

# ACTS & FACTS

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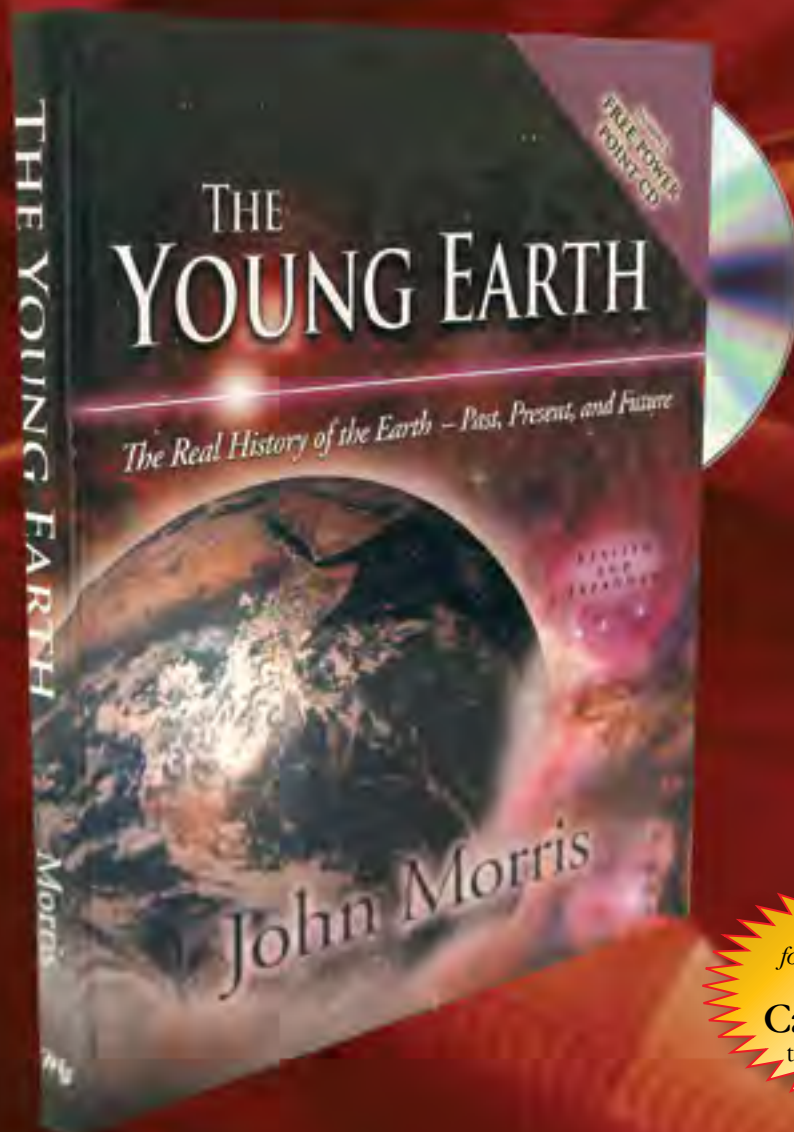
VOL. 37 NO. 2



*Keep thy heart with all diligence;  
for out of it are the issues of life.*

PROVERBS 4:23

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## Issues of Life

I was recently invited to be a keynote speaker at a leadership planning meeting for international right-to-life advocacy groups. We gathered in Amsterdam, Holland, a city renowned for its history, beauty, and culture.

Parenthetically, while I was there I took time to visit the “Ark,” a half-size model of Noah’s vessel that consists of several barges welded together, floating on the waterways of Holland. Inside is a large and attractive creation museum, complete with exhibits from the Grand Canyon and Mount St. Helens. The owner, a professional contractor and devout Christian, uses the Ark as an evangelistic tool, traveling around Europe.

Organizers of the Amsterdam conference correctly identified evolution as the root cancer underlying many of society’s woes, and proposed linking creation ministry more closely with issues concerning the value of life. Many of the Christian leaders who were present loosely believed in creation, but had never before made the connection between evolution and such societal ills as abortion, infanticide, promiscuity, racism, etc.

Conference attendees were treated to a special behind-the-scenes tour of Corrie ten Boom’s “hiding place.” To reinforce the connection between the Holocaust and abortion, they also visited a concentration camp in north Holland with a resident who had lived nearby in his youth. A press conference was held at the European Parliament to underscore the damage done to women by abortion. One supportive representative of

Parliament related that just a few days before, Parliament had refused to pass a resolution banning infanticide, the killing of unwanted infants. We were told how the abortion of so many millions of babies in the womb has caused the population of several European countries to decline to crisis levels. And yet the incessant call for abortion and euthanasia continues. Will the “evolutionary” extinction of the unfit (i.e., survival of the fittest) drive us past the point of no return?

It brought to mind a poignant passage of Scripture. Commenting on society’s evils, the psalmist asks in Psalm 94, “LORD...how long shall the wicked triumph?...They slay the widow and the stranger, and murder the fatherless. Yet they say, The LORD shall not see...” (v. 3, 6, 7). But God’s patience has a limit. “He that planted the ear, shall he not hear? he that formed the eye, shall he not see?...judgment shall return unto righteousness” (v. 9, 15). He warns that even those who conduct their shameful deeds openly, who “frameth mischief by a law” (v. 20), will meet their ultimate doom (v. 23).

Until then we must continue to study, teach, and represent Him well as “ambassadors for Christ” (2 Corinthians 5:20). So much more than an academic belief in “creation” is at stake in creation ministry. Thank you for standing with us in this worthy battle.

  
**John D. Morris, Ph.D.**  
 PRESIDENT



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# Unlocking the Mysteries of the Human Heart

HENRY M. MORRIS III, D.M.I.N.

O THAT THERE WERE SUCH AN HEART IN THEM, THAT THEY WOULD FEAR ME, AND KEEP ALL MY COMMANDMENTS ALWAYS, THAT IT MIGHT BE WELL WITH THEM, AND WITH THEIR CHILDREN FOR EVER!

(Deuteronomy 5:29)

God's emphasis on the heart pervades Scripture. The English word appears in no fewer than 878 references in the Bible, with the related Hebrew or Greek words appearing in another 55 passages and translated as either "mind" or "understanding." Of the 66 books of the Bible, only seven do not use the term.

That the heart of man is distinct from either "soul" or "mind" is clear from the Lord's emphasis in His allusion to Deuteronomy 6:5, as recorded in Matthew 22:37: "Jesus said unto him, Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy mind" (see also Mark 12:30 and Luke 10:27). But just what is this heart that God so explicitly requests love from? One must collect the biblical data before a correct conclusion can be drawn.

