

Creation Matters

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Population III Stars and the Big Bang Model

Where Humans, Canines, and Science Meet

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CSI/FACT '07 Dinosaur Digs

What is "Pascal's Wager"?



Math Matters

by
Don DeYoung, Ph.D.



What Is “Pascal’s Wager”?

Blaise Pascal (1623-1662) was a brilliant French philosopher who was a pioneer in many mathematical and scientific fields. His accomplishments were many. At age 18, Pascal built one of the first calculating machines. A computer programming language, *Pascal*, was so named in his honor. He also founded probability theory and used it to show the futility of gambling, which was prominent in his day. Pascal discovered several laws involving pressure, and a unit of pressure measurement is now called the *pascal*.

At age 32 Pascal experienced a dramatic conversion to Christianity. He was influenced by a narrow escape in a carriage accident, the faithful testimony of a younger sister, and a particular sermon which captured his mind and heart. Pascal went on to write and witness for his Creator.

Pascal applied probability theory to arguments for the reasonability of Christian faith. This led to his famous “wager” which evaluates the consequence of “betting on” whether or not God exists. Pascal concluded that you are much further ahead if you place trust in God. If God exists, you then gain an eternal reward in heaven. If God does not exist, you have lost nothing. The accompanying table compares Pascal’s consequences of belief in God, or a rejection of Him. As Pascal reasoned, “If you win, you win everything; if you lose, you lose nothing. Do not hesitate, then; gamble on His existence.”

“Pascal’s wager” is a novel approach to Christianity, but it also is clearly deficient. Christian faith includes trust and certainty in God, not mere guesswork or probability considerations.

		Does God exist?	
		Yes	No
Do you believe in God?	Yes	Eternal Gain	No Loss
	No	Eternal Loss	No Gain

A diagram of “Pascal’s wager” on the existence of God, showing the consequences of belief and disbelief.

Pascal’s writings include the posthumous work *Pensées* (literally, “Thoughts,” 1670). Pascal believed there is sufficient evidence in nature for all who seek belief in the Creator. This agrees with Romans 1:19-20, which states that God’s creative work is clearly seen all around us.

What Are Creationists Thinking about ...?

As new scientific discoveries make the headlines, have you ever wondered how your fellow creationists are reacting? Have you ever thought of a “crazy” new idea about origins and wanted to bounce it off another creationist?

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If you prefer a web-based forum for discussion, CRSforum is now available to members at www.CRSforum.org.

For more information, send an e-mail message to Glen Wolfrom at contact@creationresearch.org.
Participation is limited to CRS members in good standing.

Cover Photo

Coronet

Image Credit: NASA/CXC/JPL-Caltech/CfA

According to the caption provided by NASA, the Corona Australis region (containing, at its heart, the Coronet cluster) is one of the nearest and most active regions of ongoing star formation.

Population III Stars and the Big Bang Model

by
Steve Miller

The Big Bang model requires the existence of Population III stars. What are Population III stars? According to the physics of the Big Bang, the only elements that the Big Bang could have produced are hydrogen, helium, and possibly a trace of lithium, but no other metals. Anything atomically heavier than hydrogen and helium is considered to be a metal, including, for example, oxygen. (Note: In this context, astronomers use the term metal differently; not the way the term is used in chemistry). Therefore, the first stars of the universe could have been made only from hydrogen and helium, and these stars are known as Population III stars.

The stars we observe throughout the universe today all contain metals, such as Population I stars, which are metal-rich, and Population II stars that are metal-poor. Population I stars, containing approximately 2-3% metals, are found in the spiral arms or in the disks of galaxies. Population II stars, containing only 0.1% metal content in their light spectra, are observed around a galaxy halo, in globular clusters, and in the central bulge of a galaxy.

The missing stars

These designations became apparent from the stars' locations in the galaxy, space motion, and metal makeup. Stars produce the heavier elements by using successive stages of nuclear synthesis within their cores. According to evolutionary theory of chemical enrichment, or how stars produce the heavier elements, those elements are spewed back into space through eruptions such as supernova explosions. In this way, later generations of stars are contaminated with heavier elements. Thus, according to evolutionary theory, the later that a star forms, the more metals that it ought to contain.

This means that if the Big Bang model were true, somewhere in the universe we should see stars without the spectral lines produced by metals. Moreover, because Population III stars are predecessors of all the observed Population I and II stars, vast numbers of them should have been identified long ago. But no such stars have ever been discovered; even the light from the

most distant galaxies have metal lines in their spectra. Population III stars are essential for the Big Bang model, yet they have not been observed. Therefore, the Big Bang is not a plausible scientific model if something the theory requires is nonexistent.

Mainstream scientists who promote the Big Bang model try to refute the situation with the missing Population III stars with a "heads I win, tails you lose" argument. If evolutionary astronomers were to find a single Population III star, they would claim that proves the model, even though they need massive numbers of Population III stars to account for all that we see. Moreover, the fact that no one has found a Population III star is explained by their arguing that Population III stars must have been exceptionally massive and therefore burned up quickly. With this "must have been" explanation, the Big Bang model is confirmed in the minds of evolutionists. So how can they lose? The evidence will be made to fit the theory whatever the evidence may be.

While evolutionary astronomers will admit that the Population III stars are missing, they engage in *special pleading* to deal with the fact that Population III stars have never been found. How convenient: all the Population III stars are so massive that they burn up and disappear before even one can be detected. In other words, how can anyone say Population III stars are super massive if no one has seen one to know? Big Bang proponents need to be reminded that science is based on testable evidence, not hypothetical conjecture! If no evidence exists for Population III stars, postulating any reason for their non-existence is unscientific.

