

Creation Matters

Volume 18 Number 3
May / June 2013

A publication of the Creation Research Society
50th Anniversary (1963 – 2013)

Feathered Dinosaur Exhibit: More Fantasy than Fact

by Terry P. Beh

During a trip to Texas earlier this year, our family had an opportunity to visit the Witte (pronounced “witty”) Museum in San Antonio, which happened to be hosting a traveling exhibit called *Dinosaurs Unearthed: Bigger. Better. Feathered...*

Claiming to feature “the world’s largest and most advanced life-sized animatronic dinosaurs,” more than anything else the exhibit seemed to showcase many fossils that have been found in China in recent decades. Among them were *Yangchuanosaurus* (an allosaur cousin), *Omeisaurus* (a sauropod), *Huayangosaurus* (a stegosaur), and *Angustinaripterus* (a pterosaur). It also had a few non-Chinese dinosaurs, such as *Allosaurus* and *Dilophosaurus*. However, with China having become the epicenter of bird fossils, as well as what many evolutionists have dubbed “feathered dinosaurs,” the focus was clearly on feathers, whether the evidence supports it or not.

To drive home this point (and rather hard-handedly), the creators of the exhibit attached filament-like “protofeathers” onto the mechanized models of many of its featured stars. Entering the exhibit, we encountered what looked like a giant ostrich. It turned out to be *Gigantoraptor*, a 16-foot-

tall, beaked dinosaur covered from head-to-toe and tail-tip with a coat of yellowish-green feathers. Discovered in 2007 in China by paleontologist Xing Xu, the misnamed *Gigantoraptor* is neither a raptor nor a bird but a huge member of the Ornithomimid (bird-footed) family of dinosaurs. In fact, according to Xu, no direct evidence of feathers was found with its bones.¹ However, you would never guess that from the model that stood before us. In fact, this was just the beginning of the propaganda campaign on display at the Witte.

Leaving no room for doubt and supposedly based on “the most current scientific findings,” all of the exhibited Chinese dinosaurs, which evolutionists are calling “transitional species” between dinosaurs and birds, were covered in long, lacey “down,” with actual feathers placed in strategic locations, like along their elbows and heads. In trying a bit too hard to sell the dinosaur-bird connection, with all the hair-like downy feathers dangling from the dinosaurs’ limbs, many of them looked like a ridiculous cross between overgrown chickens and orangutans! By the end of our tour, instead of a museum showcasing scientific finds, I felt like we were visiting a

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Figure 1. *Confuciusornis* (top) and “eerily” similar *Velociraptor*



Figure 2. Juvenile *T.rex* with “protofeathers”

MicroRNA Revolutionizes Biology

by Jerry Bergman, Ph.D.

MicroRNA (miRNA) is a recently discovered class of regulatory, non-coding type RNA that has produced a revolution in our understanding of life (Taubes, 2009). These miRNA’s are also rapidly changing our understanding of eukaryotic gene regulation (Rose, 2012). MiRNAs are specialized nu-

cleotide structures that require a specific DNA code to produce the miRNA transcript. Thousands of these small, short strings of RNA (about 20 to 30 nucleotides long, or one-hundredth the length of a typical gene) have been found in every known cell type of every known organism kind (Zamore and Haley, 2005).

The miRNAs function by binding to mRNA (messenger RNA) in order to down-regulate the level of mRNA-produced protein, reducing the gene product level (Saito and Saito, 2012). This is accomplished either by inhibiting mRNA from making proteins, or by targeting miRNA for destruction and recycling (Enright, et al., 2003). Often called “tiny brakes” because of their protein down-regulation function, it is now known that mutations that disrupt miRNA can

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Dinosaur Exhibit

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fantasy animatronic aviary.

What fossil evidence for dinosaur feathers was provided by the exhibitors? As with *Gigantoraptor*, the exhibit was long on speculation and short on facts. It did have two casts of actual fossilized bones with feather impressions surrounding them, found in supposedly 120–134-million-year-old, early Cretaceous sediments in China. However, *Longipteryx* and *Yanornis* were acknowledged to be birds. And these types of displays were dwarfed by made-up facsimiles, like that of the two-foot-tall model of another known bird, *Confuciusornis* (actually a pigeon-sized fowl with two long tail feathers), displayed with an oversized, “hairy” *Velociraptor*. The accompanying caption suggested how “eerily” similar the two appeared. However, even with its silly protofeathers, to me the Witte’s model of a *Velociraptor* dinosaur looked more like a reptilian hippie on steroids than the over-stuffed *Confuciusornis*.

Importantly, not only are bird fossils found in the same formation but in rocks evolutionists date at 70–80 million years older. In other words, the so-called “transitional species,” like *Confuciusornis*, *Microaptor*, and *Sinosauropteryx* (a “fuzzy-tailed,” iguana-sized theropod), were contemporaries of or evolved *after* fully-formed birds. Perhaps this was an attempt by birds unhappy with the ability to fly to revert to their original “lizardy”

selves? Such nonsense is the confusion that results from trying to force evolutionary explanations on facts that don’t support it.

So, while the *Longipteryx* and *Yanornis* bird displays were diminished and pushed aside, great effort went into making questionable species, used to enhance the claim of early, filament-like “feathers,” larger than life — literally. For example, the exhibit’s two *Velociraptor* models were blown up to twice their normal size so viewers couldn’t miss them in all their imagined feathery glory. Actual *Velociraptor* fossils show they stood only two to three feet tall.

To top it all off, near the end of the exhibit an information panel stated that scientists have discovered recent evidence that even the mighty *T.rex*, as a juvenile, sported a coat of downy feathers which it shed on its way to adulthood. It just shows how thoughtful Darwinian evolution was to make sure that we wouldn’t miss the dinosaur-bird connection. Why, if the most terrible and popular dinosaur that ever lived wore feathers as a teenager, how could we ever doubt that other less “terrible lizards” did, as well? Amazing isn’t it?