The phrase "with all thy (thine, their) heart" is used 20 times in the Bible, citing the heart as the key to obedience, love, and service (Deuteronomy 10:12); repentance and turning back to righteousness (1 Kings 8:47-49);

trusting in God's direction (Proverbs 3:5-6); and, of course, believing unto salvation (Acts 8:37; Romans 10:9).

Whatever the heart is, it is the part of the human condition that is absolutely necessary for a right relationship with the God of eternity. The heart is surely the fountain from which the nature of a person is revealed. Several obvious statements are made in Scripture:

"Keep thy heart with all diligence; for out of it are the issues of life." (Proverbs 4:23)

"...out of the abundance of the heart the mouth speaketh." (Matthew 12:34)

"A good man out of the good treasure of the heart bringeth forth good things: and an evil man out of the evil treasure bringeth forth evil things." (Matthew 12:35)



Whatever the heart may involve, it is clearly the source of our “real” character.

Our heart can commit sin—even apart from carrying out the actual deed (Matthew 5:28)—and is naturally linked to the “treasure” we lay up for ourselves (Matthew 6:21). The heart is capable of religious deceit (Matthew 15:8), and in its natural state is full of wickedness (Jeremiah 17:9). If left to follow its natural inclination, the heart will become hardened and unreachable with the truth (Mark 6:52; Romans 2:5). Indeed, it appears that we have the ability to harden our hearts even beyond their natural tendency to rebel against God (Hebrews 3:8). Mercy! No wonder Paul cried, “O wretched man that I am! who shall deliver me from the body of this death?” (Romans 7:24).

The answer to that desperate question is, of course, the “new” heart that comes with the “new birth” (Jeremiah 31:33; Hebrews 8:10; 10:16). God promises that we will find Him if we seek Him with “all [our] heart” (Jeremiah 29:13). We are also told that even the “desires” of our hearts will be granted when we delight in the Lord (Psalm 37:4). Once we have learned to trust God, our hearts can rejoice and be glad (Psalm 28:7; Zechariah 10:7), ultimately reaching a steady “comfort” and full assurance that acknowledges the great mysteries of our relationship with God (Colossians 2:2).

But we still have not yet uncovered what the heart *is*. It is abundantly clear that the heart is vital to our behavior, our salvation, our understanding, and our commitment—either to righteousness or to evil. But what *IS* the heart?

The heart can reason (Ecclesiastes 7:25; Mark 2:8), and has “thoughts and intents” (Hebrews 4:12). The heart is in some way connected to our flesh (Ezekiel 36:26; 2 Corinthians 3:3), but is also definitely associated with our conscious understanding (Proverbs 2:2; 15:14; Matthew 13:15; Ephesians 4:18). But this connection goes deeper than the conscious mind. The heart is the source of a “hidden man” that produces qualities in character (1 Peter 3:4). The heart can feel pain (Nahum 2:10) and anguish (2 Corinthians 2:4), as well as sorrow or joy (Isaiah 65:14).

It seems that the heart is inextricably intertwined with our whole human nature—influencing and being influenced by everything we do! It operates something like a network of spiritual connections that senses every thought and every emotion, both external and internal, and will feed back

its own desire and focus, influencing and controlling our behavior more than we realize. Perhaps a good modern illustration would be the operating system of our computers—Windows, Linux, or the “heart” of an Apple. The programs that we use—Word, Excel, or email—are the training, education, habits, and associations that we develop in our lives. But the operating system—the heart—controls what can be done with the programs!

No wonder God longed for “such an heart” that would fear Him and obey Him, so that we might be the beneficiaries of His blessings (Deuteronomy 5:29). God cannot, of course, reward evil any more than He can *be* evil. Although God’s love for us has moved Him to sacrifice His only begotten Son on our behalf, He nonetheless will not acquit the wicked (Nahum 1:3). Before we can have our hearts made righteous (2 Corinthians 5:21), we must bring them into a “contrite and humble” state (Isaiah 57:15), one that is “broken” before His holiness (Psalm 34:18; 51:17). When the heart believes “unto righteousness” (Romans 10:10), repentance (Acts 8:22) leads to an enormous change in the “natural man” (1 Corinthians 2:14).

Obviously, since this huge change is not a normal human event, it must be brought about by the supernatural power of the great Creator Himself (2 Corinthians 5:17). And since it is God who is creating the new heart, there is no possible result but that the new heart is created “after God... in righteousness and true holiness” (Ephesians 4:24).

Once the event of the “new creation” takes place, we are given a heart—an operating system—that can run the “programs” of righteousness. After the new birth, it becomes possible to fear (or “reverence”) the One who created us, and to keep the commandments that are all recorded in our “Owners Manual,” also known as “The Book.” While no analogy is totally satisfactory, this may help us to understand how essential our heart really is in working out our salvation (Philippians 2:12). If we would desire that it be “well with [us], and with [our] children” (Deuteronomy 5:29), then we must “keep [our] heart with all diligence; for out of it are the issues of life” (Proverbs 4:23).

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



# MANTLE ROTATION AND THE FLOOD

LARRY VARDIMAN, P.H.D.

In August 2005, ICR installed a high-speed research computer and gave it the name Epiphany (to reveal or show forth) to reflect its purpose in using computer modeling to explore the natural processes of our world. Since then Dr. John Baumgardner, head of the ICR computer center, has conducted research on a range of topics.

One recent Epiphany project has explored the possibility that during the year of the Genesis Flood, the mantle and crust of the earth became rotationally unstable and rotated a few dozen times about an axis perpendicular to the earth's spin axis. (The earth's dense core, because the liquid outer core is only weakly coupled to the mantle, would not have participated in this auxiliary rotation.) The earth's rotation is described by the same equations that describe the motions of a gyroscope—the so-called Euler equations.

There are two reasons that this possible rotational behavior is important to understanding the Genesis Flood. First, it results in large-amplitude tsunami-like waves that sweep over the continents, which could explain the extensive sediment layers in the portion of the geologic record associated with the Flood. Second, such rotations potentially explain the record of magnetic polarity reversals observed in lava flows on the flanks of continental volcanoes, in the alternating di-

rections of magnetization in basaltic rocks on either side of spreading ridges on the world's seafloors, and also in the orientations of grains of magnetic minerals in sediments extracted from drill cores into the ocean bottom. If such auxiliary rotation occurred during the Flood, the alternating directions of rock magnetization would be a result of the mantle and crust rotating with respect to a magnetic field with a fixed polarity and orientation. This is in contrast to the standard understanding that the alternating directions of magnetization are a consequence of changes in polarity of the field itself via complex dynamo processes within the core. Up to now, creationist scientists have had difficulty understanding how polarity reversals in the core could take place rapidly enough to fit within the time scale of the Flood.