A just-so story

Their reasoning is contradictory to what we see in the universe, because over 90% of observable stars are LOW MASS! Do astronomers have a "testable mechanism" for why the universe would exhibit this sudden change? In other words, we have another just-so story: the alleged cosmic explosion makes all the first stars "super massive" to the extent that they burn up quickly (therefore no one can find any of them), and then the universe gives rise to

small, dwarf type stars, such as our sun, which comprise the vast majority of all stars.

In addition, when we gaze across the universe, looking back in time close to when the Big Bang supposedly occurred, the light which we see exhibits metal spectra! Here, we should at least find some light that would be free of metal spectra; but alas, metals were apparently present at the beginning of time. And when all else fails, we are now being told that Population II stars are polluted Population III stars, but what testable, provable mechanism can be found to show how this would happen?

Unfortunately, the proponents of the Big Bang accept by faith the essential requirements of their theory in spite of the observations, which clearly do not fit the model.

Steve Miller, with a B.A. in Philosophy and Apologetics, is an amateur astronomer and former president of the Calumet Astronomical Society. He is a frequent speaker at creation astronomy seminars.

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Speaking of Science

Commentaries on recent news from science

Editor's note: All 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. Unless otherwise noted, emphasis is added in all quotes.

Nanofabrication Imitates Shells, Butterflies

A new plastic “strong as steel” has been manufactured according to the specs in seashells, reported *PhysOrg*.¹ According to the report,

By mimicking a brick-and-mortar molecular structure found in seashells, University of Michigan researchers created a composite plastic that’s as strong as steel but lighter and transparent.

Butterflies have inspired the development of new materials with “exceptional and unexpected optical properties.”² *EurekAlert* reported that the shimmering lights from butterfly wings and peacock feathers do optical tricks.

Their brightly colored patterns are due to structural variations at the hundreds of nanometers level, which cause them to absorb or reflect light.

By manufacturing materials with similar optical properties on the nanometer scale, researchers at Northwestern University are making “very high quality optical materials with interesting properties.”

Neither article mentioned evolution nor owed any debt to evolutionary theory.

¹Anonymous. 2007. New plastic is strong as steel, transparent. *PhysOrg.com* (4 October 2007). www.physorg.com/news110727530.html

²Anonymous. 2007. Nanofabrication method paves way for new optical devices. *EurekAlert* (5 October 2007). www.eurekalert.org/pub_releases/2007-10/nu-nmp100507.php

Searching for Natural Selection in a Wildflower

Evening snow (*Linanthus*) is an amazing little wildflower that adorns desert areas of southern California. Its blossoms open in the evening, spreading fragrance across a harsh landscape. Two varieties have been noticed — one with white flowers, and one with blue flowers.

Scientists noticed that the white ones sometimes grow on one side of a ravine, and the blue ones on the other; in other places, the two varieties grow in a blue-white mosaic. Is this pattern due to genetic drift (i.e., chance), or to natural selection?

Elisabeth Pennisi wrote about this in *Science*.¹ Her opening line might open some eyes about the difficulty of deciding a question this simple: “**Sixty years ago**, studies of these patterns provided **key support for a powerful evolutionary theory**. Now, two **evolutionary biologists** have found that **the theory doesn’t hold in this species**.”



Two researchers decided to settle the debate with a long-term field study. Their decision was that natural selection was the winner, at least a little:

“In the seed-transplant studies, each color flower **typically** did best **on its own turf**, indicating that **selection played a role**.”

There may have been some environmental influences at work, in other words, that tended to make one color predominate in one environment and the other in different environments. But is anyone certain?

“The study shows the unimportance of drift in *Linanthus*,” says evolutionary biologist Masatoshi Nei of Pennsylvania State University in State College. “In this sense, [the] **finding shakes the ground of the shifting balance theory**.” But **he is cautious about making generalizations**, given that **other studies suggest otherwise**: “The **relative importance of selection and drift depends on the genes and populations studied**.”

So in a 13-year study, these scientists could only point to a little bit of natural selection that *might* have played a role in the color pattern of two varieties within the same species? And they expect us to believe that science has proved that humans have bacteria ancestors due to this wondrous mechanism of natural selection?

¹Pennisi, E. 2007. Natural selection, not chance, paints the desert landscape,” *Science* 318:376. www.sciencemag.org/cgi/content/full/318/5849/376

Bacteria and Plants Know Network Tech

An article on *ScienceDaily* says, “plants have their own chat systems that they can use to warn each other.”¹

Many herbal plants such as strawberry, clover, reed and ground elder **naturally form networks**. Individual plants **remain connected with each other** for a certain period of time by means of runners. These connections **enable the plants to share information** with each other via internal channels.

So what do they have to chat about? Danger. Their “early warning system” enables them when hazards lurk about: “Once warned, the intact plants strengthen their chemical and mechanical resistance so that they are less attractive for advancing caterpillars,” for instance.

Even smaller critters may have networks: in fact, possibly even a power grid. Phillip Ball wrote for *Nature*,² “Bacteria may be wiring up the soil.” Yes, believe it or not, “Bacteria can sprout webs of **electrical wiring** that transform the soil into a **geological battery**, a team of researchers claims.” Some bacteria extrude “nanowires” that shunt electrons produced during metabolic reactions. A geochemist working at the Venter Institute believes “The



earth beneath our feet might act as a gigantic circuit built by microbes to power their metabolic systems.” If so, this “new aspect of microbiology” is a little too fantastic for some to accept, but one admitted, “If this idea is right, it is really quite remarkable.”

You don’t need to talk to your plants. They’re too busy text-messaging each other. Maybe human network engineers could learn a little technology from our humbler life forms.

¹Anonymous. 2007. Clever plants ‘chat’ over their own network. *ScienceDaily* (27 September 2007).
www.sciencedaily.com/releases/2007/09/070925095313.htm

²Ball, P. 2007. Bacteria may be wiring up the soil. *Nature* 449:388.

