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The Internet

BATTLEGROUND

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front lines*

NEW FROM DR. JOHN MORRIS!

Thousands or Billions?

Does it matter?

Did the earth come to exist in six days or six billion years? Did God create this planet *ex nihilo* or did He set in motion evolutionary processes that have lasted eons of time?

According to Dr. John Morris, the answers to these questions are vital to understanding not only earth science, but also the biblical record of Genesis.

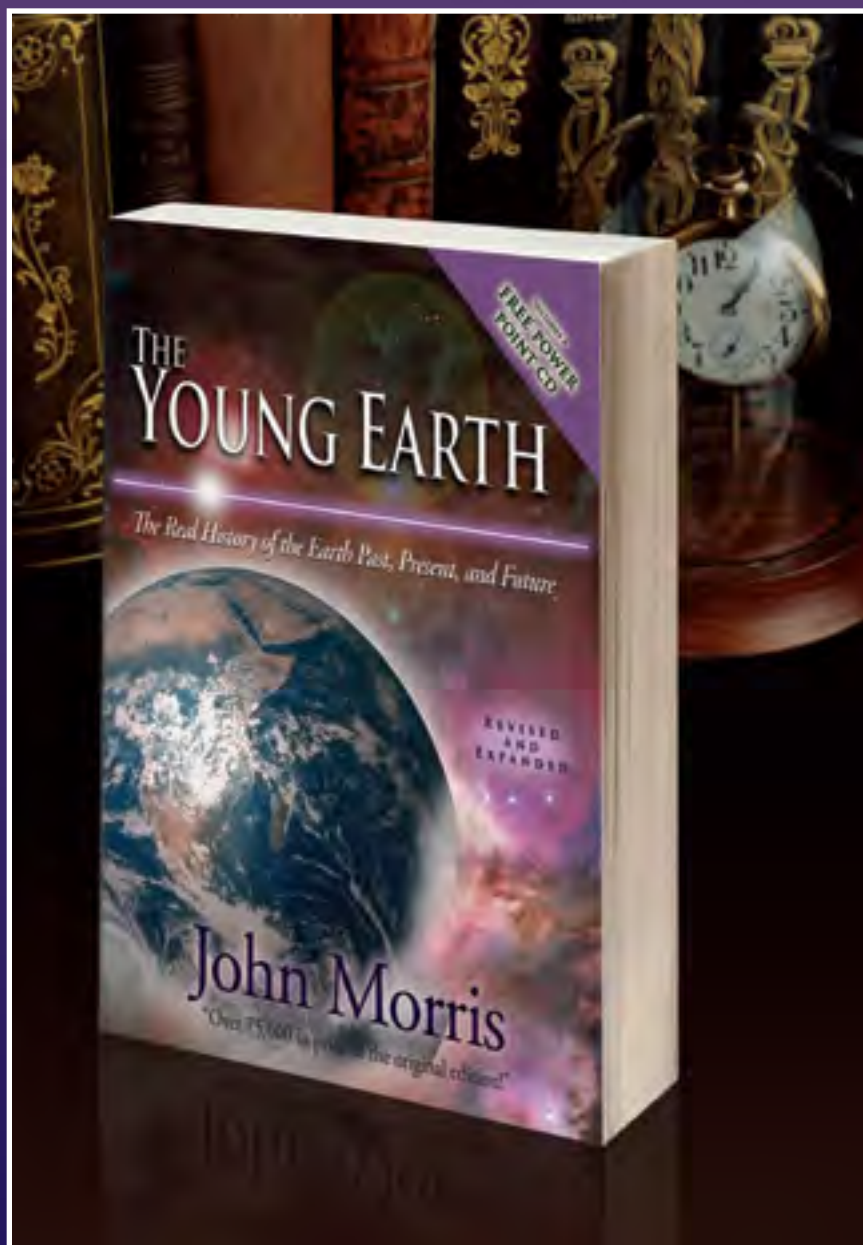
In this newly revised and expanded book, Dr. John Morris sets the record straight on the age of the earth. Complete with multimedia presentations, *The Young Earth* details the evidence that counters naturalistic interpretations in science, once again demonstrating the veracity of the biblical account of creation.