Evidence for tyrannosaur feathers comes solely from the Liaoning Province of China and is based on just a few specimens, all identified by Xing Xu. The first came from a small tyrannosaurid about 5–6 feet long, called *Dilong paradoxus* (Emperor Dragon), some of whose fossilized bones were accompanied by “filaments,” which Xu identified as “protofeathers” in a 2004 report from *Nature* magazine. However,

these remnants of what Xu calls proto- or stage-one feathers amount to little more than dark lines, perhaps a couple of inches long.²

A newer tyrannosaur species called *Yutyrannosaurus* (Feathered Tyrant), also identified by Xu in 2012,³ came from the same region in China, the early Cretaceous Yixian Formation dated at 125 million years. Chinese fossil dealers found the fossils of three individuals — one 30-foot-long adult and two juveniles — all of which possessed such filaments, up to eight inches long in different parts of their bodies, including neck, legs, and tail. While these filamentous structures were admittedly “patchy” and not well preserved in any of the three specimens, Xu nonetheless concluded that *Yutyrannosaurus* “had an extensive insulative coat of feathers” and claims this as proof of large feathered dinosaurs, not just the small, bird-like specimens of previous discoveries or even *Dilong*.

However, this is far from settled science, and basing an entire exhibit on such sketchy evidence is highly irresponsible, if not blatantly deceptive. Indeed, as noted by many creationists, such as Dr. Jonathan Sarfati and Brian Thomas, even evolutionary scientists like paleo-ornithologist Dr. Alan Feduccia, Professor Emeritus at the University of North Carolina, have been highly critical of the evidence for feathered dinosaurs.⁴ According to Feduccia, the “filamentous structures” reported by Xu *et al.* are not feathers or even “protofeathers,” but are more likely to be collagenous support fibers inside the dinosaur’s skin.⁵ Feduccia’s research demonstrated how cartilage fibers

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Creation Matters

ISSN 1094-6632
Volume 18, Number 3
May / June 2013

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in the skin persist longer into the decomposition process and thus stand a better chance of preservation than do other skin components.⁶ Indeed, I have often seen “tougher” dinosaur ligaments fossilized along with bones while excavating dinosaurs. A 2012 article by Thomas,⁷ as well as one from 2003 by Sarfati, provide further details.⁸

In addition to these scientific objections about feathers on *Yutyrannosaurus*, there are problems with its identification as a member of the *Tyrannosaurus* family to begin with. For instance, it had three fingers on its hands, which is typical of allosaurs not two-fingered tyrannosaurs. So it’s possible that the “feathered tyrant” may actually turn out to be a non-feathered cousin of *Allosaurus*. In any case, depicting a juvenile *T. rex* with a coat of hairy feathers is a Grand Canyon-sized leap — especially when Xu himself stated that “there is certainly no direct fossil evidence for the presence of feathers in gigantic Late Cretaceous tyrannosauroids.”³ By this he was specifically referring to North American species like *Tyrannosaurus rex*.

To be fair, some of the models at the Witte Museum were impressive, especially the life-sized *Allosaurus*. But, all in all, *Dinosaurs Unearthed: Bigger. Better. Feathered...* seems to be a desperate attempt by evolutionists to convince the public that dinosaurs *really did* evolve into birds. Its use of blatantly misleading propaganda tactics increasingly typifies modern science education. Much like a 2011 exhibit at the Museum of Nature & Science in Dallas, while great boasts were made about the certainty of the supposed dinosaur-bird connection, almost no real evidence was given.⁹

And just as the museum’s bogus claim that its electronic, as opposed to hydraulic, animatronics “capture some of the most life-like motions ever created” falls flat (the movements were stiff and robotic as ever) — as far as truly enlightening the public goes the exhibit is a bust. It’s all smoke and mirrors or, as Shakespeare wrote, “sound and fury, signifying nothing.” As Dr. Feduccia put it in a 2005 press release:

With the advent of “feathered dinosaurs,” we are truly witnessing the beginnings of the meltdown of the field of paleontology... Just as the discovery of a four-chambered heart in a dinosaur described in 2000 in an article in *Science* turned out to be an artefact, feathered dinosaurs too have become part of the fantasia of this field. Much of this is part of the delusional fantasy of the world of dinosaurs, the wishful hope that one can finally study dinosaurs at the backyard bird feeder...¹⁰

Sadly, this is modern science education — 99% Hollywood and 1% fact. Unfortunately, this sort of exhibit is likely a portent of things to come, and even worse, to be believed by a public largely ignorant of scientific facts. So reader beware: *Dinosaurs Unearthed: Bigger. Better. Feathered...* might be coming to a theater, that is, a museum near you.

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Photos by T. Beh, used by permission of the Witte Museum.

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MicroRNA

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cause serious diseases (Bruneau, 2005). MiRNA are now known to be involved in everything from longevity to neurodegenerative diseases and cancer (Taubes, 2009). They are also involved in apoptosis, as well as cell proliferation and differentiation (Saito and Saito, 2012).

Several hundred different types of miRNAs have been discovered so far, and evidence exists that thousands of miRNA types are produced in the cell. In humans they are believed to regulate one-third or more of all genes. To complicate matters further, typically more than one miRNA is used to

regulate each miRNA message that is part of a complex “cooperative translational control” system (Enright, et al., 2003). There does not appear to be any body system in which miRNA is not involved (Lukiw, 2012; Zabaleta, 2012).

Discovered in 1993

The first miRNA was discovered in 1993 by Victor Ambrose, his wife, and their colleagues (Chen and Lodish, 2005). The significance of their work was not recognized until many years later. Dr. Ambrose was rejected for tenure at Harvard because his colleagues “considered his work of insufficient interest to keep him around” (Taubes, 2009). Fortunately, he was able to obtain a

position at Dartmouth where he continued his research. These “minuscule RNA snip-pets” were later confirmed to have a critical role in regulating genetic and cellular functions (Taubes, 2009).

