



Science Education Roundup

exas has had its share of controversy in the last few months. Most of the issues involved science education. The State Board of Education in Austin wrangled over the K-12 science education standards for Texas public school teachers and textbook publishers, eventually giving up the "strengths and weaknesses" terminology, but replacing it with language many believe is much more robust. The Texas legislature debated various bills before the House and Senate that involved education and education officials. By the end of the session, SBOE Chairman Don McLeroy-who favors examination of all aspects of evolutionary theory in the classroom-was narrowly defeated in his bid to retain chairmanship of the state's powerful education board.

Much of the political wrangling in Texas revolved around the issues of scientific theories and what we will allow our schoolchildren to hear in the classroom regarding evidence for these theories—or lack thereof. The popular press has portrayed this as a fight between creationists and evolutionists. In reality, teaching biblical creationism in public schools was never under consideration in these debates.

But Austin saw a flurry of activity from citizens and special interest groups on both sides of the issue. Evolution activists, like National Center for Science Education director Eugenie Scott, flew in more than once to push their dogma—that "real" science is only atheistic-based evolutionary science—on Texas schoolchildren. Rather than conducting evidence-based scientific inquiry, Dr. Scott "consults" with allies who are attempting to remove criticisms about Charles Darwin and his ideas from public literature and instruction altogether. She is just one of many evolution activists

who use access to decision-makers in government to push an agenda that more than 60 percent of Americans reject.

ICR has been countering this kind of activism since its inception in 1970. Our focus has been conducting research in science, educating Christian school teachers with all sides of the evidence, and giving the Christian community confidence in their understanding of the Genesis record.

And we continue to proclaim the truth of our Creator. One of the more relaxing ways to discover the wonders of God's creation is by joining our Yosemite Creation Tour, September 12-20. Call our Tour Coordinator at 800.337.0375 to reserve your spot today. Space is limited.

This month sees the launch of the Science Education Essentials series of curriculum supplements for K-12 Christian schools and homeschools. Prepared by the researchers and science education faculty of ICR, these practical resources will allow teachers to focus on selected science topics from a biblical creationist viewpoint.

Also announced this month is the launch of the new School of Biblical Apologetics in Dallas, beginning October 6. Applications are now being accepted for this Master of Christian Education degree program. Look for our ad in this month's *Acts & Facts* for more details, or visit www.icr.org/soba.

Summer is a great time for family vacations. But before you head off to your favorite destination, consider dropping a note to ICR along with a gift to help us through the lean summer months. Our battle doesn't take a vacation, so your prayerful support is vital for the continued impact of truth around the world.

Lawrence E. Ford

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From Madalyn Murray O'Hair to Eugenie Scott

LAWRENCE E. FORD

ecently, the prestigious publication *Scientific American* honored Eugenie Scott as one of its ten most influential science people in America, along with a manager at a computer chip company, an electric car industry executive, an infectious disease physician, and even Bill Gates from Microsoft.

Who is Eugenie Scott and why is she being honored? Did she contribute to lifesaving cancer research? No. Did she invent a device that will help millions of people in need? No.

Kate Wilcox of *Scientific American* writes of Scott:

Thomas Henry Huxley was the 19th century biologist known as "Darwin's bulldog" for his defense of the great scientist's ideas. The 21st century has a counterpart in the woman who describes herself as "Darwin's golden retriever." Eugenie Scott has emerged as one of the most prominent advocates for keeping evolution an integral part of the curriculum in public schools."^{1,2}

Trained as an anthropologist, Dr. Scott turned away from *doing* science and began promoting evolution. And not just educating citizens about evolution, but demanding of government officials that *only* evolution must be taught to schoolchildren across the country. Creation science, Intelligent Design, and any other alternative to Darwinian-based evolution must be eradicated from the educational landscape in America.

This is not the first time atheists and humanists have sought to influence education policy in public schools.

In 1963, the United States Supreme Court heard the case of Madalyn Murray, an American atheist and communist sympathizer, who demanded that her son should not be subjected to prayer and Bible reading in school. The Court ruled in her favor, and Ms. Murray (later O'Hair) became a hero among atheists around the world.³ She was also named the most hated woman in America by *Life* magazine.

Eugenie Scott, who serves as Executive Director of the National Center for Science Education (NCSE) in Oakland, appears to have taken up the mantle of Madalyn Murray O'Hair, establishing herself as the guardian of atheism in America's science classrooms. Not surprisingly, Dr. Scott is one of the signers of the 2003 *Humanist Manifesto*.

Rather than doing science or defending the evidence, Dr. Scott defends the 19th century ideas of Charles Darwin. She works tirelessly to ensure that all children in America never have to hear any science but Darwin's atheistic-based evolutionary ideas. And in this year of worldwide worship of the man Charles Darwin, who popularized the notion that molecules eventually became fish that eventually became people, the popular science community is falling head over heels for anyone defending this origins-by-accident theory that now saturates science and education.

Dr. Scott has won numerous awards and many honorary degrees, mostly for her "public service" in defending evolutionism and disdaining creationism. One of her awards in 1999, oddly enough, was given by the Hugh Hefner Foundation (named for the founder of *Playboy*) for her efforts in defending the First Amendment! (She later sat as one of the judges on the 2006 Hefner Foundation committee.)

Dr. Scott's NCSE motto is: "Defending the teaching of evolution in public schools." More specifically, she labors to keep "evolution in the science classroom and creationism out." Like Madalyn Murray O'Hair, activist Eugenie Scott wants all American schoolchildren to have only one side of the story in science—her side.

Thus, as part of her mission, she flies around the country to lecture school board members that they must eliminate any policy that includes examining the weaknesses of evolutionary theory, of which she believes there are none. She "consults" with attorneys involved in court cases over creation, Intelligent Design, and evolution, and occasionally testifies as an "expert" witness. She insists that institutions expose and expel suspect scientists who don't hold firmly enough to the evolution gospel. And while many of her opponents make their living conducting actual evidence-based science research, what has Eugenie Scott contributed to the advancement of science knowledge?

The narrow, one-sided approach to the study of science is apparent in her organization's recent lament that students in Texas will now be required to "examine 'all sides of scientific evidence." And that's a

bad thing?

That's like telling judges not to examine all sides of the evidence in a murder case.

That's like telling oncologists not to examine all sides of the evidence in a patient's test results.

That's like telling military commanders not to examine all sides of the evidence before sending their troops into battle.

And, of course, no one wants cancer researchers to examine all sides of the evidence in clinical trials of a proposed cancer-fighting drug, Right?

But according to Eugenie Scott, schoolchildren are less than properly educated (perhaps even harmed?) when they examine all sides of scientific evidence. Spoon-feeding them evolutionary dogma, rather than allowing them to examine actual evidence, is the end result for the "advocacy" efforts of the NCSE. And that helps students become critical thinkers?