Darwin Saves Junk, Makes Treasure Out of It

The *Stupid Evolution Quote of the Week* award goes to a press release from the Howard Hughes Medical Institute,¹ which began by personifying evolution² as a tinkerer in its own junkyard:

Evolution has mastered the art of turning trash to treasure — though, for scientists, witnessing the transformation can require a bit of patience. In new genetic research, scientists have traced the **170-million-year evolution** of a piece of “junk” DNA to its **modern incarnation as an important regulator** of energy balance in mammals.

The **discovery**, they said, suggests that regions of the genome **formerly presumed to be a genetic junkyard** may actually be **a hardware superstore**, providing components that **can be used to evolve new genes or new species**.

The article went on to speak of genes 170 to 200 million years old that evolution used as raw material for its innovations — even though the sequences were conserved (i.e., unevolved) all that time. “We thought we had found the **tip of the iceberg of an evolutionary process that started around 200 million years ago**,” said Marcelo Rubinstein of HHMI, “and we got really fascinated by the idea of pulling up the entire iceberg from the depths.” Presumably hardware superstores now carry iceberg lifts.

If Darwinist researchers are having a lot of fun, far be it from us to stop them. Make believe is a fun game.

¹Anonymous. 2007. Evolution transforms ‘junk’ DNA into genetic machinery. *HHMI News* (5 October 2007).
www.hhmi.org/news/rubinstein20071004.html

²Author’s note: Darwin himself began the tradition of personifying evolution in his famous quote from *The Origin of Species*: “It may be said that **natural selection** is daily and hourly **scrutinizing**, throughout the world, the slightest variations; **rejecting** those that are bad, **preserving** or **adding up** all that are good; **silently and insensibly working**, whenever and wherever opportunity offers.”

Don’t Just Sit There — Evolve

Have you ever wondered why your body doesn’t evolve? After all, it is kind of like a population of trillions of organisms. Why shouldn’t it follow the rules of natural selection? Philip Ball asked this question recently.¹ “Evolution is **usually thought of** as something that happens to whole organisms,” he teased. “But there’s no fundamental reason why, for multicelled organisms,



it shouldn’t happen within a single organism, too.”

So why haven’t you evolved into something else by now? The answer is as fascinating as it is unexpected — your body works overtime to keep you from evolving:

It’s not easy making a human. Getting from a fertilized egg to a full-grown adult involves **a near-miracle of orchestration**, with replicating cells acquiring specialized functions in just the right places at the right times. So you’d think that, having done the job once, our bodies would replace cells when required by the simplest means possible.

Oddly, they don’t. Our tissues don’t renew themselves by mere copying, with old skin cells dividing into new skin cells and so forth. Instead, they keep repeating the laborious process of starting each cell from scratch. Now scientists **think** they know why: it could be **nature’s way of making sure that we don’t evolve as we grow older**.

And it’s a good thing the body prevents you from evolving. Ball explains that mutants would have a selective advantage to hijack your other cells without doing any work:

...mutant cells that don’t do their specialized job so well tend to replicate more quickly than non-mutants, and so gain a competitive advantage, freeloading off the others. In such a case, **our wonderfully wrought** bodies could grind to a halt.

My, what would Charles Darwin think of that? This is too funny. Not only did the pro-evolution writer Philip Ball knock off another Darwinian concept in the pro-Darwin *Nature*, he praised our “wonderfully wrought bodies” with their “near-miracle of orchestration” in language that would warm the heart of any believer in intelligent design. My, what would Phillip Johnson think of that?

¹Ball, P. 2007. Why a person doesn’t evolve in one lifetime. *News@Nature* (21 September 2007). [available by subscription]
www.nature.com/news/2007/070917/full/070917-11.html

Did Evolution Hardwire Our Instincts?

Evolutionary psychologists at UC Santa Barbara¹ are claiming that evolution hard-wired our brains to pay attention to people and animals more than to inanimate threats. As reported by *Live Science*,²

The researchers say the finding supports the idea that **natural selection molded mechanisms into our ancestors’ brains**

that were specialized for paying attention to humans and other animals. These **adaptive traits** were then passed on to us. “We’re **assuming that natural selection takes a long time to build anything anew** and that’s why this is **left over from our past**,” said study team member Leda Cosmides, an evolutionary psychologist at the University of California, Santa Barbara (UCSB) ...

“Having this **pop-out attentional bias** for animals is sort of a **vestigial** behavior,” said study team member Joshua New of Yale University’s Perception and Cognition Lab.

Strange that evolution did not create a fear of falling coconuts

... continued on p. 9



CSI/FACT '07 Dinosaur Digs

by
T.P. Beh

Once again, the individuals participating in the Creation Studies Institute's (CSI) dinosaur digs at Glendive, Montana went away "full," not only having unearthed dozens of dino bones, listened to nightly creation seminars by CSI Executive Director Tom DeRosa, and eaten delicious food, but also with fond memories of warm fellowship shared with like-minded folks digging together in the dirt. "It never fails," said Miriam Kline, wife of Otis Kline, who heads up FACT (Foundation Advancing Creation Truth), "by the end of the week on every one of these digs we become like family." Indeed, whether one has a Ph.D. or is still in elementary school, there's something both humbling and inspiring about searching on your hands and knees for the remains of some of God's most incredible creatures.

This year, CSI, which has been holding these unique outings with FACT for the last three years, held two week-long digs between July 23 and August 3, and for the second year in a row it was my privilege to help supervise the diggers. The first week we had a "raucous" group of 15 folks of all ages from 80 to 10 years old. The second week we hosted a bit more sedate, though no less enthusiastic, assemblage of four middle-agers, with bookends — 83-year-old Bill, and Ben, an 11-year-old pistol. Despite some record-high temperatures (112°F the first day), both teams found lots of bones and went home with many treasured memories.