Dr. Baumgardner's research on this issue included writing a computer program to solve the Euler equations for a rotating body like the earth. Using plausible parameter values, this program shows that many dozens of cycles of auxiliary rotation can occur within the time span of a year, and that the temporal pattern of these cycles resembles the observed temporal changes in rock magnetization in a striking way. The computer model also provides an obvious explanation for the observation that during individual polarity reversals, the magnetic poles seemed to have moved along fixed

paths, from one geographic pole to the other. These just happen to lie above a ring of cold dense rock in the upper mantle surrounding the pre-Flood supercontinent—the same ring that plays a leading role in the runaway subduction that makes catastrophic plate tectonics possible. In other words, there seems to be a consistent connection with this new phenomenon of rotational instability and previous research on the mechanism behind the Flood catastrophe.

Another computer program was applied to explore the effect that the auxiliary rotation behavior had on the ocean water during the Flood. Preliminary results show tsunami-like waves that repeatedly swept over continents at velocities of several tens of meters per second. Added features such as bottom friction and topography on top of the continents will hopefully yield new insights in the future concerning sediment and erosional patterns on the continents during the cataclysm. With your help, ICR will continue its work to provide the Christian community with a much stronger understanding of and evidence for the Genesis Flood. ●

*Dr. Vardiman is Professor of Atmospheric Science and Director of Research.*



# ICR EVENTS *FEBRUARY – MARCH*

■ **JANUARY 31–  
FEBRUARY 1**

Galveston, TX – ACSI  
Convention  
(Nason)

■ **FEBRUARY 1-3**

Mount Airy, MD –  
Genesis Presentation  
(J. Morris)  
410.489.4321

■ **FEBRUARY 22-23**

Whitby, Ontario,  
Canada – Decide for  
Yourself Debates  
(Sherwin)  
905.922.2589

■ **FEBRUARY 26**

Dallas, TX – Dallas  
Christian College  
Chapel, Genesis  
Presentation  
(Morris III)

■ **MARCH 2-7**

Alamo, TX –  
Bibleville Conference  
(Morris III)  
956.787.2024



## Take a Creation Education Vacation in Florida

**T**his spring, you and your family can join Dr. Gary Parker, Professor of Biology for ICR Graduate School (ICRGS), and his wife, Mary, for a unique adventure in creation science.

**April 13 to 18 and April 27 to May 2**, the Parkers' Creation Adventures Museum near Arcadia, Florida, is offering hands-on workshops, classes, and field trips. Come explore the world of fossils and the wonders of nature from a biblical creation perspective.

**For costs, reservations, or further information,  
contact Dr. and Mrs. Parker at**

**863.494.9558,**

**or visit [CreationAdventuresMuseum.org](http://CreationAdventuresMuseum.org).**

Course credit is available for participating ICRGS students. For more information, contact Dr. Patricia Nason at [pnason@icr.edu](mailto:pnason@icr.edu).

On the 12th day of February 1809, two children were born who would each have a profound impact on the world—one that affected not just the people of his time, but continues to have an almost immeasurable effect today. The achievements of both individuals are being recognized this month, but their legacies could not be more different.

On February 18, America will celebrate President's Day. Originally implemented to honor the birthday of George Washington, this holiday is now commonly understood as honoring the February 12th birth of Abraham Lincoln as well. Largely self-educated, Lincoln was elected President of the United States in 1860. His leadership during the tumultuous years of the Civil War has led him to be recognized as one of the greatest of the American Presidents.



One of his foremost achievements was the Emancipation Proclamation, which freed American slaves as of January 1, 1863 (although most slaves in the seceded southern states would not learn of it until after the war). Lincoln firmly espoused the democratic ideals on which America was founded, as reflected in his Gettysburg Address:

Four score and seven years ago our fathers brought forth, upon this continent, a new nation, conceived in liberty and dedicated to the proposition that all men are created equal.

The other child born on February 12, 1809, would grow up to have a far different view on the equality of men.

I could show fight on natural selection having done and doing more for the progress of civilization than you seem inclined to admit.... The more civilized so-called Caucasian races have beaten the Turkish hollow in the struggle for existence. Looking to the world at no very distant date, what an endless number of the lower races will have been eliminated by the higher civilized races throughout the world.<sup>1</sup>

He ranked certain races as being between “the Caucasian” and the baboon.

At some future period, not very distant as measured by centuries, the civilized races of man will almost certainly exterminate, and replace, the savage races throughout the world. At the same time, the anthropomorphous apes...will no doubt be exterminated. The break between man and his nearest allies will then be wider, for it will intervene between man in a more civilized state, as we may hope, even than the Caucasian, and

some ape as low as a baboon, instead of as now between the negro [sic] or Australian and the gorilla.<sup>2</sup>

Even the subtitle for Charles Darwin's groundbreaking 1859 book *Origin of Species* reflects this particular aspect of “natural selection”: *The Preservation of Favored Races in the Struggle for Life*. Darwin's views on the origins of life have gradually led to science's enslavement to a godless ideal. Nevertheless, his work and influence will be commemorated this month on Darwin Day, a celebration described as “an international recognition of science and humanity.”<sup>3</sup>



Sadly, the occasion will also be marked in many churches as “Evolution Weekend,” thanks to the Clergy Letter Project. Begun in 2004 by Michael Zimmerman (now Dean of the College of Liberal Arts and Sciences at Butler University), this project's purpose is to allow clergy a means of indicating their support for the teaching of evolution. Participating pastors are invited to endorse “An Open Letter Concerning Religion and Science,”

which states in part:

We the undersigned, Christian clergy from many different traditions, believe that the timeless truths of the Bible and the discoveries of modern science may comfortably coexist. We believe that the theory of evolution is a foundational scientific truth, one that has stood up to rigorous scrutiny and upon which much of human knowledge and achievement rests.<sup>4</sup>

The letter speciously posits that “religious truth is of a different order from scientific truth. Its purpose is not to convey scientific information but to transform hearts.”<sup>4</sup> Thus it neatly excises the possibility that the Bible is, or even should be, factually accurate, paving the way to indoctrinate yet more people with the idea that “evolution is sound science and poses no problems for their faith.”<sup>4</sup>

This month we celebrate two men of renown. One freed slaves, and the other enslaved minds. Which one is truly worthy of remembrance? Let us use these celebrations as a reminder to honor the Source of true freedom—“If the Son therefore shall make you free, ye shall be free indeed” (John 8:36). ●

#### References

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*Ms. Mull is Managing Editor.*

# One Birthday, Two Legacies

BETH MULL



# The Biblical Origins of MODERN SCIENCE

HENRY M. MORRIS, P.H.D.