So pervasive has Dr. Scott's activism become that TV gossip shows like *The View* have become forums for ridiculing those parents who would refuse to teach their children the beliefs of Charles Darwin. Co-host Joy Behar publically stated that not teaching Darwinism is tantamount to child abuse!

While Eugenie Scott may not ever take up the title of the most hated woman in America after Madalyn Murray O'Hair, she nonetheless is attempting to counter American public opinion on the creation-evolution controversy, where a recent Gallup poll demonstrated that over 60 percent of Americans believe in recent creation and not in evolution.⁵ Poll after poll in the United States consistently demonstrates that a majority of Americans don't believe in Charles Darwin's ideas. And yet evolution activists like Eugenie Scott, Richard Dawkins, P. Z. Myers, Michael Ruse, and many others continue their attempts to push Darwin's ideas as genuine science.

Dr. Scott, like those who honor her and those who set governmental policy in education, is much like a politician who loses touch with her constituency after taking office—she votes against the majority time after time. Splitting from the majority can be a good thing, if the majority is wrong. However, Dr. Scott's aversion to the investigation of true science—where

Eugenie Scott appears to have taken up the mantle of Madalyn Murray O'Hair, establishing herself as the guardian of atheism in America's science classrooms.

all of the evidence is fair game for study—demonstrates that her agenda is not anchored in the investigation of truth.

But Eugenie Scott is just one of many new faces in America's cultural war. She is a symptom of a larger malignancy growing even faster during these postmodern times in America's history. Because of changes in the nation's political, economic, social, and even religious landscape in recent years, activists like Dr. Scott in public education and leaders of the radical fringe groups among environmentalists, for instance, now ply their trade to politically pragmatic decision-makers at all levels of government, hoping to swing votes against traditional values and common sense, despite the will of the American citizens and even the clear evidence from scientific research.

A few years ago on the campus of Southern Methodist University in Dallas, the entire science faculty of SMU refused to sit down, behind closed doors, with scientists from the Intelligent Design Movement to dialogue about science. What were they afraid of? Were they not confident enough in their own understanding

of scientific data to enter into a friendly discussion about the evidence? What about examining evidence and analyzing data to discover truth? It's not on the agenda of these activist groups. Leveling attacks against certain elected and appointed officials (who happen to not hold these radical views) in order to oust them from school boards and other positions of influence is a much more efficient approach to accomplishing their goals.

There are others like Eugenie Scott who in their own locales are determined to push humanism and atheism on city councils, on school boards, on civic leaders, and on others who maintain the traditional values that formed the foundation of the United States. Science has become a hot-button issue in many state legislatures as the majority of citizens still want to see their children taught all sides of the evidence. Thus, there remain opportunities for people to counter the one-sided arguments of organizations like the NCSE.

And what about the role of Christians in this battle? While Dr. Scott will readily point out that many "religious" and "Christian"

people are "okay" with evolution, the fact is that many of her allies in the clergy and church have long abandoned the authority and accuracy of the Bible, which defines Judeo-Christian belief. It's time for evangelical Christians to redouble their efforts—influencing and persuading those in authority with the evidence that activists like Eugenie Scott don't want children to know and consider. And while laws still prohibit the teaching of biblical creation science within the public schools, training our children with critical thinking skills will empower them to do what is right in the classroom—examine, analyze, and critique *all* sides of the issues, especially science.

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Mr. Ford is Executive Editor.

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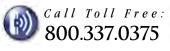
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ICR Speaker 1211 (Sherwi

CHRISTINE DAO

Not many people can put "discovered a new type of parasite" on their resumé. But ICR Senior Science Lecturer Frank Sherwin can.

He discovered the parasite Acuaria coloradensis1 while conducting research and attending graduate school at the University of Northern Colorado. Even though he was surrounded by peers and professors who held to the evolutiononly paradigm, Mr. Sherwin was awarded his masters degree in zoology (parasitology) in 1986.

But Mr. Sherwin had been a creationist long before attending UNC. During the Vietnam War, he worked on a naval aircraft carrier. As a new Christian, he found a creation tract that someone had left lying out that was authored by biochemist and creation scientist Dr. Duane Gish. Mr. Sherwin made the switch from evolutionist to creationist aboard that ship, with the scientific evidence presented in the tract sparking his interest in the life sciences.

After the Navy, Sherwin attended Western State College in Colorado and obtained his bachelors degree in biology. He then received his masters and went to work in the biology department at Pensacola Christian College in Florida for the next nine years. There, he taught various classes and labs, including general biology, anatomy and physiology, cell biology, microbiology, and parasitology.

In 1996, he joined the Institute for Creation Research in California, where Dr. Gish served as Vice President at the time. Mr. Sherwin wrote articles, gave lectures, and conducted media



interviews. When the ICR ministry and research headquarters moved to Dallas, TX, Mr. Sherwin moved with them.

As ICR's Senior Science Lecturer, Mr. Sherwin travels to seminars, conferences, and schools around the country to speak about creation science. His personable style and his extensive knowledge in the life sciences have helped many audiences understand the abundance of scientific evidence that supports the accuracy and authority of Scripture.

Some of his seminar topics include the wonders of the oceans, a subject he covered in The Ocean Book in 2004. Mr. Sherwin also discusses the scientific evidence for creation, as well as other aspects of creation, evolution, and the fossil record.

If you would like to have Frank Sherwin speak at your next creation science event, contact the ICR Events Department at 800.337.0375 or events@icr.org.

1. Sherwin, F. J. and G. D. Schmidt. 1988. Helminths of Swallows of the Mountains of Colorado, Including Acuaria Coloradensis N. Sp. Journal of Parasitology. 74 (2): 336-338

Ms. Dao is Assistant Editor.

here seems to be something about evolutionism that generates arrogance in many of its spokesmen. The concept is so wide-ranging that it purportedly can explain everything scientifically, from the origin of the cosmos to the origin of religion. Perhaps because it seems to eliminate the need for God, science itself becomes "god," and some evolutionists think they have become its official prophets and priests. One of their communicants, in fact, calls them its "shamans." He says:

We show deference to our leaders, pay respect to our elders and follow the dictates of our shamans; this being the Age of Science, it is scientism's shamans who command our veneration....scientists [are] the premier mythmakers of our time.¹

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One of these great shamans was Professor Ernst Mayr of Harvard. He told us that evolution can even answer the great "why?" questions of life. Many people of normal intelligence, including most scientists, have acknowledged that science can deal with questions beginning with "What?" and "Where," and "How," but not "Why?" The latter requires a theological answer, or at least philosophical. But not Shaman Mayr. He said:

There is not a single Why? question in biology that can be answered adequately without a consideration of evolution.²

After all, says Shermer, "cosmology and evolutionary theory ask the ultimate origin questions that have traditionally been the province of religion and theology" and evolutionism is "courageously proffering naturalistic answers

that supplant supernaturalistic ones and...is providing spiritual sustenance..."³

The investment of these leaders of the evolutionary faith with such pontifical authority, however, tends to generate in them an attitude of profound impatience with such heresies as creationism. Instead of opposing the creationists with scientific proofs of macroevolution, they resort to name-calling and ridicule. A professor at a Missouri university fulminates at the "lunatic literalism of the creationists," especially "the weirdness produced by leaders such as Henry M. Morris." 5

And even such an articulate and highly revered evolutionist as the late Stephen Jay Gould, in a voluminous book of 1,433 pages published just before his death, referred angrily to "the scourge of creationism." He had refused



to the standard debate technique of name-calling and ad hominem arguments commonly used when one has no factual evidence to support his position.