Once thought to be cellular debris or material left over from evolution, miRNA are now recognized to have a critical role, not only in cell regulation, but also in plant and animal development. Many, if not most fundamental development processes have now been confirmed to be miRNA regulated. The discovery of miRNA has also solved another problem, viz., much of the so-called junk-DNA that was once claimed to be useless genetic material left over from evolution actually codes for miRNA.

Because miRNAs play a major role in directing early embryonic development, knowledge of miRNA also holds much promise in understanding and preventing birth defects (Bruneau, 2005). The authors of one study concluded that, by regulating the translation of genetic information into proteins, miRNAs not only “serve as active regulators of gene expression,” but also are “major determinants of bio-structures and functions” (Kawasaki, Wadhwa, and Taira, 2004).

They also fine-tune gene expression and function, and can even be used in research as “molecular scissors” to help researchers learn more about how genes function and how genetic information is used in the cell. They have opened up a whole new “era of more complex and coordinated gene regulation.” Research on miRNA has allowed scientists to understand “highly ordered and regulated events, such as assembly of RNA and proteins, resulting in gene silencing either by mRNA degradation or suppression of translation” (Kawasaki, Wadhwa, and Taira, 2004). MiRNA’s are also critical regulators of neurobiology gene expression (Lukiw, 2012).

Problems posed for neo-Darwinism

For a protein to be produced and regulated it must have a compatible miRNA-regulation system. Without fine tuning of this system, too much or too little of many proteins will result, causing injury or death to the cell — or even to the whole organism. Likewise, down-regulation or deletion of certain miRNAs can also result in misregulation that can cause disease (Chen and Lodish, 2005; Gregory and Shiekhattar, 2005).

Furthermore, a single miRNA type affects many cell operations, resulting in complex interrelationships between the miRNA and gene products, a property called *pleiotropy*. This creates major problems for neo-Darwinism because it results in an irreducibly complex system that requires the entire network of miRNA and protein to be fine tuned. Even if a mutation in a miRNA produces a beneficial result, it will very often disrupt another part of the complex system, causing disease or potentially lethal developmental or other disorders. Similarly, any mutation in DNA, even one that produces a beneficial effect, will likely adversely affect another function of the cell because of this high level of miRNA and mRNA interrelatedness.

Research into miRNAs also has rewritten the book of evolution by “tearing apart traditional ideas about the animal family tree” (Dolgin, 2012). The reason is that miRNA sequence comparisons often produce different phylogenies than do those arranged from nuclear and mitochondria DNA sequences. Further confounding evolutionary explanations is that, instead of coding for one protein as once thought, each gene may code for many different proteins, often potentially hundreds. It has been estimated that up to 95 percent of our gene mRNA transcripts are spliced together by proteins called spliceosomes, to form as many as 38,000 different combinations (Graveley, 2005), resulting in even more protein variety. Splicing mistakes reveal how important this process is in genetic regulation, with cancer as only one potential result.

Perspective

It was not but a few years ago that Darwinists were convinced that the gene was the key to evolution. It is now realized that numerous regulation systems exist that are all critically important for proper cell function. The complex systems of gene regulation now known to exist, aside from miRNA, include small interference RNA (siRNA) and chaperonins (Ellis, 1996). These systems all work together as a unit to achieve what was once thought to be the sole domain of genes.

The miRNA regulatory system adds another level of irreducible complexity to cell function. Its importance is documented by the finding that miRNA aberrations are linked to diseases that include most cancers, heart disease, diabetes, Alzheimer’s, Parkinson’s, and other neurodegenerative diseases (Taubes, 2009). Research to determine what controls the miRNA regulation system may reveal a level of control as complex as the gene system itself.

This new level of complexity also means that, even if a beneficial mutation occurs in a gene, a compatible regulation system must be in place simultaneously in order for the gene to function, and for proper levels of the protein to be produced, or for non-lethal amounts of functional proteins to be produced. Beneficial mutations alone are insufficient and an effective regulation system must simultaneously exist for the gene to function.

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...without excuse!

by Timothy R. Stout

THE TESTIMONY OF DHMO

Many of you will recall the hoax, perpetrated from time to time, which after listing the dangerous properties and harmful effects of a chemical known as dihydrogen monoxide (DHMO), calls for the government to ban the sale and use of the hazardous substance. DHMO is of course the chemical name for water. While the listed characteristics are true, the contexts in which they are presented are hyperbole. The purpose of the hoax is purportedly to demonstrate that scientific ignorance can lead to fears which are unfounded.¹ The hoax certainly shows how easy it is to present a truth, out of context, in order to lead the gullible to a false conclusion.

The Wikipedia article lists many of the occasions on which the hoax has been successfully perpetrated. Among these, it was reported that in 1997 a junior high student named Nathan Zohner used the hoax as the basis for his science fair project. He conducted a survey among his classmates which revealed that 43 of 50 persons interviewed agreed that the chemical should be banned. Upon reporting Nathan's first place finish, *Washington Post* journalist James K. Glassman "coined the term 'Zohnerism' to refer to 'the use of a true fact to lead a scientifically and mathematically ignorant public to a false conclusion.'"²

After reading this, I immediately thought of the arguments evolutionists present to justify their teachings. To one informed of the scientific arguments for creation, it appears that the entire evolutionary propaganda machine is one giant Zohnerism (see sidebar). Highly esteemed atheistic professors and scientists make statements about scientific data which are normally true to some degree; yet, there are invariably disconnects between the actual data and the conclusions that they claim flow naturally from the data.

By contrast, if a person points out discrepancies between the evolutionists' data and their conclusions, the response is an immediate, condescending, almost violent argument *ad hominem*; that is, the response attacks the person making the argument instead of the content of the argument itself. The implication is that the dissenting argument can be discounted because the one making it lacks competence to understand the issues. In other words, who is this

person who would dare to stand against the united testimony of established science? In modern science, whenever arguments impacting the validity of evolution are presented, the standard for truth has become "authoritative" pronouncements of atheistic scientists in positions of power and prestige. By decree, conclusions contrary to their pronouncements are deemed false.