One of the most serious fallacies of modern thought is the widespread notion that biblical Christianity is in conflict with true science and, therefore, that genuine scientists cannot believe the Bible. The scientific method is built on empirical testing of hypotheses, and since creation and other biblical doctrines cannot be tested in the laboratory,

specifically commissioned in God's primeval mandate to Adam and Eve (Genesis 1:26-28), and many early scientists, especially in England and America, viewed it in just this way. The study of the world and its processes is really, as Johann Kepler and other great scientists have maintained, "thinking God's thoughts after Him," and should be approached reverently and humbly.

to Christian theism long before the modern era). Nevertheless, they were all convinced of the authority of Scripture and the truth of the Christian worldview.

Like people in other professions (even preachers), scientists have held a variety of specific religious beliefs. The inclusion of a particular scientist in this collection will not indicate that we would or would not endorse



JOHANN KEPLER



ISAAC NEWTON



LOUIS PASTEUR

they are considered nonscientific, to be taken strictly on faith. Furthermore, it is commonly believed that the Bible contains many scientific errors. At the very most, it is contended, a scientist may be able to accept the spiritual teachings of the Bible if he wishes, but never its scientific and historical teachings.

Such a charge is tragically wrong, however, and has done untold damage. Thousands of scientists of the past and present have been and are Bible-believing Christians. As a matter of fact, the most discerning historians and philosophers of science have recognized that the very existence of modern science had its origins in a culture at least nominally committed to a biblical basis, and at a time in history marked by a great return to biblical faith.

As a matter of fact, authorization for the development of science and technology was

In the next few months, therefore, we will present a number of brief biographical testimonies of important scientists who professed to be Bible-believing Christians. Many of these names will be names familiar to every science student, but he or she may not know that these men also were Christians (this fact is commonly ignored or slighted in present-day scientific literature). This will by no means be an exhaustive list, but it should at least put to rest the common misconception that no first-class scientist can be a Bible-believing Christian.

Some of these scientists lived before the rise of modern Darwinism, but they were certainly well aware of evolutionary philosophy (which has been around since antiquity) and of scientific skepticism in general (deism, humanism, atheism, pantheism, and other anti-biblical philosophies were very real threats

his personal behavior or particular doctrinal or denominational beliefs. Our only criteria will be that, in addition to being a highly qualified scientist, he believed in the inspiration and authority of the Bible, accepted Jesus Christ as the Son of God, and believed in the one true God of the Bible as the Creator of all things. They will also be seen to represent many different fields of science. In other words, there have been leading scientists in every field of science who have studied both the Bible and their own scientific disciplines in depth, and who are firmly convinced the two are fully compatible. ●

This article was adapted from Morris, Henry M. 1988. *Men of Science, Men of God*. Green Forest, AR: Master Books, 1-3.



Henry M. Morris • 1918-2006

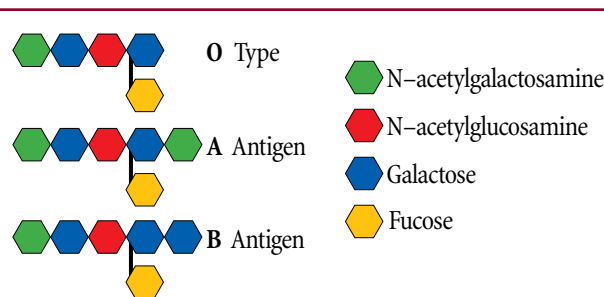
# ABO Blood and Human Origins

DANIEL CRISWELL, P H . D .

Many people know what their blood type is and understand that blood types must be matched in a medical emergency. The ABO blood group is the most significant blood factor in clinical applications involving blood transfusions. Understanding the importance of the ABO blood group is not limited to clinical applications, however. With our recent ability to rapidly sequence genes, the ABO blood group is also proving to be a valuable asset for determining human migration patterns and origins.

### What Determines Blood Type?

ABO blood types are determined by a cell surface marker that identifies the cell as belonging to “self” or to that individual. These cell surface markers are characterized by a protein or lipid that has an extension of a particular arrangement of sugars. Figure 1 shows the arrangement of sugars that determines each of the A, B, and O blood types.<sup>1</sup> Note that each is identical, except that types A and B have an additional sugar: N-acetylgalactosamine for A, and galactose for B.



**Figure 1.** ABO antigen specificity. The ABO antigens differ by just one sugar at the antigen terminus. Only the carbohydrate portion of the antigen is illustrated.

These sugar arrangements are part of an antigen capable of stimulating an immune response that produces antibodies to identify and destroy foreign antigens. People with blood type A produce antibody B when exposed to antigen B, and those with blood type B produce antibody A when exposed to antigen A. Blood type

AB, however, produces no antibodies because both antigens present on the cells are recognized as “self.” Blood type O produces antibodies A and B, because neither antigen A nor B is present on the cells of type O individuals (Table 1). Antibodies A and B belong to the “M” class of immunoglobins and are expressed from the immunoglobulin genes of B-cell lymphocytes upon exposure to foreign antigens. Immunoglobulin genes are capable of producing an essentially infinite number of antibodies through a complex editing and selective

process.<sup>1</sup> Consequently, there isn’t a specific “antibody A” gene or “antibody B” gene inherited with a complementary A or B antigen.

A gene for the specification of antigens A or B or type O determines the blood type. An enzyme, glycosyltransferase, is the product of this gene,<sup>2</sup> and differences in the sequence of this enzyme (polymorphisms) determine whether the enzyme attaches N-acetylgalactosamine (antigen A), galactose (antigen B), or no sugar (type O) (Figure 1). People inherit two genes for blood type; or, more accurately, two alleles, one from each parent. These al-

Blood Type	Cell Antigen	Serum Antibodies	Donor
A	A	B	A or O
B	B	A	B or O
AB	AB	None	All
O	None	A and B	O

**Table 1.** ABO Blood Groups



If Adam and Eve were heterozygous for blood types A and B, respectively, they could have produced children that had any of the ABO blood types.

leles are represented as  $I^A$  for type A,  $I^B$  for type B, and  $i$  for type O. Both glycosyltransferase alleles for antigens A and B are expressed when inherited together, producing both antigens and resulting in blood type AB. When the allele for blood type A or B is inherited with type O, the individual will be either type A or B. This is not necessarily because the type O allele is silenced or recessive, but is instead a result of the activity of the A or B glycosyltransferase, while the glycosyltransferase for the O allele is inactive.<sup>2</sup> A type O individual has both alleles for the inactive glycosyltransferase.