In his gigantic magnum opus, Dr. Gould provides a valuable historical review of the development of evolutionary theory, including the many conflicts among the evolutionists themselves, but in his 1,433 pages neglected to provide a single proof of macroevolution. The same was true of the esteemed Ernst Mayr, who in his own textbook⁹ could cite no such proof. Yet he had the gall to make the pronouncement that "every knowing person agrees that man is descended from the apes."10

ignorant creationists, since we theoretically know nothing about the subject, thus, according to Gould, have "always relied, as a primary strategy, upon the misquotation of scientific sources."11 We not only are ignorant, but also by him are assumed to be liars. Strange that, in his 1,433 pages, not to mention his

copious other writings, Dr. Gould failed to cite a single example of such misquotations.

Creationists are fallible human beings, of course, and it is possible that a few mistakes could be discovered among the thousands of quotes we have used from the evolutionists, but they would certainly be rare exceptions, as well as unintentional. They certainly could not obviate the tremendous case that has been built up against evolution just from admissions of evolutionists.

It would be easy if space permitted to multiply examples of the evolutionists' use of ridicule and insulting names in lieu of scientific evidence. But another type of evolutionary arrogance consists of their repeatedly professed amazement that anyone of intelligence could ever disagree with them.

One writer laments that even after the pope reaffirmed the commitment of the Catholic Church to evolution in 1996.

40 percent of American Catholics in a 2001 Gallup poll said they believed that God created human life in the past 10,000 years. Indeed, fully 45 percent of all Americans subscribe to this creationist view.12

Two eminent authors of an important article in the journal Evolution assume that this simply indicates "a lack of...understanding of evolution by the general public" and then suggests that the cause of this ignorance may be "the way the media communicates evolution and anti-evolution."13

Perhaps these authors were writing this with tongue-in-cheek! It would seem they must know that practically all the media strongly promote evolution and that the "general public" has been taught only evolution in public schools and secular colleges all their lives. Evidently all this brainwashing somehow has failed.

But why would the public favor creation?

Science itself becomes "god," and some evolutionists think they have become its official prophets and priests.

> Only a statistical minority of the "general public" attends church and Sunday school. Could it possibly be that evolution is so contrary to evidence and common sense that people intuitively know that evolution is wrong? And could it be that many of these have studied the evidences for themselves and thereby found that evolution is not really scientific after all?

> Higher education doesn't seem to help much. Alters and Nelson have made a fairly extensive survey of this kind of study.

Research results show that there may be surprisingly little difference in performance between majors and nonmajor introductory biology students. For example, in an ecology and evolutionary biology pretest of 1200 students, biology majors scored only 6% higher than non-majors. When the same students were posttested on the first day of the following semester, the researchers concluded "that majors, who received a much more rigorous treatment of the material, came through the semester with the same degree of understanding as the non-majors!"14

This strange intransigence on the part of science students when subjected to evolutionary teachings, they think, must be caused by religion!

The more deeply ingrained the religious teachings, the more the evidence was viewed through lenses different from those of students without contradictory religious beliefs.15

Well, that does make sense. If evolutionists can just persuade students to be atheists, it should be easier to make them become evolutionists!

There will always be a problem, however, in convincing students who believe that scientific generalizations should at least be based on scientific facts.

> Even more difficult will it always be to convince students who believe that the biblical account of creation is the true account as revealed by the Creator Himself.

> In the absence of either a divine "evolution revelation" or real scientific proof of macroevolution, it is hard to understand this

pervasive attitude of intellectual superiority (even over thousands of fully credentialed creationist scientists) as anything but evolutionary arrogance.

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Adapted from Dr. Morris' article "Evolutionary Arrogance" in the February 2003 edition of Acts & Facts.

Dr. Morris (1918-2006) was Founder of the Institute for Creation Research





Bone, An Engineering Marvel

RANDY J. GULIUZZA, P.E., M.D.

key design feature shared by many 100-year-old barns and some modern skyscrapers is that the external shell carries the building's load with a minimal use of internal columns for support. Internal floors and walls, if any, function in a structural way to stiffen the building. This resourceful design allows for a very strong structure with a maximum of interior space available for other purposes.

The bones in the human body capitalized on this design feature long before farmers and architects did. In fact, studying bone construction and function provides a mini-course illustrating important engineering principles.

Sophisticated Engineering Properties

A quality product begins with materials that have superior *engineering properties*. Bone is constructed much like reinforced concrete, in which a cage of steel reinforcing bars ("rebar") is embedded. The reinforcing "rods" in bone are made from minute strands of *collagen* fibers, 360 of which could be put end-to-end in the width of a human hair.

Each fiber is composed of three substrands wound in rope-like fashion around each other so tightly that along the area of contact only the smallest amino acid would fit in the space between the strands. In order to work, this particular amino acid would need to be designated for every third position in each strand—which is exactly what is specified in the DNA code. Collagen fibers are linked so strongly that their resistance to being pulled apart in tension is actually greater than the resistance present in an equal amount of steel rebar.

The bone's equivalent of the cement/aggregate part of concrete is composed of *apatite*. Apatite is a medium-hard mineral with properties similar to marble and is found widely distributed in rocks. A microscopic view shows

that individual apatite crystals are bound to the collagen fibers and linked as a continuous mesh—but at full size the structure appears solid. Compared to reinforced concrete, bone is more *flexible* and has more *strength* to resist crushing compressive loads. This is vitally important, since a man lifting a 70-pound box actually exerts a normal compressive load of over 500 pounds on one of his vertebrae—just imagine the loads of Olympic weightlifters.

An important area of engineering research is designing materials that are *fatigue* resistant. Fatigue is a progressive failure due to the localized and cumulative damage that oc-

Studying bone construction and function provides a minicourse illustrating important engineering principles.

curs when material is subjected to cyclic loading. Counteracting this is imperative, since in one year each hip bone for the average person will sustain about 1.8 million cyclic loads. Bone is one of the most fatigue resistant materials known due to its unique blend of strength, stiffness, and flexibility.