Most of the material presented by scientific creationists makes an effort to show how the data of science, honestly interpreted, is far more consistent with the declarations of Scripture than with evolutionary theory. The combined testimony of all of creationist materials shows how evolutionists rely on ignorance of their audience to allow scientific evidence to be twisted and misrepresented, in order to make the hoax of evolutionary theory appear true. The fact that most of the time their audience also wants it to be true certainly simplifies their task.

God reveals Himself in two ways: natural revelation (observation of the world around us) and written revelation (the Bible). In Romans 1:18–22 He testifies that He has very clearly revealed His person and attributes to every one of us through the things that have been made. This applies to the scientist and the non-scientist alike. God considers this evidence to be so clear that from His perspective *no one* has an excuse to reject Him.

Since science is a detailed, organized study of God's creation, the study of science should increase a person's awe over the wisdom and greatness of God, the One who designed and brought into existence the things we see and study. The scientist in this instance has an advantage over the non-scientist because of his or her understanding depths of God's wisdom that are overwhelming.

The lay public can see the humor in the DHMO hoax. We would wonder at the

Examples of Evolutionary Zohnerisms

Miller's experiment provides a ready example of an evolutionary Zohnerism. This experiment is widely quoted in introductory biology textbooks as a demonstration of how natural processes can create the chemicals of life. Actually, though, if one looks at the details of Miller's work, he will see that it illustrates many roadblocks which would thwart a natural origin of life. Eighty percent of his product was tar. Most of the chemicals that were produced would have interfered with the assembly into anything useful of the amino acids that did appear. In addition, the kinds of amino acids produced were in the wrong ratios to form anything useful.²

Homologous structures are frequently touted as an extremely strong evidence of evolutionary development. Five bones in fish fins are said to be homologous to five toes in reptiles and five toes in humans, purportedly demonstrating an evolutionary relationship. However, evolutionists can neither provide fossils that show the progression nor plausible explanations

of how fins can change to legs, etc. By contrast, beauty in art may be achieved by combining the repetition of basic patterns, providing structural organization, with variation in the patterns, provoking interest and demonstrating creativity. Homologous structures are most properly viewed as a demonstration of God's creativity and appreciation of beauty.³

Evolutionists arrogantly proclaim that science clearly demonstrates the plausibility of a natural origin of life. Yet, there is not a single "fact" of abiogenesis which does not fly in the face of known scientific principles and laws. There is not even agreement whether abiogenesis was "information first" or "metabolism first." Abiogenists tend to be in one camp or another, not because the evidence favors their camp, but because they believe even more formidable problems face the alternative view. It would be more expedient just to admit that the things we have learned about abiogenesis make an essentially air-tight case against its possibility.⁴

—TRS

wisdom of a person who would continue to believe the hoax after it was explained to him. Yet, from God's perspective, since He gives each person a personal testimony of Himself through the things that He made, a person has no more excuse for believing in a naturalistic appearance of the heavens and earth and the life on earth than a person would have for continuing to believe in the DMHO hoax after it has been explained to

Him. Evolutionary theory is a hoax, perpetrated by those who reject God's testimony.

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Matters of Fact

by

James J.S. Johnson, JD, ThD

Editor's note: Dr. James J.S. Johnson, Associate Professor of Apologetics at ICR, serves as guest respondent to this issue's featured question. You may submit your question to Dr. Jean Lightner at 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 Because there is no word "the" in the Hebrew word *bereshith*, good grammar requires that Genesis 1:1 be translated "in a beginning" (rather than "in the beginning"), so doesn't that suggest that the creation reported in that verse is not really the original "beginning" of creation?

A Quick answer — Good grammar does not "require" Genesis 1:1 to be translated "in a beginning," so the question wrongly assumes a false premise about what kind of beginning Genesis 1:1 refers to.

Quite literally the Hebrew of **Genesis 1:1** (*bereshith*) says "in beginning" (assuming for now that the non-inspired Masoretic vowel pointing is correct). To the English-speaking mind, does that phrase contextually mean "in *a* beginning" or "in *the* beginning"? There are good reasons for disagreeing with the criticism that Genesis 1:1 should be translated "in *a* beginning." Due to limited space, only four are addressed here.

Grammatically

When translating a Hebrew noun (or a noun prefixed by a preposition, like *bereshith* in **Genesis 1:1**), the lack of a prefixed definite article (which we translate as "the" in English) does *not* mean that the indefinite article

Does Bereshith Mean "in a beginning"?

"a" should be automatically inserted before the Hebrew noun.

Why not? Why is it error to assume, as the question above does, that the lack of the definite article means we should imply "a" (our indefinite article)? Because doing so fails to appreciate a critical difference between biblical Hebrew and modern English: *unlike English, Hebrew has no indefinite article!* Put simply, there is no separate Hebrew word (or prefix) that means "a" or "an."¹ So it is never true that Hebrew grammar alone "requires" the phrase "in *a* beginning" for Genesis 1:1.²

However, if our English phrase "in *a* beginning" was what Moses intended to say, there is an easy way to communicate an **unparticularized-one-of-a-plurality**, using Hebrew: just use the Hebrew equivalent of "in **one** beginning." Hebrew has numbers: one, two, three, etc., so if the author wanted to indicate one of a plurality, yet without particularizing that one, the simple use of the Hebrew word "one" (*'achad*) would accomplish that. In fact, that is exactly what Moses did when he reported that "one" of Adam's ribs was taken by God to make the body of Woman (see **Genesis 2:21**). Another example, during Creation Week, is **Genesis 1:9**, where the "waters under heaven" are gathered up into "one" (*'echad*) place. Thus, Genesis 1:9 and Genesis 2:21, just to name two examples, show how Moses *could have* indicated "*a* beginning" *if* that is what he meant.

So, if a Hebrew word is not preceded by "the," how does that affect the meaning of the noun? Sometimes our English word

"a" fits the context, but in other contexts the lack of "the" only means that the essence of the noun is being emphasized, like this English phrase (where "forgiveness" is anarthrous): "forgiveness in Christ is wonderful."