Picking up immediately where last year's group left off, it wasn't long until Anthony, one of the four teenagers present in Group One, uncovered our first fossil — a beautiful *T. rex* tooth, the first of three found that week. A few days later, it was Caleb, our 10-year-old, who was responsible for discovering the largest bone of the dig, which we believe to be a nearly complete Triceratops scapula (shoulder blade). The Week One folks also found a large number of toe bones, rib sections, vertebrae, as well as some Triceratops teeth and a second scapula.

While still 15–20 degrees above normal, the temperatures faced by Group Two were a bit less foreboding. Eleven-year-old Ben turned out to be a regular fossil magnet, finding the first and many of the other bones excavated during the second week. Members



of this group found two intriguing claws, one possibly belonging to a juvenile *T. rex*, the other perhaps to a raptor, as well as some interesting potential horn bones and large sections of Triceratops frill. The last few hours of the last day after lunch witnessed a flurry of activity, as they suddenly found a trove of fossils, including a sizeable leg bone, much to everyone's satisfaction.

Needless to say, expressions of awe, wonder and delight were not uncommon during both dig weeks in Montana. From seniors, like 83-yr.-old Bill, to kids, like 10-yr.-old Caleb, dinosaurs seem to have that effect on people. They hold a fascination that cuts across generational, ecclesiastical, and cultural lines — a fact long exploited by evolutionists to attract people, especially youngsters, to their deadly, faith-killing ideology. As Tom DeRosa shared at one of the evening lessons, when God questioned Job about "behemoth, which I made along with you" (Job 40:15), the Lord added, "He is the first (or chief) of the ways of God." Tom indicated that the behemoth

(probably a sauropod dinosaur and representing the dinosaur "kind") showcased the Creator's glory, power, and might in Job's day like no other creature. And dinosaurs still do. It's exciting to be living in a day when Christian groups like FACT and CSI are endeavoring to use them to turn people to Christ, instead of away from Him.

Tom DeRosa and Otis Kline are dedicated to making these kinds of opportunities increasingly available to the Christian community, as well as teaching the truths of creation and exposing the lies of evolution. Tom and CSI are in the process of expanding their operations and museum in Ft. Lauderdale, FL, all while becoming independent of Coral Ridge Ministries, their former sponsors. Otis and FACT are currently endeavoring to complete the 20,000-square-foot Glendive Dinosaur & Fossil Museum, which promises to be a premier creation facility for fossil displays. For more information on CSI and FACT, visit:

www.creationstudies.org
www.creationtruth.org

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Where Humans, Canines, and Science Meet

by
Theodore J. Siek, Ph.D.

An intricate partnership of humans and dogs in a scientific endeavor is the subject of this article. The elements of our true story include (1) a very practical problem related to human industrial activity, (2) the application of the scientific method, and (3) the utilization of Labrador retrievers as the most effective solution to the problem. The conceptual implications of this story relative to creation and evolution are briefly discussed.

The remarkable ability of dogs to detect substances by odor, and not just very strong odors, is common knowledge. Two familiar examples of dogs performing a service to humans is their use in searching for hidden explosives, and detection of illicit drugs in luggage at airports, in vehicles at border crossings, and in cargo arriving at US ports of entry. A little known, novel use of dogs' scent-detection abilities, the finding of oil pipeline leaks, has been commercially developed by Ronald H. Allen, President and CEO of American Detection Technologies (AMDETECH; <http://www.amdetch.biz/>).

Labrador retrievers were chosen for the task of detecting leaks. This particular breed, as well other breeds such as bloodhounds, can detect the odor (scent) of ultra-trace quantities of mercaptan-based volatile organics which have been infused into the pipeline at an upstream pump station. To prepare the dogs for this task, months of training by handlers were required. Simulated testing, then field testing, and finally buried-pipeline testing occurred before the dogs were up to the task. Mr. Allen, who was interviewed for this article, emphasized that the handlers do not actually "train" the dogs to detect odors, but instead discover and select those individual dogs whose phenomenal olfactory abilities coincide with this vital human need.

The oil pipelines for which this technology was first developed are buried on the open range in Alberta and Manitoba, Canada. To date, the dogs have found at least 75 leaks, saving millions of dollars of potential economic losses and, at the same time, preventing contamination of vast wilderness areas with crude oil. The dogs'



known success rate to date for finding leaks is 100% — every mission to find a pipeline leak was successful.

Scientific and engineering efforts began in 1991 to develop a test fluid which could be injected upstream into the oil pipeline, and which could be detected near the location of the leak either instrumentally or by dogs. Most of the pipelines are buried 4 to 12 feet below the surface of the ground, and can also run under bodies of water such as streams and lakes. Requirements of the odorous concoction were that it be non-toxic in low concentrations, soluble in crude oil, and insoluble in water. It also had to have sufficient vapor pressure to diffuse and percolate through the soil to the surface where it would be detected. Too high a vapor pressure would result in the odorous substances diffusing too far too fast, making it more difficult to pin-point the spot above a leak. Requirements for dogs, as the agents of detection, included scent sensitivity to parts per billion (ppb) or less, and ruggedness and stamina for working all day in rough terrain in bitter cold weather.

Man-made instruments were tried as detection devices. Catalytic combustion detectors or gas "sniffers," such as those used by natural gas companies to locate hydrogen sulfide gas, were not sufficiently robust or sensitive. A gas chromatograph, modeled after a second generation prototype

of the one used in the Mars space probe, was also tested, but it was not portable enough, and was sensitive to only 0.2 parts per million (ppm). An infrared (IR) spectrophotometer was likewise tested and found to be unsatisfactory.