The actions of *bending* (compression/tension) and *torsion* (twisting) on bone are at their highest within the external shell. Dense-compact bone, able to resist these actions, is built into the shell. Inside, a three-dimensional network of small boney material resembling a porous sponge, called *spongy* bone, is found throughout small bones and at the ends of long bones. Spongy bone absorbs shocks and also contributes inner bracing or *stiffness*. The thin bony inner bracing elements do not grow randomly, but

look and function like the support struts in the Eiffel Tower. Some studies demonstrate that if engineers apply a stress-strain analysis to a cross section of bone, it reveals that the boney braces are built along lines of maximum stress relative to the mechanical forces applied to them.

Fundamental Engineering Principles

Engineering efficiency strives for designs that completely fulfill an intended purpose while using minimal resources. Engineers can only dream of highways so efficient that they automatically expand from two to four lanes with population growth and contract with declines. In contrast, bone size does constantly change in response to demand throughout a person's life.

This highly efficient process called *remodeling* ensures that more bone is built in specific locations when it is subjected to heavy-repetitive loads and less is built when it carries lighter loads. In infants, 100 percent of the calcium is exchanged in their bones every year. For people in their 20s, the equivalent of 20 percent of the skeleton is replaced yearly—though high stress areas like inside the head of the upper leg bone may be replaced up to three times per year.

Remodeling also functions as a non-stop *maintenance program* for bone by tearing out old bone and replacing it with new. Concrete or block walls would last for ages if they had an outer covering that could continuously replace weak spots, repair cracks, or swap out rusty rebar. Remarkably, bones do possess such a covering.

The *periosteum* is composed of two important layers. The thin, lightweight outer layer consists of very flexible but extremely *tough* high-tensile-strength fibers akin to high-performance membranes that are now being utilized to wrap new buildings. The inner layer is composed mostly of two different types of cells kept in delicate balance—one type destroys bone and the other builds bone. These crucial



cells are the workhorses for remodeling. The entire layer adheres tenaciously to the bone by means of strong, perforating fibers that embed in the collagen-apatite matrix. The concentration of these fibers varies and is appropriately very dense at spots where tendons connect to the bone.

A robust object withstands a lot of harm but continues functioning as intended. Sometimes the best response to a destructive force is to flex rather than to offer direct resistance. Automobile makers design "crumple zones" of materials intended to fold up or shear apart so crash forces are absorbed rather than transmitted to occupants.

Bones resist fractures in similar fashion. At the smallest level of collagen fibers, not all of the bonds are fixed solid. Some, called *sacrificial bonds*, are weaker bonds intended to break upon impact. Their exact arrangements in bone absorb and then disperse many forces that could rapidly reach the fracture threshold. But unlike a car's crumple zone, a bone's sacrificial bonds can repair themselves after the trauma, making them ready for another strike.

Damage Repair

Bones do have structural limits and can succumb to fractures that range from hairline to fully displaced. The cleanup and repair of bone exemplifies a thoughtfully engineered *construction plan*. A major fracture tears blood vessels, causing extensive bleeding and tissue swelling (pain results from torn or compressed nerves). Fortunately, blood eventually clots around the fracture, starting the healing. Within 48 hours, cells invade the blood clot and use it as a template to build a micro-fiber meshwork that acts as the "scaffolding" supporting the rest of the repair work. Other prerequisites to proper healing include broken bone ends being brought close together, aligned properly, and immobilized, with a sustained blood supply and the area kept free of infection.

The fracture zone is full of bone fragments and dead cells. Cells specialized in tissue demolition dismantle unusable bone fragments into their component parts. Other cells engulf and digest tissue debris. Valuable recyclable materials are saved and actual wastes carried off in the bloodstream to be discarded.

Man-made splints support fractures to prevent large damaging movements, but the broken ends still need further stabilization. Certain cells, called *fibroblasts*, work off of the "scaffold," laying down collagen fibers to span the break. Once some of the collagen bridge is made, new cartilage can be placed concurrently around the fibers. Fibroblasts will transform themselves into *chondroblasts* to produce this

cartilage. Once built, the collagen-cartilage unit functions as new inner rebar, forming material (controlling the shape and location of the new

bone), and the temporary bracing—all in one package.

Bones are living tissue and need to be nourished. Inside bone is an ingenious system of microscopic canals that comprise a thoroughfare to shuttle nutrients. Bonebuilding cells have multiple slender arms that radiate out from the cell body. When new bone is made, hundreds of these cells join their arms together to form a three-dimensional network that will become the basis of the canal system.

These cells will actually build new bone all around themselves and thus become entrapped within the bone. In essence, the cells not only make boney "concrete," but amazingly become their own forming material for the interior canals. With its job making bone now complete, this cell transforms itself into a nourishing/pressure-sensor cell called an *osteocyte*. Repair and remodeling processes make bone so resilient that in time a repaired bone may look almost identical to the original.

Conclusion

Bone structure is an engineering marvel. For its stress environment, it achieves nearly maximum mechanical efficiency with minimum mass, which designers call an *optimized* structure. Thus, bones remain a testimony to the genius of their Creator, the Lord Jesus Christ. In fact, bones are such an important feature in human design that they will remain with us for

all eternity in our resurrected bodies, as Jesus demonstrated for His disciples (Luke 24:39).

Dr. Guliuzza is ICR's National Representative.







lobal warming continues to make headlines and drive policy decisions, based on the widespread assumption that manmade carbon dioxide emissions are the main contributing factor to an increase in world temperatures. My recent *Acts* & Facts articles have questioned that assumption, with the latest discussing a new theory of climate change developed by Henrik Svensmark that offered a physical explanation for the connection between solar activity and global warming on the earth.

Svensmark essentially theorized that when the sun is active, it deflects cosmic radiation from outer space, which reduces low cloud cover and allows more solar radiation to strike the earth's surface, resulting in warming. When the sun is quiet, it allows cosmic radiation to increase the cloud cover, which reflects more solar radiation, cooling the earth. The sun has most recently been showing a decrease in activity, which within the next few years may well result in a decrease in global temperatures.

Fewer Sunspots

Sunspots are an indicator of an active sun. These planet-sized islands of magnetism appear as dark areas on the surface of the sun and reveal intense convection in and below the photosphere. They are sources of solar flares, coronal mass ejections, strong solar winds, and ultraviolet radiation. The number of dark, cooler sunspots normally varies in frequency with a

period of about 11 years. When the sun is active, the number of sunspots can exceed 100, and when it is quiescent the number may be zero. Current and archived images of the sun may be found online at the Space Weather website.³ Figures 1a and 1b show the sun on December 5, 2001, when it was active, compared with May 7, 2009, when it was quiescent.