### Blood Types and Human Origins

So what light does this shed on human origins? Is it possible for the two people of the Creation account (Adam and Eve) or the eight people on Noah's Ark to give rise to all of the ABO blood types present in humans today? If Adam and Eve were heterozygous for blood types A and B, respectively (one allele for type O and one allele for either type A or B), they could have produced children that had any of the ABO blood types, as illustrated in Figure 2. The Punnett square simply predicts what the possible phenotypes would be for a given couple's children. From the number of children that Adam and Eve likely produced, it is not difficult to envision all of the ABO blood types being passed down to their offspring.

If Adam and Eve were heterozygous for the ABO blood type gene locus, then the allele frequency for the type O allele is 50 percent (2 of 4 alleles), the allele frequency for type A is 25 percent (1 of 4 alleles), and the allele frequency for type B is 25 percent (Figure 2). If there are no selective pressures or genetic drift for these alleles, then the allele frequency will remain constant through all of their descendants. The overall allele frequency in the Punnett square is actually the same for the children as it might have been

for Adam and Eve. This scenario would also be true for Noah's family and their descendants.

### Modern Allele Frequencies

Do human populations today reflect these allele frequencies? The answer is yes. Table 2 shows the allele frequencies for several populations. (Note that these are not *blood type* frequencies.) There is a general increase in the frequency of the type O allele, and in many

		Adam	
		$I^A$	$i$
Eve	$I^B$	$I^A I^B$ Seth? "AB"	$I^B i$ Cain? "B"
	$i$	$I^A i$ Abel? "A"	$ii$ Other sons and daughters "O"

**Figure 2.** The possible inheritance of four blood types from Adam and Eve. Alleles for blood type  $I^A = A$ ,  $I^B = B$ ,  $i = O$ .

Population	Number	Allele Frequency		
		O	A	B
American	20,000	67	26	7
French	10,433	64	30	6
Japanese	29,799	55	28	17
African	1,538	57	22	21
Hindu	2,357	55	18	26

**Table 2.** The allele frequencies for several populations.<sup>3,4</sup>

populations a drop in the type B allele. But as expected, the frequencies for each allele are close to what they could have been at the start of human history or with Noah's family. The shift in frequency (the increase in type O and decrease in type B) can be caused by migration of people groups that had a higher or lower frequency

for one of the alleles at the time of migration. It could also result from random genetic drift, or from a mutation that renders glycosyltransferase inactive—which would result in blood type O from type A and is likely one cause for the increase in the frequency of the O allele.

Unfortunately, the origin of the ABO alleles gets more complicated when examining the actual gene for glycosyltransferase. There are more than 180 variations (polymorphisms) for the ABO gene listed on the National Center for Biotechnology Information (NCBI) website,<sup>5</sup> and each one of these polymorphisms can be assigned to one of the three ABO alleles. Most of these polymorphisms do not change glycosyltransferase activity or blood type, but can identify ethnic groups that formed after humans migrated across the globe. Mutation and chromosome crossing-over events are the most plausible cause of these variants.<sup>6</sup>

There are DNA differences, or polymorphisms, that determine the function of glycosyltransferase, resulting in different ABO blood types. These differences are few, but not trivial. The glycosyltransferase specific for antigen A synthesis differs from the antigen B-specific enzyme by just four amino acid residues (out of 354), and there are several DNA sequence differences in the alleles that code for the A- and O-specific enzyme.<sup>2</sup> The four differences between the A and B glycosyltransferase are enough to allow the enzyme to specify the characteristic terminal sugar that distinguishes antigens A and B. A single DNA deletion in the A-specific allele results in a truncated version of the glycosyltransferase gene product, eliminating enzymatic activity and effectively resulting in blood type O.

### Origin Implications of Blood Type O

It can be argued that one of the three alleles is ancestral to the other two. For example, the origin of the O allele, and subsequently blood type O, is simply the result of the deletion resulting in a loss of function of glycosyltransferase activity for the A antigen. A mutation resulting in the loss of function in a protein, at

best, would be a “nearly neutral” mutation since blood type O does not appear to have any deleterious effects or selective advantage over the other two blood types. Because neutral or nearly neutral mutations have no selective advantage, it is likely impossible to fix these mutations in a large population of organisms (fixation = 100 percent O alleles) in a reasonable length of time. For example, if a mutation that gave blood type O were actually 1 percent more beneficial than type A, it would take 100,000 generations to fix this mutation in the modern human population from a beginning population of 10,000 people.<sup>7,8</sup> The larger the population at the time of the mutation, the longer it will take for fixation and the less likely the mutation will ever be fixed.

Molecular evolutionary time scales place modern humans at roughly 200,000 years ago,<sup>9</sup> a timeframe too short to increase the O allele frequency to 60 percent of all people alive today within a population of 10,000. Certainly a biblical timeframe would be far too short for such fixation. The deletion responsible for converting an A allele to an O allele is not present in chimpanzees, and sequence comparisons between humans and chimps indicate this allele is unique to the human lineage,<sup>10, 11</sup> further complicating an evolutionary scenario for the origin of blood type O. This scenario would fit better if the O allele was rare in the population today and appeared in a specific people group. However, the O allele is by far *the most common allele globally*, indicating that if it did originate via a mutational event, it had to occur when the human population was extremely small and before humans divided into ethnic groups and spread across the globe.

It is possible to achieve the current O allele frequency via a mutation if it occurred at the time of Noah’s Flood and was passed on by one of Noah’s family members. Noah or Mrs. Noah could have had the O allele and passed it on to each one of their sons, or the alleles could have mutated in one son’s offspring. The population of the human race at the time of the Flood and immediately afterward certainly qualifies as a population size that would enable

a mutated allele to become common as the population grew. With a starting population of only eight people, the O allele could easily have increased in frequency through random genetic drift in the post-Flood population, reflecting the present levels that are observed today and consistent with computer simulations modeling fixation.<sup>12</sup>

### Conclusion

If Adam and Eve did not have all three blood type alleles, then there must have been a mutation creating the O allele while the human race was still very small and before humans dispersed across the globe. Whether the origin of blood type O was in Adam and Eve at Creation or whether it arose as a mutational event that took place shortly before or after the Flood, it strongly supports that all humans today are descendants of two individuals or a small group of people that eventually populated the globe. Both scenarios are consistent with the biblical model of human origins. ●

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— See related poster on page 19. —

# The Keys to Creation Research

JOHN D. MORRIS, P.H.D.