Now we turn to man's best friend. Not all breeds of dogs possess the requisite ultra-sensitive olfactory system. Even within the Labrador retriever breed, known for its super-sensitive odor-detection abilities, only an average of two of 50 dogs initially entering a training group make the "cut" as being capable of the real thing — finding oil pipeline leaks. And the training itself requires great patience. The drive and energy of the dog, allowing it to perform all-day searches over frozen,

rough, undulating ground, are as essential as is its odor-detecting ability. Dogs are taught to follow the "scent cone" to the spot directly above the location of the leak and to focus by digging at this point. Interestingly, when a dog is successful in a particular task, the reward is not food, but is instead playtime with the human trainer/companion.

To guard against the dogs' being distracted by other odors, training involves exposure to other industrial chemicals used in the oil industry. The animals are ultimately trained to react only to a product called Tekscent™, which is a special blend of mercaptans made by AMDETECH. A mercaptan is a sulfhydryl-containing hydrocarbon. Butyl mercaptan, for example, is one of the odor components of skunk oil. The odor of the Tekscent concoction or cocktail, once introduced into the head of the pipeline, dissolves in the crude oil. When a leak occurs, mercaptans, present in the oil which escapes into the ground surrounding the pipe, migrate to the ground surface. Ultimately, only a minute fraction of the added odorant reaches a dog's nose.

How do the quantitative detection thresholds of scientific analytical instruments, such as gas chromatographs, compare to that of these magnificently-endowed animals? Gas chromatographs with specialized detectors will detect 0.1 ppm of the Tekscent mix. Researchers had reported

that certain dogs were capable of detecting specific chemicals as low as 1 part per thousand trillion. Six animals trained by AMDETECH were able to detect 1×10^{-18} molar of the key mercaptan component used in the odor cocktail. Thus, the natural ability of dogs is approximately a billion times more sensitive than man-made detection devices.

It is true that electron-detecting and molecular ion-detecting analytical instruments can detect parts per trillion of volatile organics. But such instruments perform optimally in stable, indoor, air-conditioned, humidity-controlled, power-stabilized environments and do not romp across the frozen tundra of Canada, seeking out esoteric molecules as their analytes. To further emphasize the superiority of dogs over man-made instruments, some dogs even found leaks while riding in a boat on a lake. The odorant molecules (getting down to a precious few) rising through the ground, through the water, and into the boat, were “sensed” by these marvelously created dogs.

To whom are we to show our appreciation for this exquisite cooperation between man and animal? There are those who are compelled to explain everything in terms of evolution. For example, Dobzhansky (1982) stated,

Evolution comprises all stages of development of the universe: the cosmic, biological and human or cultural developments. Attempts to restrict the concept of evolution to biology are gratuitous.

First we ask this: how could dogs, through mutations and natural selection, have developed an incomprehensibly sensitive olfactory organ for detecting specific, synthetic, man-made substances, not to mention the drive, energy, and intelligence to meet this particular human need? Individual dogs, belonging to such breeds as Labrador retriever and bloodhound, have olfactory systems which are up to 100 million times more sensitive than are those of humans, and can differentiate odors and recall specific odors from the olfactory memory system far better than do humans.

Secondly, an olfactory system which is sensitive to below parts per thousand trillion of *man-made* substances transfers no obvious survival advantage to dogs, who existed before humans, according to evolutionary scenarios. True, an acute sense of smell would aid canines in finding food, but not all breeds have this extremely high sensitivity and, furthermore, individual dogs within the more sensitive breeds vary in their olfactory capability. It is one thing for a dog to be able to detect the pungent, highly concentrated components of skunk oil, but quite another to be capable of detecting ultra-low concentrations of a blend of unique, man-made chemicals, a situation which just happens to coincide with the economic and environmental interests of mankind.

There is an obvious relationship between humans and domestic dogs, and a reason why the dog has been called “man’s best friend.” That the three elements of this

story — man, dog, and science — would coincide in this highly specialized way is so improbable as to be flat out impossible by evolutionary scenarios. Evolutionists, as usual, are barking up the wrong tree.

Our Creator has given us many blessings, including dogs for pets and for assistance in solving technical and physical problems. The unique ability of Labrador retrievers is just one of the many reminders of God’s creative genius. This special relationship between humans and dogs underscores the fact that God cares immensely for us, and He has purposefully provided exquisite ways for us to overcome many kinds of difficulties.

Acknowledgment

I wish to thank Ronald Allen, President/CEO of American Detection Technologies, maker of Tekscent™, for his cooperation and review of a preliminary manuscript.

Reference

Dobzhansky, T. 1982. *Genetics and the Origin of Species*. Columbia University Press, New York, p. 409.

Theodore J. Siek has a Ph. D. in biochemistry and has been a CRS member since 1970. He has published extensively in *Journal of Forensic Sciences* and the *Journal of Analytical Toxicology*, and has contributed chapters to three books in analytical toxicology. He is currently Director of Analytical Bio-Chemistries, a forensic and clinical toxicology laboratory in Pennsylvania.

Membership Matters

by Glen Wolfrom, Ph.D.

Summer, Fall, Winter, Spring

For most of the past 43 years, issue numbers 1 through 4 of the *CRS Quarterly* have been labeled June, September, December, and March, respectively. However, you’ve probably noticed that the actual publication dates could vary by a month or two from the dates on the covers.

Beginning with the current volume (44), the four issues have, respectively, been renamed Summer, Fall, Winter, and Spring. Despite the apparent allusion to a certain princess,** the editors believe that the new naming convention will more accurately reflect the journal’s publication schedule.

Speaking of the *Quarterly*, the price of the *CRSQ on CD* was recently reduced, for members, from \$100 to \$75. If you had purchased a previous version, you are entitled to the upgrade price. Look on page 13 of your new resource catalog, or visit the CRS Books online store (www.crsbooks.org). This is an excellent opportunity to avail yourself of this excellent resource. And remember, postage and handling for this item is free.