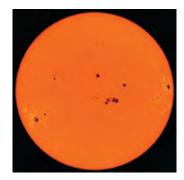


Figure 1a. Sun at active time on December 5, 2001. Credit: SOHO/MDI.³



Figure 1b. Sun at quiet time on May 7, 2009. Credit: SOHO/MDI.³

The sun is currently in a quiet period, as shown in Figure 2. In fact, the current sunspot minimum is setting records for its length. There were no sunspots observed on 266 of the 366 days in 2008 (73 percent), and as

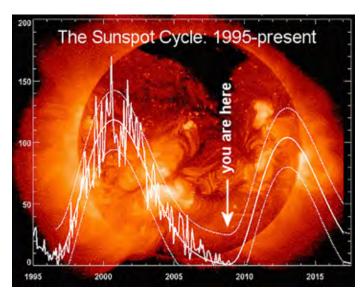


Figure 2. The sunspot cycle from 1995 to the present. The jagged curve traces actual sunspot counts. The smooth curves are fits to the data and one forecaster's prediction of future activity. Credit: David Hathaway, NASA/MSFC.4

of May 7, 2009, there had been no sunspots on 109 of the 127 days since the year began (86 percent). Solar physicist Dean Pesnell of the Goddard Space Flight Center concluded, "We're experiencing a very deep solar minimum." Sunspot expert David Hathaway of the Marshall Space Flight Center agreed, stating, "This is the quietest sun we've seen in almost a century."

The Sun's Connection with Climate

Scientists are baffled by what they are seeing on the sun's surface, and this lack of activity could have a major impact on global warming. For many years climatologists thought that the sun should have an effect on earth's weather. But after many years of unsuccessful attempts to explain temperature and precipitation variation based on sunspot number, most dismissed the connection because statistically significant correlations could not be demonstrated. And the magnitude of the global variation in temperature and precipitation (about 5 percent) did not seem to be explainable by the small (less than 0.1 percent) variation in solar radiation. Today there is still reluctance to accept a sunspot explanation because of its connection to those who deny climate change. But now the speculation about an earth/sun connection has grown louder because of what is happening to the sun. No living scientist has seen it behave this way.

The energy coming from the sun is the primary driving force for the earth's climate system. It drives the global circulation patterns of the atmosphere and ocean and is a key component of the greenhouse effect. When the sun has gone quiet like this before, it has coincided with a slight cooling of the earth. For example, the Maunder Minimum lasted about 50 years in the middle of the Little Ice Age between about 1550 and 1750 A.D. It had nearly zero sunspot activity and temperatures were generally cooler over most of Europe. When the sun is active, it coincides with warming. For example, the sun was very active from about 1850 to 2000 and the average global temperature in the northern hemisphere warmed during that period. Since about 2000 the sun seems to have declined in activity. There is speculation by some that if the sun is now growing quiet, cooling may be starting.

Will Solar Inactivity Lead to Cooling?

Supporters of the carbon dioxide theory of global warming respond in two ways to recent evidence for changes in the sun—they say that either there is no connection between solar activity and global warming, or that if there is a connection, the effect of carbon dioxide on global warming is much stronger than the solar influence. The ultimate answer as to which theory is correct may have to wait a few years to see if a continued decline in solar activity leads to cooling or not. However, a few hints that global cooling has begun may be evident in the cooling temperatures across the U.S. in 2007-2008 shown in Figure 3, and the apparent return to more normal sea ice extent in the Arctic.5

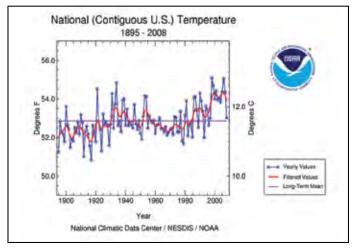


Figure 3. Average temperature over the contiguous United States from 1895-2008.6

It is true that the observed increase in carbon dioxide in the atmosphere likely contributes to global warming, but it is not at all evident that it is the primary cause. Unfortunately, the actions by advocates of carbon dioxide-caused global warming to mediate the effect may prematurely incur a massive debt load on our nation before we know the answer to the question above.

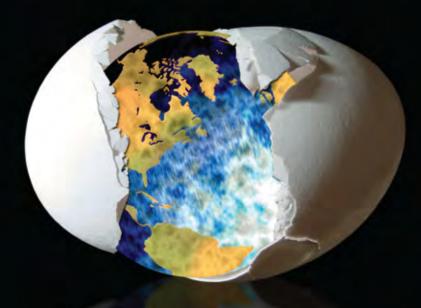
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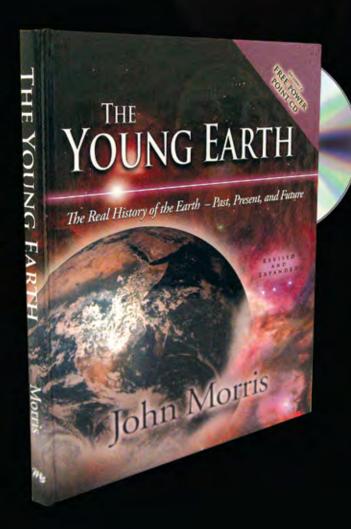
Dr. Vardiman is Chair of the Department of Astro/Geophysics.



13



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Sedimentary Structure Shows a Young Earth

JOHN D. MORRIS, PH.D.

edimentary rock, which makes up most of the surface cover of the continents, is by definition deposited by moving fluids. Normally, the sediments contain evidence of their waterborne history in what is called *sedimentary structure*. These features may be in the form of cross bedding, paleo-current markers, graded bedding, laminations, ripple marks, etc. If the hardening conditions are met (presence of a cementing agent and pressure to drive water from the matrix), the sediments soon harden into sedimentary rock, making the "structure" somewhat permanent, although erosion will eventually destroy even hard rock features.

Rocks abound with such markings, virtually frozen in place in the solid rock. Today when we drive through a road cut, we can observe these reminders of past sedimentary processes and discern many things about the moving fluids, including their direction, velocity, chemistry, etc.

Geologists have traditionally surmised that the deposits are typically the results of the calm and gradual, uniformitarian processes currently in operation. Conversely, more recent geologic models recognize that processes of the past acted at rates, scales, and intensities far exceeding those of today. They were the same basic processes, but were acting at catastrophic levels, accomplishing much depositional work in a short time. Continuing catastrophic action would quickly deposit a second layer, and then more. The question remains: How long ago did this rapid depositional sequence of events take place?