There is no secret method for conducting creation research. It requires the same nose-to-the-grindstone effort that all scientific investigation requires—scholarly study, mathematical rigor, laboratory precision, and careful analysis.

**B**ut creation research suffers from the same disadvantage that evolutionary research does in that both examine events that happened in the unobserved past, outside the reach of observational science. Both are historical reconstructions.

Keep in mind that both sides study the same data. The big difference between them exists in the interpretation process. Evolutionary scientists start with the assumption of past uniformity, characterized by the slogan “the present is the key to the past.” This means a uniformity of natural law, with no interruption of natural processes. Perhaps rates of processes have changed somewhat, but the laws have not.

Creation scientists agree that natural law governs processes today and throughout recent history, but hold that origins events were different in kind. The natural laws that operate today cannot account for them; supernatural processes were required, along with natural processes operating at rates, scales, and intensities far outside modern limits. Based on the clear teaching of Scripture, we know that God used such supernatural processes, and while we don’t invoke them to explain events in the present, we are justified in calling on them for one-time origins events in the past.

Three great worldwide events happened in early earth history that affected all of reality, and without including them in our thinking and explanatory models we have no chance of properly interpreting the data. These events are:

- » The creation of all things in the beginning
- » The curse on all creation because of Adam’s sin
- » The great Flood of Noah’s day

Scripture claims that “in six days the LORD made heaven and earth, the sea, and all that in them is” (Exodus 20:11). What can be observed today

that was not originally created during this supernatural event? Humans did not witness creation, but we were told of it by One who was there, and today we see the things that were created.

Likewise, we are told of a subsequent event that altered all of creation. Indeed, “the whole creation groaneth and travaileth in pain together until now” (Romans 8:22) because of the presence of sin and its penalty, death. Plants, animals, mankind, even the very earth came under this penalty. What possible system was exempt from its scope? Today we see its effects all around us.

Later, the great Flood restructured the entire earth, as “the same day were all the fountains of the great deep broken up, and the windows of heaven were opened” (Genesis 7:11).

Today we stand on flooded terrain. Nowhere on earth can we view results of uniformitarian processes, except for those that have occurred since the Flood. As with the other early earth-shaping events, we did not see the Flood itself; but we can see its aftereffects.

A fourth event followed the Flood that impacted only mankind—that of the dispersion at Babel. But in a similar fashion, we will never fully understand human origins, migrations, genetics, or languages without considering Babel. “From thence did the LORD scatter them abroad upon the face of all the earth” (Genesis 11:9). All modern nations and peoples are descended from those scattered at Babel.

As you can see, these events are essential in making sense of the present scientific data. We can be assured they did happen, for they are all clearly taught in the Creator’s account of earth history. Thus we can be confident that they provide a sure foundation for scientific research. ●

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



# The Regularity of Nature

WILLIAM A. HOESCH, M.S.

One generation passeth away, and another generation cometh: but the earth abideth for ever. The sun also ariseth, and the sun goeth down, and hasteth to his place where he arose. The wind goeth toward the south, and turneth about unto the north; it whirleth about continually, and the wind returneth again according to his circuits. All the rivers run into the sea; yet the sea is not full; unto the place from whence the rivers come, thither they return again....Is there any thing whereof it may be said, See, this is new? it hath been already of old time, which was before us.

( ECCLESIASTES 1:4-7, 10 )

The writer of Ecclesiastes placed much confidence in the regularity of natural processes. The continual passage of generations of people, the repetitive sequence of sunrise-sunset, the circular paths of the winds, and the continuity of the hydrologic cycle led him to projections of an *eternal* earth, and to despair, among other things. Aristotle and Charles Hutton, later “uniformitarianists,” took the same approach; and they too arrived at an eternal earth (and arguably, despair). Mankind’s mad rush to explain all of nature without reference to God in an effort to be “scientific” is no surprise. But how much is too much when it comes to the confidence we place in the regularities of nature?

Two radically different endeavors vie for authority as “science” today; both have a high regard for the regularity we see in nature, but for different reasons. The *experimental* scientist, such as a chemist, mixes his reagents under tightly-controlled conditions (the laboratory), and when he can repeat his results, he has then discovered something about the here-

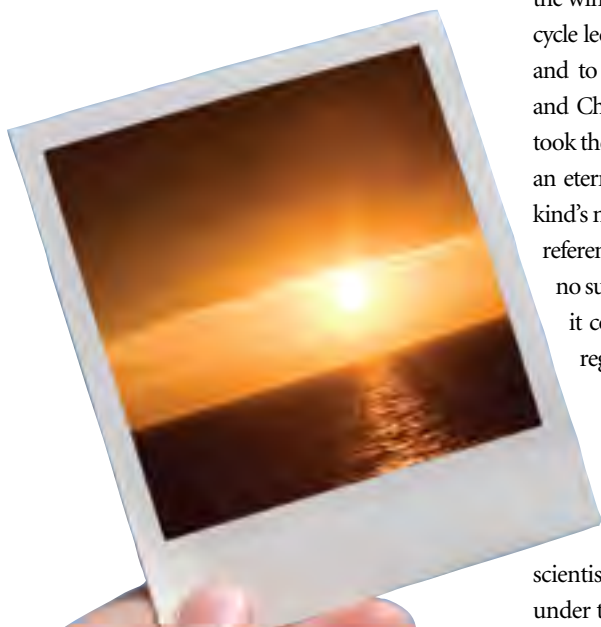
and-now world. There is no problem with this approach. Such scientific endeavors must rule out the possibility of any outside meddling in the lab (God or otherwise) if the results are to have legitimacy.

Now consider a *forensic* (or historical) scientist. The archaeologist examining a ring of stones, the detective investigating a murder scene, the geologist surveying a rocky outcrop—all are engaged in a far different game. Their goal is to understand the past, based upon what can be observed in the present. Having a high confidence in the regularity of *ordinary* nature is essential to recognizing the *extraordinary*, as Paley’s watch in the heath illustrates.<sup>1</sup> Unlike experimental science, to deny at the outset the possible “meddling” of an intelligent agent in the observed phenomena would be to invalidate the entire endeavor!