**Princess Summer-Fall-Winter-Spring made regular appearances on the *Howdy Doody Show* in the 1950’s.

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Speaking of Science
...continued from page 5

or poison mushrooms. Evolution also must have taught us that bear cubs and tiger cubs are cute, even when the mother is snarling a few yards away. Maybe, in a few million years, evolution will finally get it right that electrical outlets are dangerous (if any people remain that survive electrocution). Maybe then our brains will have gotten it straight that we shouldn't step in front of speeding vehicles, and that most spiders are harmless and cute. Long before then, the UCSB scientists will have comfortably retired with no fear of falsification.

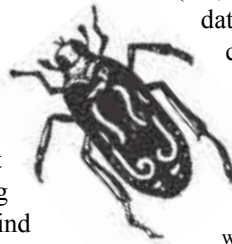
Isn't evolutionary psychology wonderful? It can explain anything. All you need is a good imagination and some funding. Let's try some intelligently-designed shame on the Darwinian myth makers to see if they evolve any sense.

¹New, J., L. Cosmides, and J. Tooby. 2007. Category-specific attention for animals reflects ancestral priorities, not expertise. *PNAS* 104:16598-16603.

²Bryner, J. 2007. Modern humans retain caveman's survival instincts. *Live Science* (24 September 2007).
www.livescience.com/health/070924_ancestors_eyes.html

Early Beetle Was Armed

According to an article in the *Journal of Chemical Ecology*,¹ a beetle preserved in amber, dated at 100 million years old, was caught in the act of using chemical warfare. "Soldier beetles" capable of this kind of advanced defense system were not thought to have evolved till



60 million years later. As reported by *Live Science*,²

The discovery of a **bug that roamed with the dinosaurs** has shown that **insects were equipped** with chemical weapons **much earlier than thought**...

...the beetle fired an acidic repellent at the attacker — providing researchers with a **frozen glimpse of a 100 million-year-old battle for survival**.

What's even more remarkable, he says, is that **this finding pushes back the known existence of this type of beetle by about 60 million years**, making it the earliest fossil record of chemical weaponry in animals...

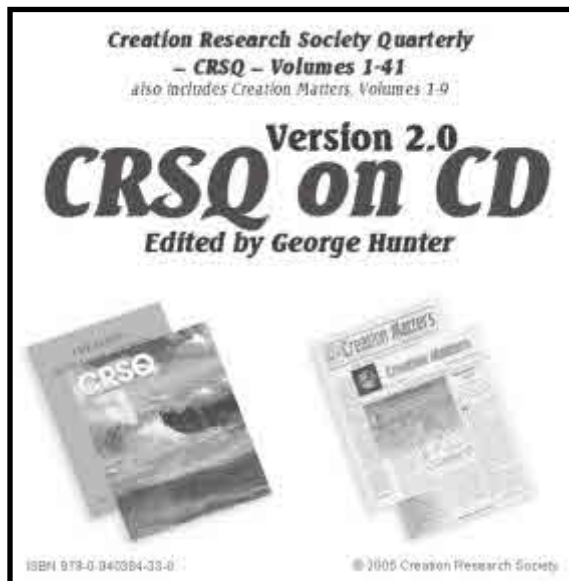
...the researchers concluded that the insect was most likely a member of an extinct soldier beetle species which was an **ancestor to modern soldier beetles that pack similar kinds of ammunition**...

"That this type of defense has been **preserved through 100 million years of evolution** is **evidence** that it works pretty well."

These quotes satisfy the prize criteria by: (1) attributing complex structures to evolution without explaining how they evolved (i.e., telling a just-so story), and (2) holding to evolutionary dating schemes even though the claim pushes the origin of the complex structure further back in time.

¹Poinar, G.O., C. J. Marshall, and R. Buckley. 2007. One hundred million years of chemical warfare by insects. *J. of Chemical Ecology* 33:1663-1669.

²Nguyen, T.C. 2007. Bug warfare discovered in dinosaur era. *Live Science* (04 September 2007).
www.livescience.com/animals/070904_ancient_battle.html



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Dark Matter Sheds Light on Invisible Stars: Come Again?

Can one unknown shed light on another unknown? That's what some UK astronomers seem to be saying. Before describing their model, consider this conundrum with which they ended a story in the *BBC News*:¹

"We don't know what the dark matter is, we don't know what the first stars are. If we bring these two problems together, when we know more about one, then we can say something about the other."



But if they don't know what either is, and they see something, how could they know they are seeing it, and how could it say it says something about something else they don't see?

This strange state of affairs comes not from observations, but from computer models. Liang Gao and Tom Theuns from Durham University told the *BBC News* that their models allow them to predict the properties of a substance that they freely admitted, "they cannot say what it is." Yet they were confident enough of their model, that once they had selected certain starting conditions that seemed reasonable to them, they claimed they could propose that the first stars must have formed in long, thin filaments. No such filaments have been found. But now, they believe they know what to look for.

OK, let's play a similar game in a parallel universe, just for fun. I posit that there are fairies who use pixie dust. I don't have any clues what fairies are, or what they look like, but according to the common mythology, they use pixie dust, of which I also have no clues. I made up a computer game where I gave pixie dust certain properties of granularity, temperature, and viscosity. If I find invisible dust with these properties, it should be able to tell me something about fairies.

Gentlemen, come back to the science lab when you have some observations. What? You need funding first? All right, all right. Here's some imaginary money.

¹Seward, L. 2007. Dark matter clues in oldest stars. *BBC News* (14 September 2007). <http://news.bbc.co.uk/2/hi/science/nature/6993870.stm>

New World Record for Winged Migration

The *BBC News* reports that a female bar-tailed godwit flew 11,500 km (almost 7200 mi) nonstop from Alaska to New Zealand.¹ The journey took about a week. Observers at Massey University used electronic tags to catalog the bird's flight.