While the muddy sediments are still fresh and soft, the ephemeral sedimentary structure within the deposits is in jeopardy of being obliterated by the action of plant and animal life. We know that life proliferates in every near-surface layer of soft sediment. This is true on land and especially true underwater. Plant roots penetrate through the soil. Animals such as worms, moles, clams, etc., burrow through the sediment, chewing up and turning it over in search of food or shelter through a process called

bioturbation. This obviously destroys the sedimentary structure. But how long does it take? A recent study undertook to determine just how much time was required to destroy all remnants of water action.¹

Numerous recent storm deposits, dominated by sedimentary structure, were investigated in a natural setting. It was observed that within months, all sedimentary structure was destroyed, so intense is the bioturbation in soft sediments. As long as the sediments are still soft, they will be bioturbated and the structure lost. Yet the geologic record abounds with such sedimentary structure. This comprises a good geologic age indicator, and in fact points to a young earth. Consider the total picture.

Virtually all sediments required only a short time to accumulate in various high energy events. Hardening of sediments into sedimentary rock itself normally takes little time, if the conditions are met. Soft at the start, the sediment's internal character would necessarily be subjected to the rapid, destructive action of plant and animal life. Within a relatively short time (months or years), all sedimentary structure would disappear through their action. The surface of each layer would be exposed to bioturbation until the next layer covered it and until hardening was complete. Sedimentary structure is fragile and short-lived, yet such features abound in nearly every sedimentary rock layer.

Each layer was laid down in a short period of time. The deposit could not have been exposed for long before the next deposit covered it, isolating it from destructive bioturbation. Thus the length of time between the layers could not have been great. The total time involved for the entire sequence must have been short.

Of course, Scripture specifies that the time elapsed for all of creation and earth history has not been very long. Geology confirms it.

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Dr. Morris is President of the Institute for Creation Research.

volutionists have insisted that man was not created in God's image, but instead is related to the sponge. An equally unflattering pronouncement of human origins was made nine years ago by two Darwinists: "There is but one tree of life, one universal phylogeny [evolution] that connects humans, onions, mushrooms, slime molds and bacteria."

In 2003, evolutionist Werner Müller discussed this strange sponge/human relationship in a paper addressing the complexity of metazoans (members of an animal subkingdom that includes people).3 Figure 1 of Mueller's paper shows "hypothetical steps towards the evolution to the Urmetazoa with the Porifera [sponges] as the next closest taxon." Thus, imaginary steps led to the unobserved appearance of an unknown or imaginary ancestor (Urmetazoa). Empirical science in this area is supposed to be conducted by finding and classifying sponges from the fossil record or living world. Holding up a sponge as "our ancestor" must be based on philosophical convictions, because there is no true science involved.

Müller stated, "The facts compiled also imply that the ancestor of all metazoans was a sponge-like organism." Six years later, an international research group found in a "most comprehensive study" and "with a high degree of confidence" that the sponge "was not the ancestor of all other animals."4 Even under the wrong paradigm, some evolutionists are getting certain pieces right when they follow the evidence where it leads. Led by researchers at the Ludwig-Maximilians-Universität München, the study found "that humans did not descend from a sponge-like organism." It also suggested that "the nervous system only evolved once in animal history."4 Creation scientists would clarify that human and animal nervous systems were created once during the six-day creation week just thousands of years ago.

The LMU researchers also reported a re-



Surprising Discovery: **Sponges and Man Are Not Related!**

FRANK SHERWIN, M.A

curring conundrum that plagues all evolutionary "trees": Darwinian interpretations based on fossils give different results than those based on molecules like protein and DNA.⁵

The exact relationships among these early animal groups are still controversial, as different research groups have often obtained conflicting results. In particular, results from morphological studies, which look for structural similarities between different organisms, frequently contradict the results from molecular biological studies.⁴

British evolutionist Peter Forey said the molecular evidence is "fraught with difficulties of interpretation." It is difficult—if not impossible—for secular scientists to decide which evolutionary tree to use when fossils and the molecular evidence disagree. This problem arises because these creatures did not evolve

from one into another, but were instead created as distinct kinds.

Bilaterians are creatures with bilateral symmetry, which excludes sponges, jellyfish, and sea stars. Interestingly, the LMU report also stated, "And yet, another recent and less comprehensive study concerning the non-bilaterians proposed the unorthodox hypothesis that the comb jellies had already diverged from all other species even before the sponges." This "unorthodox hypothesis" actually makes perfect sense in the creation science model. Comb jellies, in the phylum Ctenophora, are unique and set apart—having been created that way.

Where did the early protochordates come from? In 2006, four evolutionists had a fancy way of admitting they did not know: "Despite their critical importance for understanding the origins of vertebrates, phylogenetic studies of chordate relationships have provided equivocal results." Today, conflicting secular stories compete over vertebrate origins. Since there is no evolutionary pattern inherent in any biological information, Genesis must be accurate.

God created kinds to reproduce after their own kinds. We can trust our origin (and destiny) to the One who was there "in the beginning."

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Mr. Sherwin is Senior Science Lecturer.



The Ida Fossil: A Clever Campaign for a Lackluster "Link"

BRIAN THOMAS, M.S.

da is the stunningly well-preserved fossil that has been hailed as "our connection with the rest of all the mammals." A massive publicity campaign, including books, videos, a website, and public unveilings, coincided with the May 2009 publication of a scientific study conducted on the fossil. But published statements from creation and evolutionary scientists alike indicate that Ida's accolades as a "missing link" are thoroughly undeserved.

University of Oslo paleontologist Jørn Hurum, co-author of the *PLoS* report detailing the fossil, claimed, "This fossil is part of our evolution." Although Ida appears very lemurlike, Hurum considers her transitional to haplorhines, a broad grouping of primates thought to exclude lemurs but include monkeys and apes. However, Chris Beard of the Carnegie Museum of Natural History wrote that "Ida is not a 'missing link'—at least not between anthropoids and more primitive primates." And Duke University paleontologist Richard Kay stated, "There is no phylogenetic analysis to support the claims" that Ida is a missing link.

Not only does Ida not have transitional features that a missing link should have, but she was found in a rock layer that is too young for her to even be a candidate for a "missing link" status. Harvard-trained paleontologist Kurt Wise told the *Baptist Press* that, according to evolutionary timescales, "Ida is much younger than both good fossils of lemurs and good fossils of monkeys."

What was Ida, then? Other than a few different teeth, a single ankle bone that is unlike that of modern lemurs, and the absence of modern lemurs' "toilet claw," she appears very lemur-like. To be an evolutionary link, "Ida would have to have anthropoid-like features that evolved after

anthropoids split away from lemurs and other early primates. Here, alas, Ida fails miserably."⁴ She appears to be just what biblically-informed science would predict—a fully-formed distinct creature with no transitional features that was buried in a catastrophic event.

With such strong evidence that Ida is not a missing link, why has there been such a widespread campaign claiming that she is? Ida is so the whole theory?