Exegetically

How the Bible itself uses language is authoritative for interpreting Scripture texts, so Scripture texts that are very clear in their meaning should guide our understanding of what less-clear Scripture texts mean.³

Compare **John 1:1**, where we read "in the beginning" (*en archê*). This Greek phrase is anarthrous. Like Hebrew, and unlike English, Greek has no indefinite article, so it would be false to say that Greek grammar "requires" that the phrase *en archê* be literally translated "in a beginning." **John 1:1** also says that "the Word was God (anarthrous noun "God") and "the Word was with God" (noun "God" preceded in the Greek by the definite article "the"). Some cultists argue that this means Jesus was "a god" when He was "with the God," but this errs by assuming that the lack of a definite article requires the meaning of what in English is shown by an indefinite article. Rather, anarthrous nouns often indicate that a noun's essence is being stressed, more than the noun's particularity.

In **John 1:1**, Christ's essence as deity (i.e., being God, divine) is stressed, yet His being personally distinct from God the Father is also indicated (where God the father is particularized by the noun for "God" being preceded by the definite arti-

cle). Why? **John 1:1** is teaching Trinitarian theology by the way that the noun “God” once has and once doesn’t have the definite article.

Historically

The consonantal text of the Hebrew Bible is divinely inspired, not the medieval vowel pointing that was added by Masoretic scribes, who copied the Scriptures generation after generation.

As a memory aid to pronunciation, Masoretic scribes added vowel points, and the question (above) completely depends upon exactly one uninspired vowel point! Yet the Masoretic vowel points were invented during the Dark Ages (A.D.), not during the times of the Old Testament prophets (B.C.)!¹ When Christ said that every “jot and tittle” of the Scriptures were perfect (see **Matthew 5:18-19**), He was referring to the Old Testament — which then consisted only of a text of Hebrew letters (called the “consonantal text”).

It needs to be stressed that the Masoretic vowel points (just like numerical verifications) are not “inspired” in the sense of **2 Timothy 3:16** (and **2 Peter 1:18-21**). Even so, in light of **Genesis 1:9** and **Genesis**

2:21 (analyzed above), the Masoretic vowel pointing does not really clash with the English translation phrase “in the beginning” so long as it is understood that it is the beginning’s **essence**, not its **particularity**, that is emphasized in **Genesis 1:1** — a situation not uncommon when a preposition is prefixed to an important noun (what we would call “the object of the preposition”).

In other words, the Bible of Jesus’s earthly lifetime had no Hebrew vowel points, so they are not divinely inspired (just as chapter and verse divisions are often educated guesses). So trying to pivot an entire creation theology on one Masoretic vowel point is unwarranted, to say the least.

Theologically

The overall message of the entire Bible, both Old and New Testaments, necessarily implies that there was no “earlier” beginning of creation that somehow preceded the one reported in Genesis. If there was some earlier “beginning” before the Genesis creation, the Bible would have said so, rather than repeatedly referring to the Genesis account as the authoritative account of our origins and early history.⁴

The bottom line is that **Genesis 1:1**

reports “**the** beginning” of God’s creation.⁵

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Math Matters

by
Don DeYoung, PhD

The Drake Equation

American astronomer Frank Drake (b. 1930) has developed an equation to “calculate” the number of civilizations (N) existing in the Milky Way Galaxy. In one simplified form the equation reads

$$N = n f_s f_p f_i$$

where

n = total stars in our galaxy

f_s = fraction of sun-like stars

f_p = fraction of sun-like stars with planets

f_i = fraction of planets where life has evolved

The first term, the number of Milky Way stars, is about one hundred billion, or 10^{11} stars. The fraction of sun-like stars (f_s) is often assumed to be about 0.1. The next variable is of great current interest, with far more than 1,000 known planets circling other stars. Since f_p is not known, 0.1 may be used as a “generous” value.

The final variable f_i is the key to the entire equation. Values between 0.5 and 1 are typically chosen for f_i . That is, an optimistic, high probability is assumed for the spontaneous origin of life elsewhere. The result is at least ½ billion Milky Way planets with evolved life. However, based on probability arguments and the complexity of the living cell, the proper value for evolved life, f_i , is zero. Therefore, the other variables in the Drake Equation are not significant since multiplication by zero cancels them regardless of their values. The unmistakable conclusion is that no other planets exist in the Milky Way with evolved civilizations.

Many books have been written about life in space, but supporting evidence is totally lacking. If any form of life is eventually detected on other planets, there are two possible explanations. First, microscopic forms of life may have been delivered to



nearby planets from the earth. Space probes continue to explore the moon and solar system planets. Efforts are made to keep these probes sterile before launch; however, microscopic organisms such as bacteria undoubtedly are on board and may survive the trip.

As a second possibility, the Creator may have placed life elsewhere in space. Although this is possible, scripture clearly describes the earth as a unique abode for human life in the entire universe: “The highest heavens belong to the Lord, but the earth he has given to man” (Psalm 115:16).

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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: <http://crev.info/>. Unless otherwise noted, emphasis is added in all quotes.

Latest Attempt to Explain Homochirality Underscores the Problem

Finding that some stars emit circularly polarized light will not help explain why life uses only left-handed amino acids.

Periodically, another attempt is made to explain the one-handedness of life's amino acids. The problem for materialists, explained in *Evolution: Possible or Impossible*¹ chapter 3, is that only 100%-pure one-handed proteins will work, but the probability of getting pure one-handedness ("homochirality") by chance is vanishingly small (chapter 4). The latest article addressing this problem on *PhysOrg* admits it:²

Life on Earth is made of "left-handed amino acids (L-amino acids)". The question of **why organisms on Earth consist of L-amino acids instead of D-amino acids or consist of D-sugar instead of L-sugar is still an unresolved riddle**. In other words, **a major mystery of life on Earth is that organisms are exclusively made up of left-handed amino acids**. Therefore, **the effort to solve this problem is one of the biggest in research into the origins of life, a subject that remains enveloped in mystery**.

