protected from such exposure, they disparage the intelligence of their fellow *Homo sapiens*. No scientist should fear openness about the evidence. Bring it on.

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## Mummified Trees Found in Arctic

Like Narnian children finding a zoo of lifeless stone statues in the White Witch’s wintery realm, scientists have come across frozen trees, leaves and seedpods deep in the Canadian arctic. “The dry, frigid site is now surrounded by glaciers and is **completely treeless**,” said *National Geographic News*.<sup>1</sup> What deep magic left this mummified forest “**exquisitely preserved**”? The scientific wizards say it was a landslide, up to 10 million years ago.

Other frozen forests have been known, but this one on Ellesmere Island is the farthest north found so far. *ScienceDaily*<sup>2</sup> said the find is the tip of the iceberg, so to speak. Researchers at Ohio State “also suspect that **many more mummified forests could emerge** across North America as Arctic ice continues to melt,” *ScienceDaily* said. “As the **wood is exposed and begins to rot**, it could release **significant amounts of methane and carbon dioxide** into the atmosphere — and actually boost global warming.”

While that reporter was fascinated by whatever “clues to future

warming impact” might be gained, perhaps more astonishing is how wood that could rot today remained frozen for 2–8 million years — the age range claimed in the article. For him to worry about global warming, he must be talking about a lot of wood: “**Walking through the area, they’re everywhere**,” said Joel Barker, an environmental scientist at Ohio State University and leader of study of the mummified forest. “**You’d have trouble not tripping over them**.” The article described the forest as similar to those covering a wide area:

The **mummified forest** seems to resemble modern forests growing **hundreds of miles to the south**, suggesting the forest must have grown during a time when the Arctic was much warmer.

The *National Geographic* story led off with a photo of a cross-section of a log that looks like it would burn in a fireplace.

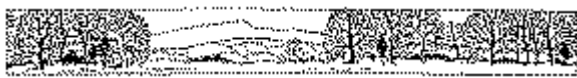
The **mummified trees** were likely **preserved so long** because they were **buried quickly** by landslides and thus protected from air and water, which hastens decomposition.

But can it protect them for millions of years? How many landslides must be invoked to cover enough rotting mummified trees to raise concerns about greenhouse gases? Even so, no living material lasts forever in its original state, unless replaced by minerals, as in petrification and fossilization. This is real wood.

“When we started **pulling leaves out of the soil**, that was **surreal**, to **know that it’s millions of years old** and that **you can hold it in your hand**,” one of the researchers announced to the American Geophysical Union last week. A colleague familiar with fossil forests called this find “**extraordinary**,” speaking of “**Finding wood that is millions of years old in such good condition — almost as if you just picked it up from the forest floor....**”

The millions of years exist only in their imagination. So tenacious is their faith in millions/billions of years, that they cannot see the trees for the forest, or the forest for the trees — the dogma is so thick that you can’t see through it unless you’re outside it. These trees are not that old. Neither are the dinosaur bones with blood vessels intact. Why do they tell such tales?

They must keep the tale going, because they live in a fantasy-land, the world of Blarneya, where it is always winter and never Christmas. They like it that way, because they serve the White Beard, who rules Blarneya with an iron fist. The Chronicles of Blarneya stretch backward and forward billions of years; they teach the children, turning their minds to stone. They fear global warming because it will portend the day the lyin’ will be revealed.



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—CM—

## Matters of Fact...

by Jean K. Lightner, DVM, MS

# Immune System

*Editor's note: You may submit your question to Dr. Jean Lightner at [jean@creationresearch.org](mailto:jean@creationresearch.org). It will not be possible to provide an answer for each question, but she will choose those which have a broad appeal and lend themselves to relatively short answers.*

**Q** There was no need for an immune system before the Fall because life was perfect and there was no disease to fight off, right?

**A** There is an underlying assumption in this question. It assumes that the sole purpose of the immune system is to seek and destroy pathogens. However, the immune system was designed to detect and respond appropriately to numerous molecules, both foreign and self-derived. It has important roles in both health and disease. Therefore, it would seem the immune system would have played an important role even in a perfect pre-Fall world.

### Communication to establish relationships with symbiotic microbes

For proper development and function of the digestive tract, it must be inhabited by certain beneficial microbes. Primarily consisting of bacteria, these microbes that invade shortly after birth and inhabit the body are called microbiota. The immune system is necessary to establish and maintain a healthy microbiotic community.

The immune system monitors the microbiota in the intestine and influences the number of various species of microbes. Through a chemical dialog between host and microbe, the immune response can be modulated to allow for a large population of microbiota, generally an order of magnitude greater than the number of cells in the human body.