How much better it would be to rely on God-inspired rather than man-invented history. From the perspective of the Scriptures, one can understand not only why the "links" are missing, but how catastrophic events related to the Flood caused fossilization in the first place. No amount of media hype can truly replace real science and biblical history.



well-preserved, and evolutionary theory is currently in such need of an icon, that the match is being made, with or without supporting science. The extravagant marketing of this fossil purported to be "proof of evolution" seems to have been timed for the effective sale of the evolutionary theory itself. With so many fossils like "Lucy" having been confirmed as evolutionary dead ends, the evolutionary camp is running out of missing links. As Hurum told UK news outlet *The Guardian*, "You need an icon or two in a museum to drag people in."

So, Ida is destined to join the ranks of over a century of fossil fizzles, including Neandertal (human), Ramapithecus (orangutan), and *Homo habilis* (not a real taxon)—not to mention *Archaeopteryx* (bird), *Archaeoraptor* (a fake), *Pakicetus* (land mammal fragments), and many others. Since each evolutionary "link" turns out to be false, what does that say about

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Mr. Thomas is Science Writer.



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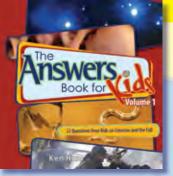
The Answers Book for Kids

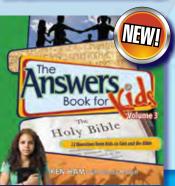
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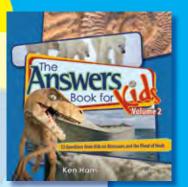
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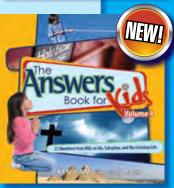
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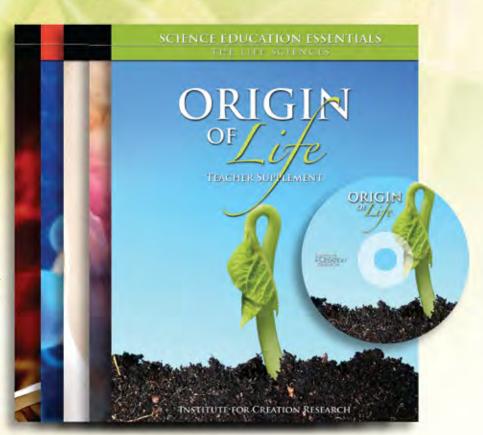
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LETTERS TO THE EDITOR

My college psychology professor...told me, in a personal conversation, to remember that the presuppositions are ultimately important. It is the presuppositions that form the conclusions. And in the debate between evolution and creation are two opposing fundamental *religious* presuppositions upon which both conclusions are based....The debate was not and is not a debate between science and religion, but is one between religion and religion, atheism and theism. Science is simply the sphere in which the debate is taking place.

--G.M.

I want to commend you on your devotional *Days of Praise*. If it were all I had to read daily I would be so encouraged by the Scriptures quoted and comments made. Even if I didn't have a Bible it would help me to meet God every day. Please continue the good work.

— *L.M.*

Thank you much for that gem of a magazine, *Acts & Facts*. I read every inch of it, even though my 97-year-old brain stumbles at articles about "molecular" and "morphilogical" stuff. What fun God must have had creating some of the creatures He did, especially the ones like tadpoles which go through many changes to become grown-up. The evolutionists can't explain it, any more than they can tell us why the sun comes up every day.

-M.W.

Thank you for the monthly *Acts & Facts*. I have enjoyed the April issue very much. I found myself laughing and crying when reading the article on "Balancing Body Temperature." Laughing in sheer enjoyment of the realization once again of how amazingly, intricately fashioned we are, and crying when realizing how foolish and tragic it is to believe we were formed by accidental random processes.

— S.H.

Just wanted to say "Thank you so much" for all the effort that went into publishing *The Defender's Study Bible* online. Such a blessing. I am just thrilled to have found this valuable resource online.

— J.N.

Editor's Note: To access *The Defender's Study Bible* online, go to www.icr.org, click the Search link, and select "Bible." You can search both the Bible and ICR founder Henry M. Morris' extensive reference notes.

Correction: In Brian Thomas' June 2009 article "Fossilized Biomaterials Must Be Young," the word "carbon" in the last sentence of the first paragraph should have read "radiocarbon."

Have a comment? Email us at editor@icr.org. Or write to Editor, P. O. Box 59029, Dallas, Texas 75229.



This month on "Science, Scripture, & Salvation"



WEEKEND OF JULY 4

Creation and the Constitution

Great men like George Washington and John Adams founded America on biblical principles. However, through the years evolution and atheistic thinking have steered us off course from our biblical foundation. Just how far have we deviated from the original intent of the Founding Fathers? Listen in as we discuss creation and the Constitution and see what happened in America that changed the way our founding documents are viewed.



WEEKEND OF JULY 11

Lingering Effects of the Scopes Trial

The famous 1925 Scopes Monkey Trial had far-reaching repercussions that still affect us today. Many people do not realize that what happened at that courthouse in Dayton, Tennessee, changed the course of education, culture, and the church in America. Join us as we discuss the Scopes Trial and consider what lessons we can learn from it.



WEEKEND OF JULY 18

The Immune System

God has given our bodies a wonderful defense system that protects against germs and diseases. The immune system plays an important role in maintaining our health, but how did it work before Adam sinned and there was no sickness to fight? Don't miss this intriguing discussion about what the immune system may have been like in the beginning when the world was perfect.



WEEKEND OF JULY 25

Memory and the Human Brain

The detailed workings of human memory are shrouded in mystery. Why do our brains retain certain information, but discard other data? Was this intricate working of the brain formed accidentally or by design? Don't forget to listen in as we learn some fascinating things about memory and the human brain and see how the design and function of this incredible organ give evidence for creation.

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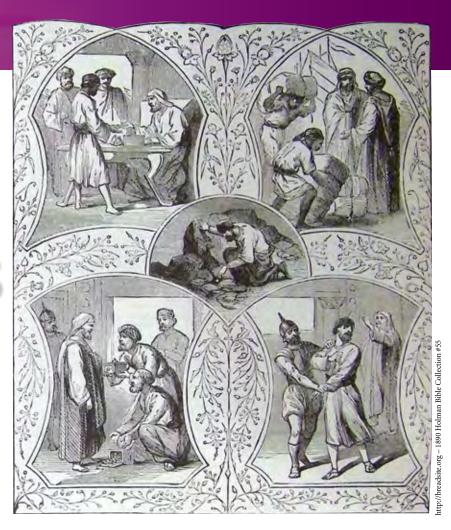
The Stewardship of Talents

HENRY M. MORRIS IV

rinciples of biblical stewardship, to which this page of *Acts & Facts* is dedicated, apply not only to the individual believer, but also to Christian organizations such as the Institute for Creation Research. All Bible-believing Christians and organizations know that our Lord will one day hold us accountable for how we used His resources, as He illustrated in the parable of the talents (Matthew 25:14-30). As such, we should earnestly seek to maximize His provision to the fullest extent of our capabilities and skill.