The homochirality problem is enormous: "**Origin-of-life theories often ignore the homochirality problem**, even though **the question is critical to the origin of life**," the article states. All known physical processes lead to mixed-handed ("racemic") collections. Since the two forms behave the same chemically and thermodynamically, how can they be separated? Only life seems capable of producing pure one-handed sets.

Previous attempts have tried to discover physical factors that might lead to a preference for one hand over the other ("enantiomeric excess"), but they have only achieved differences of a few percent. *PhysOrg* explained the leading multi-step hypothesis for separating the hands: (1) Find stellar sources of circularly polarized light that might preferentially destroy one hand or convert it to the other; (2) Have the amino acids delivered to Earth via meteorites; (3) Purify the one hand further in shallow basins undergoing cyclic periods of wetting and drying.

Now, astronomers at the National Observatory of Japan have detected the highest ever circular polarization excess from a star: 22%. Their paper was published in *The Astrophysical Journal Letters*.³ This has "**implications for the origin of homochirality**," the *PhysOrg* headline reads. NASA's *Astrobiology Magazine* reproduced the press release verbatim, categorizing it as a "Hot topic," headlining it, "**Star- and Planet-Forming Regions May Hold Key to Life's Chirality**."⁴ If so, the implications are pretty weak, and the key hard to find, since polarization only addresses half of the first step in the chain.

It is not known how effective circularly polarized light is in causing changes to amino acids. The finding also requires that most of life's amino acids were sent to Earth on meteorites — a

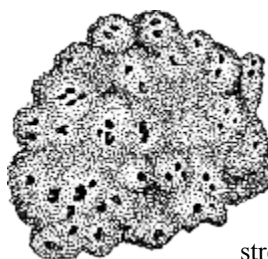
controversial claim. Even then, the enantiomeric excess would likely be small, and exist only in tiny locales (shallow pools) that reduce the lab space for life's origin. But unless a growing protein chain is 100% pure with one hand, it won't work. A generous scenario with 22% excess (assuming the amino acid population trends with the polarized light excess) is far too small to help, even if origin-of-life researchers could figure out a way for the amino acids to link up naturally (they prefer to separate in water).

Homochirality is not the only mystery. "**The history of star and planet formation and the origin of life are still a mystery**," too, the article confessed.

Could the pure one-handedness in life be bona fide evidence for intelligent design? Louis Pasteur, the man who discovered homochirality, thought so. For more than a century this problem has baffled materialists. They've been trying to relegate this to a god-of-the-gaps argument for too long. One can't keep using that excuse forever. If the gap keeps getting wider, or if the evidence creates a positive argument for design, there comes a time to turn that excuse around and accuse materialists of materialism-of-the-gaps, the faith that somehow, sometime, a solution will emerge. But why must materialism be the default position? Scientists cannot live in the land of mystery for decades and still call it science. If the evidence points to design, so be it.

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Biomimetics Roundup



Here's a quick rundown of news on new technologies emerging from the study of plants, animals, and cells.

Toxin sponges: *PhysOrg*¹ reported on "biomimetic nanosponges" made of absorbent material wrapped in red blood cell membranes that can drift in the bloodstream as "decoys" to absorb bacterial toxins and snake venom. Instead of poking holes in live blood cells, the toxins poke them into the sponges harmlessly, which are then eliminated by the liver.

Nano-cellulose: Promising "one of the most important potential agricultural transformations ever," a researcher has "engineered algae" to manufacture "nano-cellulose," a "wonder material" that can become the raw material for "sustainable production of biofuels

and many other products.” While producing the nanocellulose, the algae mop carbon dioxide from the atmosphere. See *PhysOrg*.²

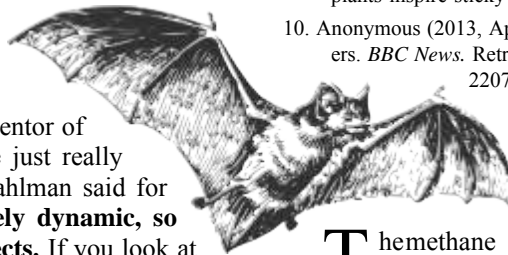
Nano-fabrication: Need to form precise shapes on graphene at billionths of a meter? Use DNA as a template, reported *PhysOrg*³ on efforts at MIT to perfect the technology. It might be used to fashion nano-circuits such as “electronic chips made of graphene, a one-atom-thick sheet of carbon with unique electronic properties.”

From parasite to patch: A surgical patch more effective than sutures or staples has been developed by inspiration from a parasite, reported *Science Now*.⁴ “By **mimicking a technique used** by an intestinal parasite of fish,” namely a spiny-headed worm that embeds itself into the fish’s intestine, researchers created a “flexible patch studded with microneedles that holds skin grafts in place more strongly than surgical staples do.” It’s 3 times stronger than surgical staples, *PhysOrg*⁵ said.



New use for road apples: Believe it or not, scientists have found a useful enzyme in horse feces that might help world biofuel production. *ScienceDaily*⁶ said that a horse pile houses a fungus that can convert cellulose to sugars, promising “**a potential treasure trove** of enzymes for solving this problem and reducing the cost of biofuels.” Who woulda thunk as they heard that plunk.

Bat wing and a pinch of inspiration: Inventor of a robotic bat wing said it all: “**Bats** are just really amazing, **spectacular flyers**,” Joseph Bahlman said for *LiveScience*.⁷ “**Their wings are extremely dynamic, so much more dynamic than birds or insects.** If you look at the wings of a bat, they’re just like our hands, they have all these joints that let their wings adapt into lots of different shapes, giving them a **tremendous range of aerodynamic forces and maneuverabilities.** They **fly much better than anything we’ve engineered.** I would love to figure out how that works and then duplicate it.”