### Role of intestinal microbiota

The contributions of microbiota to the health of the host are quite extensive. For the digestive tract itself these microbes are important for:

- 1) proper development of the digestive tract after birth
- 2) breaking down certain indigestible components of the diet
- 3) providing essential vitamins and amino acids
- 4) breaking down certain toxins that could harm us
- 5) metabolism of bile to a form that

can be reabsorbed and reused

6) influencing the absorption and distribution of fat

7) keeping in check potential enteric pathogens

The importance of microbiota extends even beyond the digestive tract. Much of what has been learned in this regard has come from comparing germ-free rodents with their normal counterparts. Microbiota have been discovered to also be important in influencing:

- 1) the development of a healthy immune system that can respond appropriately to pathogens
- 2) pain perception in the skin
- 3) the development of brain responses to stress
- 4) cognitive function.

Given the importance of microbiota to health, and due to the complexity of their relationship with us, it seems logical that we were originally created to have this type of relationship. Since the immune system is necessary to establish and maintain this relationship, the immune system would also have been necessary originally.

### Keeping the guests in the guest area

Though intestinal microbiota may influence many different systems in the body, primarily through complex chemical dialog with the host, they cannot be wandering aimlessly in the body without creating a problem. The immune system is also involved in eliminating any stragglers that might leave the digestive tract and enter the body through a break in the intestinal lining.

If the number of intruding microbes is relatively small, the immune system may accomplish this task without any obvious signs of disease in the host. This may well have been important in the pre-Fall world. If so, only after the Fall would there have been situations where bacterial invasions were massive enough, or handled inadequately by the host, such that obvious signs of disease could be present.

### Clean up of defective or obsolete body cells

When cells are no longer needed in the body, or have become dangerous, they often undergo programmed cell death, also known

as apoptosis. The immune system plays a role. Programmed cell death can occur as part of normal development. For example, the fingers and toes develop in a fetus by elimination of the tissue between them via apoptosis. The macrophages (literally, big eaters) of the immune system can then swallow up the remains of the cells. At other times, when a body cell becomes defective, such as through infection by a virus or by becoming cancerous, other components of the immune system can identify the deviant cell and initiate apoptosis. Again remnants of the cell will eventually be swallowed up by a macrophage.

One type of response the immune system can mount is a cell-mediated response. Although this largely consists of lymphocytes, other cells are involved as well. When these cells have done their job they need to be properly eliminated. So, ironically, the immune system is also responsible for cleaning up after itself.

### Conclusions

The immune system is active in both health and disease. When it is working efficiently, signs of disease never appear. Some diseases we observe today are because of pathogens which have developed since the Fall. At other times diseases can result from otherwise harmless bacteria that the immune system did not effectively handle.

While much remains to be learned about our immune system, it is a testimony to the awesome God who created us and continues to give us life and breath (Acts 17:24, 25). Innumerable times we have been spared from a variety of diseases because God continues to hold things together, including our immune system (Colossians 1:16, 17). It adds depth to the meaning of Exodus 15:26: *I am Yahweh, who heals you.*

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## All by Design

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

# Perfect Timing

**T**here are countless examples of fantastic physiological properties utilized by living creatures for their survival.

Evolutionary theory teaches that these specializations developed by chance through random genetic mutations over millions of years. Nothing could be further from the truth.

The eastern barred bandicoot is a medium-sized, warm-blooded (endothermic) Australian marsupial that lives in Victoria and Tasmania. As with other marsupials, newborn bandicoots spend the early weeks of life in their mothers' pouches, nursing and growing. Interestingly, these animals are born without the ability to regulate their body temperature. In essence, they are born cold-blooded, or ectothermic, just like reptiles and amphibians.

Studies measuring the metabolic rates of bandicoots at various temperatures and ages, and with and without the influence of



*Eastern barred bandicoot (Perameles gunnii), Poimena Reserve, Austin's Ferry, Tasmania, Australia. Photo provided courtesy of Wikimedia Commons.*

norepinephrine, have been performed to identify when these marsupials become able to regulate their own body temperature and switch from ectothermy to endothermy. Researchers have found that these bandicoots

start becoming able to regulate their body temperature by seven weeks and are completely endothermic by eight weeks. Incidentally, the bandicoots' development of endothermy coincides precisely with their development of fur, which is fully developed by eight weeks, just in time for the young bandicoots to leave their mothers' pouches.

Evolution has no explanation for how an animal's metabolism can develop from ectothermy to endothermy, except to say, "it evolved." Is it not much wiser to simply acknowledge the mighty hand of our Creator when we see it?

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