The ultimate focus of this parable, however, should be understood in a spiritual sense. Our Lord provides tangible and intangible "talents" in various degrees—be they of wealth or intelligence, skill or influence—and expects us to sow bountifully with an eternal perspective that will reap spiritual gains for His kingdom. At ICR, we take this mandate very seriously, and prayerfully and carefully apply the gifts we receive to communicate the message of salvation as seen through His majestic creation.

ICR accomplishes this, of course, primarily through our publications Acts & Facts and Days of Praise. You are already familiar with the breadth of articles in this Acts & Facts magazine, which provides important insights into issues related to origins and scientific research, as well



as perspectives on how the biblical message impacts critical thinking. *Days of Praise* provides a daily portion of hearty "meat" for the Christian (Hebrews 5:14), delivering short devotionals that challenge, convict, and encourage a closer walk with our Creator.

We are delighted to provide both of these publications free of charge to all who ask—and we wish to keep doing so. But the expense for such quality materials is considerable, costing ICR over \$1,500,000 each year to prepare, publish, and mail these periodicals to those who have requested them. Virtually all of the expense is borne by a small band of faithful donors who understand the eternal value these publications provide, and who share some of their resources with us so that we can continue this vital part of our ministry. And while we will continue offering these materials free to all who sign up, we also need to be good stewards of the gifts God has provided to us through His people.

To this end, ICR has mailed letters over the last several months to tens of thousands of our subscribers who haven't contacted us in a while, asking them to let us know if these publications are still meaningful and useful to them. We have received a good response thus far, but a sizeable majority still has not responded. If this applies to you, please know that we would like nothing more than to continue making these publications available to you—but we need to hear from you.

Otherwise, and regrettably, this issue of *Acts & Facts* will be your last.

If you are benefiting from these materials and are still interested in continuing to receive them, please consider how the Lord may be blessing you through our ministry. Let us know what you would like to do by returning the tear-off response slip you received in the previous letters so we can keep your subscription active. You may also email us at subscriptions@icr.org with your name and address, or call us

at 800.337.0375 and ask for the Subscriptions Department. We look forward to hearing from you! ●

Mr. Morris is Director of Donor Relations.





HENRY M. MORRIS III, D.MIN.

For the invisible things of him from the creation of the world are clearly seen, being understood by the things that are made, even his eternal power and Godhead; so that they are without excuse.

ROMANS 1:20

here has been much discussion about the amount and quality of the "natural" revelation God has displayed in the universe He created. Much has been discovered about the processes and functioning of our world—so much that some have suggested that these facts of science must be used to "interpret" the written text of Scripture.

What is the rightful place of the "things that are made" in our understanding of God's truth?

The written words of Scripture are inspired, and it is clear from passages like Psalm 19:1-4 and Romans 1:18-20 that God created the universe to "speak," "declare," and "show" much of His nature. It follows then that the creation itself would make "clearly seen" that which can be understood about the Creator—unless there is a willing rebellion against that truth (Romans 1:21-25).

The creation declares and speaks of God's glory, but the "law of the Lord is perfect...the testimony of the Lord is sure....The statutes of the Lord are right" (Psalm 19:7-8). Created things tell us something about the nature of God, but the *revealed words* define, clarify, limit, and command. The *writings* (the Scriptures) are that which is inspired (*God-breathed*, 2 Timothy 3:16-17).

Natural revelation, therefore, provides only limited insight into truth. Final authority rests in the *written* revelation that God "breathed" into a living record (1 Peter 1:23) that "shall not pass away" (Mark 13:31). We can only understand the events of creation by revelation, not by discovery. Science cannot duplicate or comprehend creation. Man can merely steward that which is preserved by the Creator in His patient mercy (2 Peter 3:8-9).

What we speak and teach about the creation, we speak and teach about the Savior.

Jesus Christ is clearly both Creator and Savior. Such passages as John 1:1-14, Colossians 1:16-19, and Hebrews 1:1-3 manifestly declare that Jesus, the Word made flesh, is none other than our Lord and Creator. What is revealed to us about the nature of the Creator teaches us about the nature of the Savior. The Gospel points us to "worship him that made heaven, and earth, and the sea, and the fountains of waters" (Revelation 14:7).

The doctrine of creation cannot be separated from the doctrine of salvation. Only the omnipotent, omniscient, omnipresent Creator could accomplish the work of redemption on Calvary, implementing an eternal reconciliation of all things to the immutable will and purpose of the Creator-Redeemer.

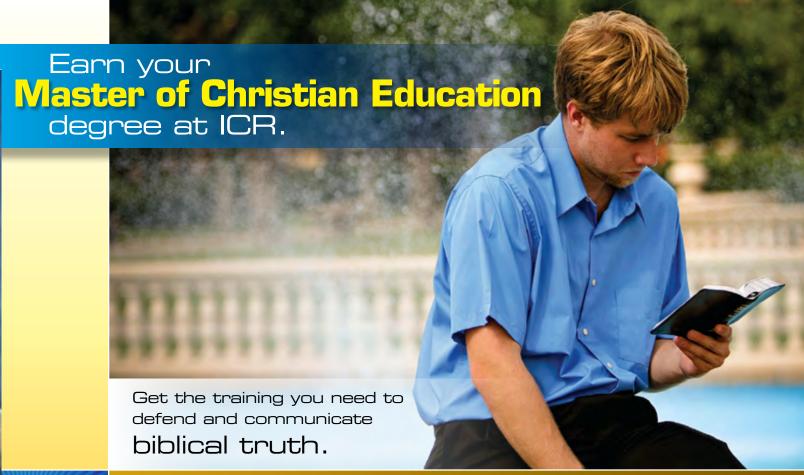
Since Scripture reveals that the creation demonstrates the nature of the Creator, the inextricably bound attributes of the Father, Son, and Spirit cannot be in conflict with the message of the created things. Nor can the message of the gospel conflict with the message discovered in the creation. God cannot lie (Titus 1:2)—either by word or by action.

Creation issues are foundational to a biblical worldview.

The gospel we present must include "all the counsel of God" (Acts 20:27). The secular worldview is in direct opposition to a Creator. It knows and acknowledges nothing of the need for eternal redemption. It speaks only of self-centered appeasement. Naturalism at its core is atheistic, and the thrust of evolutionary theory is to tell the story of our origins *without* God.

We then who have been given the high privilege of being "ambassadors for Christ" (2 Corinthians 5:20) must ensure that our teachings about the creation, the Dominion Mandate, the fall of man, and the plan of redemption are as accurate as our human minds can portray, guided by and submitted to the revealed words of our Creator.

Dr. Morris is Chief Executive Officer of the Institute for Creation Research.





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