Where you bean, amigo: Efforts to control pesky bedbugs have been largely unsuccessful, frustrating many a homeowner and hotel client. Now, scientists are building synthetic traps “inspired by an age-old remedy formerly used in Bulgaria and Serbia where kidney-bean leaves were strewn on the floor next to beds to trap the bugs.” That’s right; bean leaves successfully trap the critters, reported *Nature*⁸, *LiveScience*⁹ and the *BBC News*.¹⁰ Tiny hairs impale the bugs’ feet, leaving them helpless to die. The synthetic versions don’t work as well yet, but scientists have their inspiration for a pesticide-free solution. “**Plants exhibit extraordinary abilities to entrap insects,**” a researcher said. “**Nature is a hard act to follow,**” said another.

The only mention of evolution, in the bean-leaf bedbug story, was not particularly helpful to Darwinism: “There is **absolutely no evolutionary history between bean plants and bedbugs**, so this entrapment effect on bedbugs specifically is **purely coincidental.**”

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Titan’s Methane Still Puzzles Scientists

Themethane in Titan’s atmosphere should be long gone, and may be disappearing soon, planetologists say. A JPL press release¹ states that the stability of Titan’s scattered polar lakes suggests that ethane, not methane, is the primary constituent. If so, it means that methane in the atmosphere cannot last much longer.

Ethane evaporates slower than methane. In the nearly nine years of observations of Titan’s surface, the lakes haven’t changed much. This suggests that heavier hydrocarbons, end products of dissociation of methane by the solar wind, predominate in the lakes.

The lakes are also **not getting filled quickly**, and scientists **haven’t seen more than the occasional outburst of hydrocarbon rain** at the moon over the mission’s eight-plus years in the Saturn system. This **indicates that on Titan, the methane that is constantly being lost by breaking down to form ethane** and other heavier molecules is **not being replaced by fresh methane from the interior**. The team suggests that the current load of methane at Titan **may have** come from some kind of gigantic outburst from the interior eons ago possibly after a huge impact. **They think Titan’s methane could run out in tens of millions of years.**

The “gigantic outburst” is purely speculative. There is no evidence Titan has a reservoir of methane in its interior, nor that it could erupt onto the surface. It would seem more reasonable to believe that Titan’s current methane budget is a remnant of its primordial methane.

It should be noted that scientists in the 1990s predicted Cassini-Huygens would find a global ocean of ethane on the surface from half a kilometer to several kilometers deep. If methane photolysis

to ethane were occurring continuously for billions of years, it should have accumulated those vast quantities of ethane on the surface. Instead, the Huygens probe landed on relatively dry sand.

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Human and Animal Brains: Uniquenesses and Similarities

Several recent science articles explore what we have in common with animals, and what is unique about the human mind.

Grammar test: A *ScienceDaily*¹ entry summarizes the story in the headline: “**Young Children Have Grammar and Chimpanzees Don’t.**” Scientists at University of Pennsylvania believe they have shown that “children as young as 2 **understand basic grammar rules** when they first learn to speak and are **not simply imitating adults.**” For instance, children tend to get the definite article “the” and the indefinite article “a” correct every time when referring to objects. They also exhibit more extensive diversity of abstract grammatical concepts.

Chimpanzees, by contrast, just don’t get it. The famous 1970’s ape Nim Chimsky “never grasped rules like those in a 2-year-old’s grammar.” To the researchers, “This suggests that **true language learning** is — so far — **a uniquely human trait**, and that it is **present very early in development.**” An article on *PhysOrg*², though, claimed that chimpanzees have “**metacognition**,” the ability to think about thinking. This was based on how they responded to a touch screen to find a hidden reward. None of them, however, were found mumbling, “I think, therefore I am.”

Math test: Another headline tells all, this time from *Medical Xpress*: “Despite what you may think, **your brain is a mathematical genius.**”³ Researchers at the Salk Institute were impressed that the brain appears to run an algorithm called the Gabor Transform when confronting a change of environment. The brain picks out the salient signals in both time and space, and learns to ignore others, in order to extract the maximum amount of useful information. Confronted with precision on the time channel and not the location channel, or vice versa, how does an information theorist decide the best compromise? Nobelist Dennis Gabor, who invented holography in 1971, came up with a mathematical theorem, known as a “Gabor Filter” that “helps obtain the **most precise measurements possible for both qualities.**” A Salk researcher said that our brains employ a similar strategy.

Music test: Several science sites reported on Canadian research that identified how the brain learns to “like” (in the Facebook sense) a new piece of music and file it in the “favorites” folder. A part of the brain called the nucleus accumbens lights up on fMRI scans when tested on various human subjects. *Science Now*⁴, *LiveScience*⁵, and *Medical Xpress*⁶ discussed how this shows that different human brains appear to have the same responses to a new music experience. Another *LiveScience*⁷ article explained how this shows music is a universal language for humans. That article quoted a neuroscientist opining, without evidence, “**Evolutionarily**, music is something people came together to do.” None of the articles

mentioned if animals have a similar response.

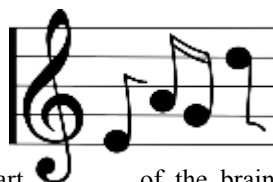
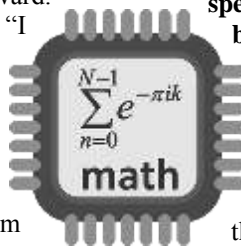
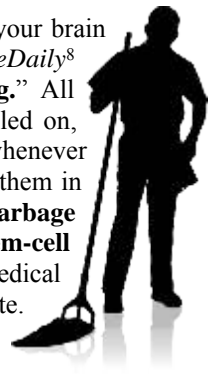
Your brain’s janitors: Some things go on in your brain without your knowledge, and good thing: *ScienceDaily*⁸ described how your brain does “**spring cleaning.**” All brains have stem cells lying in wait to be called on, ready to become nerve cells or brain cells “whenever and wherever you need them most.” To keep them in readiness, a process in the brain “**clears out garbage within the cells, and keeps them in their stem-cell state,**” researchers at University of Michigan Medical School found. Even stem cells can generate waste. Through a well-known process called autophagy (eat myself), stem cells periodically clean house to maintain their readiness. The study was conducted on mice.