For the creation scientist, it is his confidence in the regularity of nature that makes his case so strong. Despite the numerous paradoxes and mysteries we face as creationists, our worldview is far more secure than that of the evolutionist, in spite of boastings to the contrary. We do not fear that some new discovery will topple our worldview; nor do we accept the unbridled extrapolation of uniform processes and rates into the infinite past as “science.” The debate is not one of science versus religion, but of genuine versus fraudulent science. Those who worship the Father must worship “in spirit *and* in truth” (John 4:24, emphasis added). ●

1. William Paley (1743-1805) wrote in the book *Natural Theology* his famous analogy of finding a watch in a field and concluding that its evident design required a watchmaker.

Mr. Hoesch is Research Assistant in Geology.





# Nebulous Hypotheses

DAVID F. COPPEDGE

“Glittering generalities”—a phrase describing grand, panoramic scenarios that sweep difficulties under the rug—appropriately describes theories of planetary evolution. They’re not as simple as “add dust, stir, and wait.” I remember a planetary science professor years ago admitting that planetary evolution models usually hit a snag where a miracle is needed to continue. Not much has changed, despite a wealth of new data—including the discovery of hundreds of extrasolar planets.

One would think such a discovery would bolster confidence in naturalistic theories. Planet-building, however, has become a theory in crisis. Most extrasolar systems look nothing like ours. Many have gas giants very close to the star. Some of these so-called “hot Jupiters” have smaller orbits than Mercury. They would likely eject any earthlike planets in the habitable zone.<sup>1</sup> Scientists realize now that stellar dust disks are not planetary maternity wards, but conveyor belts of doom. Models show that a planet embedded in a dust disk at the orbit of Jupiter would spiral into its host star in mere thousands of years. Some disks appear to be dissipating rapidly.

A consequence is that planets need to form quickly to survive. Sure enough, theorists have found ways to make planets in less

time. They now believe a gas giant can form in just hundreds of years, not millions. Indeed it must, if it is to avoid the giant sucking sound from the star at the center of the disk. Then, it needs to clear its orbit of debris quickly, so that inward migration will stop before the planet is devoured.<sup>2</sup> A cleared orbit, however, has the downside of bringing accretion to a standstill.

Speaking of accretion, a planetesimal must grow to at least a kilometer in diameter for gravitational attraction to take over.<sup>3</sup> Smaller clumps do not stick—they bounce. Rather than grow into boulders, they are more likely to collide and fragment.<sup>4</sup> Even then, unless protected, boulders would be drawn rapidly into the star. A recent article on Space.com said the realization that “boulders tend to fall into the star in a celestial blink of an eye” has been “a stumbling block for 30 years.”<sup>5</sup> One recent model proposed that boulders might join forces against the viscosity of the disk, forming a protective pocket—like that behind a semi truck—giving embryonic planetesimals time to grow. The authors of this ad hoc speculation, however, worried that such clumped boulders would actually be more likely to grind to dust.<sup>6</sup>

In recent years, planetary scientists have been undergoing a kind of “religious conversion” from the nebular hypothesis to a completely new “disk-instability hypothesis.”<sup>7</sup>

Championed by Alan Boss, it postulates that knots in the swirling cloud contract catastrophically to form gas giant planets almost instantly. This idea should raise the eyebrows of many who were taught to think planet formation requires millions of years. The new model was proposed less on evidence than on attempts to get around the difficulties.

This is only the beginning of a long list of “miracles” needed to build planets naturally. The extent to which God used natural forces to create is an interesting question, but it is important to know what materialists are up against lest we be mesmerized by the glitter of their generalities. ●

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David Coppedge works in the Cassini Program at the Jet Propulsion Laboratory. The views expressed are his own.



## LETTERS TO THE EDITOR



About the [December 2007 *Acts & Facts*] “Gallop­ing Glaciers” article by William A. Hoesch, M.S.—the start of the last mini-ice-age (c. A.D. 1300) featured glaciers in France that advanced MILES in a single year. Excellent article, and a crucial point. Keep up the good work!

—B.K.

[ICR radio program] *Back to Genesis* is a golden nugget packed with truth and easy to understand. It helps me daily to go “Back to Genesis” to see where God stands on the issues. The program is so packed with the richness of God’s Word.

—S.T.

Blessings come every day from reading and meditating on *Days of Praise* and I thank you and praise God for these blessings. We visited the museum in Santee May ‘06 and like it so very much.

—J.K.

Your materials (books and videos) have had a very positive impact on my life over the past seventeen years. Thank you for staying in contact with me through your publication *Acts & Facts*. And thank you most of all for providing a reasonable answer for how and why we are here by simply opening God’s Word and applying good science.

—D.D.

Note sent to our graphic designer: “Are you the Dennis Davidson who does the new ICR magazine? You are to be commended because it is a beautiful new format, and informative magazine!”

—H.S.

I enjoy receiving *Days of Praise* as well as *Acts & Facts*. As a student in a secular school, I find it very important to refute any false teaching, and also to have answers to give in return. Thank you for your ministry!

—A.E.

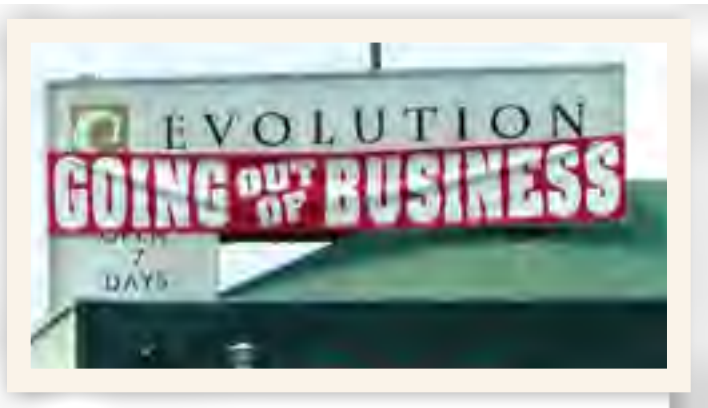


Photo provided by observant reader Norman Miller.

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

## Radio Log



This month on  
“Science, Scripture,  
& Salvation”

WEEKEND OF FEBRUARY 2

### *Origin of Diseases*

Throughout the ages, diseases have caused pain, misery, and death around the globe. But why must we suffer this way? If God created everything “good” in the beginning, how did such devastating diseases come to be? Listen in to find out!

WEEKEND OF FEBRUARY 9

### *Lincoln and Darwin*

What do Abraham Lincoln and Charles Darwin have in common? Surprisingly, there are significant similarities between these two famous men, and one very important difference. Don’t miss this interesting discussion!