This distance is nearly double what ornithologists used to consider an "extremely long" flight. This makes the godwits the new champions of avian migration.

"Unlike seabirds, which feed and rest on their long journeys or swifts which feed in



flight, the godwits make their long journeys without feeding or drinking."

Even more amazing, some of the young follow weeks later without adult guidance. Then, come January and February, the birds will fly back, completing their annual victory lap around the world.

Animals are never-ending sources of amazement and wonder. Thank goodness the article spared us an evolutionary fable.

¹Griggs, K. 2007. Godwit makes huge Pacific flight. *BBC News* (11 September 2007). <http://news.bbc.co.uk/2/hi/science/nature/6988720.stm>

Can Humans Use Evolution?

Evolution is being used. A press release from UW-Madison was titled, "**Using evolution, UW team creates a template for many new therapeutic agents.**"¹ Exactly how does one *use* evolution? The release continued,

By **guiding an enzyme down a new evolutionary pathway**, a team of University of Wisconsin-Madison researchers has **created** a new form of an enzyme capable of producing a range of potential new therapeutic agents with anticancer and antibiotic properties.

We must keep up the heat on evolutionists till they become too embarrassed to say such things. You cannot "use" evolution. The moment you use it, you are doing intelligent design. Evolution has no purpose, no aim, no guidance, no goal, and no reward — not even survival. In Darwin's universe, extinction happens and is just as dispassionate an outcome as survival. If you think survival is somehow good, that's your soul speaking.

The moment a human does the selecting, guiding, or rewarding, evolution stops and intelligent design begins. Evolution, as described by Darwin, is not just change. It is a particular *kind* of change: undirected, dispassionate, purposeless, blind. Darwin and his disciples believe that an evolutionary process could have produced all the beauty and variety of today's highly-adapted life forms. Whether it could or not, Darwin certainly would deny that anyone "used" evolution. Darwin fought against any suggestion by compromising theologians of his day (even his close friend Asa Gray) that God *used* the evolutionary process to create life.

Such stories do nothing but obfuscate. Evolution has nothing to do with it. These scientists had a goal, and purposely selected enzymes with the properties they desired. Darwin team, the referee just blew the whistle. The penalty for your foul is to yield those two points to the ID team. The title now reads, "Using selection criteria by intelligent design, UW team discovers a template for many new therapeutic agents." Much better; play ball. Whoops; we just remembered the Darwin team has no goal. Game over by forfeit.

¹Devitt, T. 2007. Using evolution, UW team creates a template for many new therapeutic agents. *University of Wisconsin-Madison News* (10 September 2007). <http://www.news.wisc.edu/14094>



Potatoes: Brain Food for Evolutionary Health

A claim that eating starchy foods, like potatoes, made men out of monkeys made it all the way to the *BBC News*.¹ “Man’s ability to digest starchy foods like the potato may explain our success on the planet, genetic work suggests,” the subtitle read. Not only that, “these extra calories may have been crucial for feeding the larger brains of humans, **speculate** the University of California Santa Cruz authors” of a paper in *Nature Genetics*.²

It was reported that this benefit, of course, arose after our primitive ancestors mastered fire and cooking. “We roast tubers, and we eat French fries and baked potatoes,” the article quoted one coauthor. “When you cook, you can afford to eat less overall, because the food is easier to digest.”

The paper did not speculate on the evolution of the couch potato. One meat eater had a different view. The *BBC News* report ended:

Professor John Dupré, a professor of philosophy of science at Exeter University in the UK, **urged caution** when interpreting the findings.

He said it was **impossible to conclude** that the introduction of starchy foods into the diet lay behind the emergence of larger brains in humans.

Lots of things differ between ourselves and our closest relatives and apart from the **difficulty of establishing** the relative places in the **evolutionary sequence** of any of these, the **assumption** that there is **any one fundamental** to such change is **dubious**.

He said the finding does have value in teaching us more about the plasticity of the genome. Despite this admission, he seemed to mash the potato hypothesis.

News@Nature (website article no longer available) took a less philosophical approach. Showing a picture of a boy spitting, it began its coverage, “Spit might have helped human evolution by enabling our ancestors to harvest more energy from starch than their primate cousins.” Further down in the article, under “Evolution of Spit,” the article claimed, “The ability to digest starch may have had the added benefit of cutting down on diarrhoea — still a major cause of death in children.” Then it quoted Nate Dominy (UC Santa Cruz) explaining, “It might pay to start digesting things a bit earlier in the process to get what you can before it’s shot out of your body.”

So *Nature* was shooting from both ends, apparently. The article praised such research as “a great example of **what can be learned about our past via evolutionary genomics**.” *ScienceDaily*³ reported this story with similar salivation for its potential to explain human evolution.

This is the level of foolishness that evolutionary thought has smuggled into science. The article even uses a suggestive Haeckel drawing of human evolution. If double dribble is a foul committed by babies with no control at either end of the alimentary canal, the evolutionists here are committing double drivell.

The world is in the grip of a stupid myth pretending to be scientific. The new experimental method now consists of trying



out new twists on the plot. How about a little empiricism? Feed French fries to a chimp and see if he starts philosophizing or composing symphonies. Notice that this was not from some podunk college professor, but from the world’s leading journal company, and one of the world’s leading news agencies. O grievous folly. The Darwinists are now getting into the habit of supersizing their nonsense meal deals.

¹Anonymous. 2007. Starch ‘fuel of human evolution.’ *BBC News* (9 September 2007). <http://news.bbc.co.uk/2/hi/health/6983330.stm>

²Perry, G.H., N.J. Dominy, K.G. Claw, et al. 2007. Diet and the evolution of human amylase gene copy number variation. *Nature Genetics* 39:1256–1260.