The fly, the mouse, the human: Another article on *Medical Xpress*⁹ claims that human, mouse and fruit fly brains have some “strikingly similar” characteristics. Al Hirth, a psychologist at King’s College London deduced this from studies of what happens when analogous parts of the brains are disrupted. A photo of the three brains side by side shows dramatic differences in size, like between a pinhead and a cantaloupe. The researchers found, “**despite the major differences between species**, their respective constitutions and specifications **derive from similar genetic programmes.**” Hirth believes this shows common ancestry, but he was just speculating:

Dr. Hirth from King’s College London Institute of Psychiatry says: “Flies, crabs, mice, humans: all experience hunger, need sleep and have a preference for a comfortable temperature **so we speculated there must be a similar mechanism regulating these behaviours.** We were **amazed to find just how deep the similarities go**, despite the differences in size and appearance of these species and their brains.”

Dr. Hirth did not, however, find mice or fruit flies doing research to figure out how the human brain works. Furthermore, “**no fossil remains of the common ancestor exist,**” the article admitted.

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Scientific Findings Can Be Counterintuitive

Here are examples, from various scientific news sources, of recent claims that seem to contradict what some would consider intuitively obvious. These assertions should be kept in mind when evaluating other widely-accepted scientific truisms, like evolution.

PhysOrg: Tough love, not small, incremental effort, is needed to turn around failing schools.¹

Medical Xpress: Conservatives with their strict morality tend to be happier than fancy-free liberals.²

BBC News: The large horns on rhinoceros beetles do not slow them down during flight.³

Nature: Greenland defied ancient global warming.⁴

PhysOrg: Geo-engineering to reduce global warming can have severe unintended consequences.⁵

Nature: Tropical forests are unexpectedly resilient to climate change.⁶

PhysOrg: African elephants do better in educated countries than in those with large nature reserves.⁷

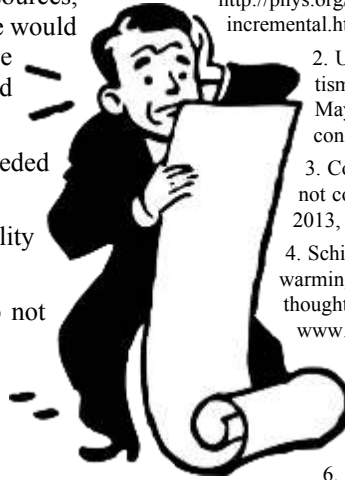
LiveScience: Fossil footprint depth can be misleading; depth is not necessarily related to pressure.⁸

Nature: The anus is a sophisticated organ. Calling it a "remarkable orifice," author Mary Roach said, "No engineer could design something as multifunctional and fine-tuned as an anus. To call someone an ... [a**h***] is really bragging him up."⁹

In a final example of counterintuitive findings, *LiveScience*¹⁰ now claims that brain size didn't drive human evolution. It's the organization of the brain, not its size, that makes the difference between humans and lower primates. What would Morton and Broca have thought? This contradicts decades of assumptions

about what drove humans forward in evolution. But was the prefrontal cortex the "driving force" in the human brain, as the article assumed, or a distinguishing characteristic of an already well-designed being? Who would argue the evolutionary line without assuming it to be the seat of rationality?

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What Are Creationists Thinking about ...?

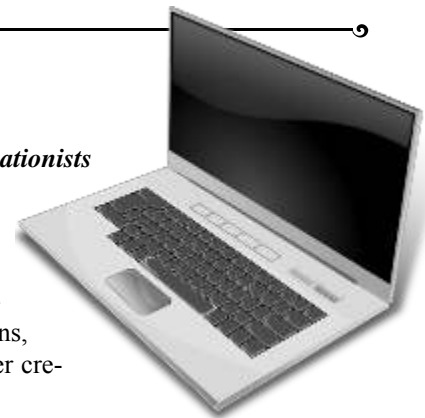
As new scientific discoveries make the headlines, have you ever wondered how your fellow creationists are reacting? Have you ever thought of a "crazy" new idea about origins and wanted to bounce it off another creationist?

Now you can keep in contact daily with creationists from all around the world. The Creation Research Society sponsors **CRSnet**, an online community of CRS members who have e-mail access to the Internet. Not only do participants discuss the latest scientific findings related to origins, but they also receive news about the CRS — its research, publications, and activities — and other creation-related news.

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

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2013
Vol. 18 No. 3

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

Rainbows - A Simple Sign?

Most people can appreciate the beauty of a rainbow, but to Bible-believing Christians, rainbows hold a great testimony to the glorious creativity of the Lord God.

When horizontal light rays from the sun strike the upper portion of a spherical water droplet, they are bent by refraction and then reflected internally within the droplet, exiting at an approximate deviation of 138 degrees from their original direction. Light rays striking the lower portion of a droplet are similarly bent, exiting at an angle of about 232 degrees.

At opposite ends of the spectrum, violet light is bent slightly more than red light by this prismatic action, causing a dispersal of the component colors of white light; i.e., a phenomenon which results in the rainbow which we see. Light exiting from these two angles forms both the primary and secondary rainbows often seen following rainstorms.



When cirrostratus clouds contain predominantly hexagonal ice crystals of uniform size, sunlight passing through these crystals is refracted by 22 degrees. Again, the angle of deviation is greater for violet light than for red light, causing a dispersal of white light and forming a small streak of the rainbow's colors. This is called a 22-degree halo, or a sun dog.

Genesis Chapter 9 tells us that God created the rainbow as a symbol of His

covenant to never again destroy the earth with a flood, and Psalm 19 tells us that the heavens declare the glory of God. The high degree of order evidenced by rainbows and sun dogs demonstrates that our world did not come into being by random chance as evolutionists would have us believe, but by an all-knowing Creator.

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Date: 2008 July 4
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