WEEKEND OF FEBRUARY 16

### *Gems*

Diamonds, rubies, sapphires, and emeralds: these precious stones radiate beauty and delight those who possess them. How does their beauty reflect God’s handiwork in creation? Join us as we talk about precious gems and discover how their worth extends beyond our worldly borders.

WEEKEND OF FEBRUARY 23

### *Did God Use Evolution to Create?*

Because miracles are hard to understand, many people do not accept that God created everything in six ordinary days. Instead, they believe that God used evolution to create. But is this possible? Tune in to this faith-building program to find out!

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# The LIBERAL Soul

HENRY M. MORRIS IV

While attending my son's baseball practice on a recent winter day, I was surprised to discover a short path of stepping stones leading from the parking area to the field. While stepping stones in that context aren't unusual, these were unique, for each one was inscribed with a Scripture verse. Most verses were taken from the Psalms or Proverbs, and offered appropriate encouragement to young athletes to listen to instruction and work diligently on the field of play.

One stone in particular caught my eye, since it seemed out of place from the theme laid down by the rest. There, on a stone near a drinking fountain, was Proverbs 11:25:

*The liberal soul shall be made fat: and he that watereth shall be watered also himself.*

I can only assume the verse was used in playful reference to the stone's close proximity to the water fountain. But on further reflection, this powerful verse has little to do with water at all!

I found the phrase "liberal soul" particularly interesting, since the modern meaning usually applies to those who seek to steer a society away from its traditional (e.g., conservative) practices or beliefs. But after some study, I discovered that this unique reference to the "liberal soul" (its only occurrence in Scripture) was drawn from the *original* meaning of "liberal"—that is, liberating, or generous. And in its biblical context, it refers to a person who is generous with his resources to help others.

But notice the Lord's promise to those who are generous—they shall "be made fat." This is not a biblical endorsement to become

physically overweight, but rather a guarantee that God will amply provide for those who are first generous. What a beautiful promise from the Great Provider Himself!

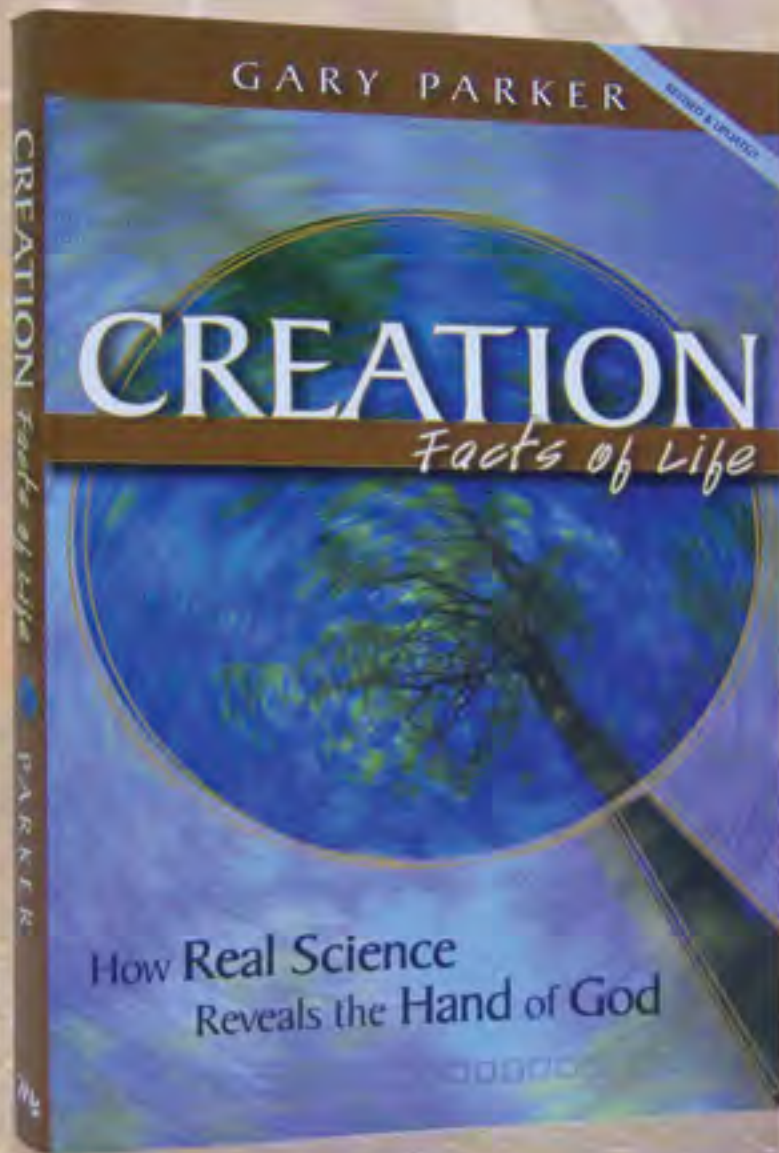
The second part of the verse uses the concept of water to convey a common theme of blessing found throughout Scripture. The phrase "he that watereth" literally means someone who refreshes. And in turn, that person is promised that he "shall be watered also" with similar refreshment. Again, what a wonderful promise of continued renewal to those who first seek to refresh others!

Within the confines of a simple baseball park on the blustery plains of Texas, I was shown a great lesson. Namely, in order to receive, we must first give; in order to accumulate, we must first scatter; and in order to become refreshed, we must first seek the refreshment of others. The world's way to prosperity calls for guarding and hoarding our earthly riches. But this is not the Lord's way—His way of gaining is by giving.

As a ministry, ICR earnestly seeks to glorify the Creator in all that it does, and we freely give of our ministry to all who ask. Similar "liberal souls" who share our vision to communicate the wonders of God's magnificent creation have upheld us through their prayers and finances. We can do so much more, but not without God's provision through His people. Won't you prayerfully consider how you can partner with us? ●

Mr. Morris is Director of Donor Relations.





## Creation: Facts of Life

In their efforts to “prove evolution,” scientists and teachers rely on certain classic arguments—mutation, adaptation, natural selection, fossils, the geologic column. These are the very arguments used by Dr. Gary Parker when, as an evolutionary biologist, he taught his students that evolution was “fact,” not theory.

Until, that is, a fellow scientist introduced him to the evidence for creation and he gradually came to the realization that “God’s Word is the surest guide to understanding what we see in God’s world.” Now Dr. Parker, a leading creation scientist and Professor of Biology at the ICR Graduate School, uses these same scientific topics to refute evolution. Written in an easy-to-read style, *Creation: Facts of Life* is an excellent introduction to the evidence for creation in DNA, embryology, natural adaptation, fossils, geology, and more!

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