³Anonymous. 2007. Extra gene copies were enough to make early humans’ mouths water. *ScienceDaily* (14 September 2007). www.sciencedaily.com/releases/2007/09/070909184006.htm

Walking Upright Was a Birth Defect

What’s so big about walking upright? A single birth defect in a human ancestor 21 million years ago could have made it all possible, according to Dr. Aaron Filler (Cedars Sinai Medical Center), a specialist in the spine.

As reported in *EurekaAlert*,¹ he proposes that in the “hominiform hominoid” *Morotopithecus*, a sibling was born with its horizontal septum transposed behind the lumbar region of the spine. This would have made its normal knuckle-walking gait inefficient. The child must have stood upright for relief.

“Any mammal with this **set of changes** would only be comfortable standing upright,” he said. “I would envision **this malformed young hominiform** – the **first true ancestral human** – as **standing upright from a young age while its siblings walked around on all fours**.”

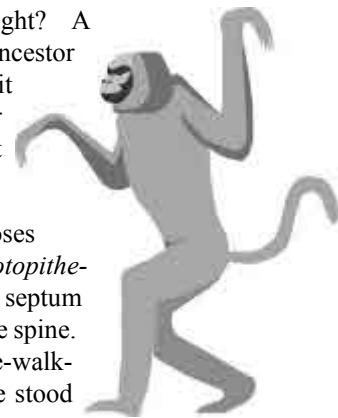
According to the article, this idea “greatly demotes the importance of the bipedalism of *Australopithecus* species such as Lucy,” because walking upright was already old hat by then. In fact, the septum pattern found in his assumed upright-walking hominoids is as old as some invertebrates. Filler seems to be proposing upright posture not for any particular functional reason, but as a mistake. “From an embryological point of view,” he remarked, “**what took place is literally breathtaking**.”

So the Ugly Duckling of an early hominoid family found a sweetheart with the same birth defect and the two lived happily ever after, having lots of children that became medical doctors and philosophers. He’s right; for a story devoid of sense or evidence, this one is literally breathtaking.

¹Anonymous. 2007. New findings solve human origins mystery. *EurekaAlert* (9 October 2007). www.eurekaalert.org/pub_releases/2007-10/plos-nfs100907.php

Make Your Face Sparkle with Diatoms

Human engineers may join forces with cellular architects to produce the next generation of paints, cosmetics and holo-



grams, reported *ScienceDaily*.¹ Scientists are finding ways to harness the rapid growth of diatoms.

Manufacturing consumer products with these properties currently requires energy-intensive, high-temperature, high-pressure industrial processes that create tiny artificial reflectors. But **farming diatom shells**, which essentially **harnesses a natural growth process**, could provide an alternative that takes place at **normal room temperature and pressure**, dramatically **reducing energy needs** and so **cutting carbon dioxide emissions**. The process is also **extremely rapid** — in the right conditions, **one diatom can give rise to 100 million descendants in a month**.

The products are also biodegradable and have a low carbon footprint. Someday the holograms on your credit card, the shim-

mering fabric in your clothes, and the sparkle in your face may owe their dazzle to miniature glass-makers of the sea, diatoms.

The picture of the five-pointed star diatom in the report is worth a thousand words. How did a little one-celled organism figure that out? And why? Surely a plain pill box would have sufficed for survival, but God gave living things beauty as well as function.

¹Anonymous. 2007. Nature leads the way for the next generation of paints, cosmetics and holograms. *ScienceDaily* (6 October 2007). <http://www.sciencedaily.com/releases/2007/10/071003100546.htm>

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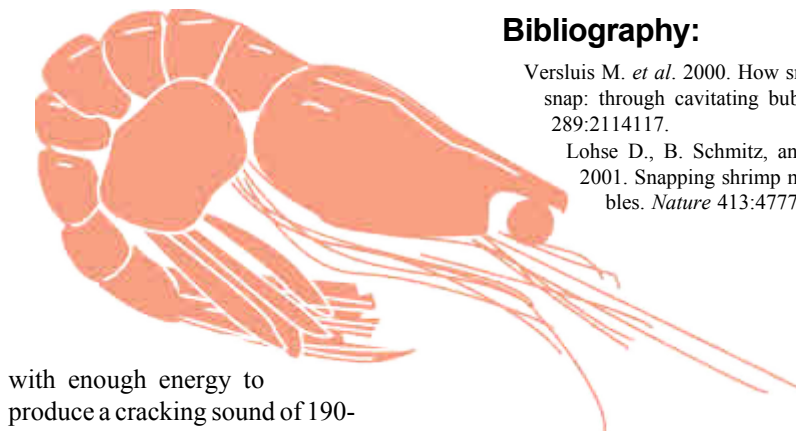
by Jonathan C. O'Quinn, D.P.M., M.S.

SNAPPING SHRIMP

Imagine yourself at the seashore, contemplating the vastness of the oceans and the untold number of species of living things that dwell there. Do you view it all as a product of chance, or the handiwork of an all-knowing Designer?

Consider the extraordinary ability of the snapping shrimp. They have one large “snapping” claw, with a specialized plunger on the movable (dactyl) portion of the claw that fits into a socket on the fixed (propus) portion of the claw. The claw can be locked open, under enormous tension, by co-contraction of an opener and a closer muscle, then snapped shut by a second closer muscle. This produces a high-velocity water jet, leaving behind it a wake of low pressure that drops below the vapor pressure of water.

Then, forming behind the jet of water is a cavitation bubble which subsequently collapses violently as the pressure rises again. Amazingly, this bubble collapses



with enough energy to produce a cracking sound of 190-210 dB (decibels), which can stun or even kill small prey such as worms, goby fish, or even other shrimp at close distances. The energy released as the bubble collapses even produces a tiny flash of light.

The precise design and function of this claw is one of many examples of the perfect designs of living things. This biological system is all-or-nothing and could not have evolved by chance and in stages.

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