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Moving God's Way

Now the LORD had said unto Abram, Get thee out of thy country, and from thy kindred, and from thy father's house, unto a land that I will shew thee. (GENESIS 12:1)

The Bible contains many examples of God accomplishing His purposes through the physical relocation of His people: Abraham to Canaan, Joseph to Egypt, the early Christians to "the uttermost part of the earth." Add ICR to that list.

God has richly blessed the work of ICR in San Diego for over 35 years, from its humble beginnings as a division of the newly-formed Christian Heritage College in 1970, to a worldwide movement reintroducing creation thinking into Christianity. Significant advancements both in advocacy and research have been accomplished by God's grace. As a supporter and participant in this work, you share a part in the resulting fruit.

However, San Diego has never been a good place from which to conduct a nationwide ministry. This part of California may be conservative in many ways, but a hotbed of Christianity it is not. ICR's financial support and speaking opportunities come from all over the world, not simply from a home base nearby. Neither our history nor our future holds us here.

Furthermore, the rising cost of living—especially housing prices—makes it extremely difficult to recruit faculty to join ICR or students to enroll in the graduate school. Once you're here and situated, it's a wonderful place to live, but getting to that point can be difficult. The ICR Board has long entertained the notion of moving to a more advantageous location.

The possibility of moving to Dallas surfaced when my brother, Dr. Henry Morris III, discerned that a central location would be beneficial for ICR, with several possibilities for student services at nearby affiliated colleges. The many good churches and large numbers of ICR supporters living in North Texas made it a natural fit for the ministry. When my father was still alive he approved the move to Dallas, especially as a way to strengthen the graduate school.

In 2006, ICR opened a distance education effort in Dallas, as well as the hub of ICR's internet ministries, which you will read about in our feature article this month. As additional operational functions were assigned to the new Dallas office, the Board concluded that it was in ICR's best interests to move the entire ministry.

As you would expect from a group of scientists, our migration is being conducted in a very orderly fashion. Many of the business and publication functions have already been transferred to the Dallas headquarters, and some of our scientists and employees have also relocated, or are in the process of doing so. A new recruitment effort is underway for professional staff at the new headquarters.

Change can be exciting and hold great promise, but it is rarely a comfortable process, and some ICR members have faced challenges with these adjustments. Not everyone is moving. The geology group (including me) will remain in California for the near future, while the life science research staff will be reassigned to Dallas. A few of our scientists work from various locations around the U.S. and that will continue, but all future growth will be in Dallas.

This relocation is only part of the changes occurring at ICR. As you can see, we have expanded the format of *Acts & Facts*, opening up wonderful new possibilities for ministry in our publications department. I'm convinced that these changes are for the better, allowing us to extend the message of creation even further.

Of course, several things remain the same. ICR's ministry focus, our high regard for Scripture, our commitment to good science, and our basic philosophy of fundraising continue. However, the need for monthly support hasn't changed. So, I will keep gently reminding you of giving opportunities. Might I also suggest that you continue to uphold ICR in your prayers? We need it as much now as we ever did.


John D. Morris, Ph.D.
PRESIDENT

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THE INTERNET BATTLEGROUND

Forty million adults use the Internet as their primary source of news and information about science.¹ But finding answers to questions of origins is fraught with danger on the Internet. Landmines of half-truths and hidden assumptions lay waiting for the unwary.

The centuries-old battle over the Bible's scientific accuracy is now being fought on the 21st-century high-tech battleground of the Internet. The pace of scientific research is accelerating, from the outer reaches of the universe to the inner reaches of the genome, and with each new discovery comes an interpretation of origins that is inconsistent with Genesis. The accelerated pace of the Internet demands a corresponding response to the challenge.

For over a decade ICR has equipped creationists on the front lines of the Internet. In September 1995, icr.org was registered, four days before Google.com. Since that time, icr.org has supplied advocates for creation with solid analysis on the issues of creation, science, and biblical authority.

In this long war, our best weapon is the Word of God.² The Bible is the foundation upon which ICR's research, education, and publications are built. One example of this is the online Bible integrated into the search feature of icr.org. Verses found in search results are linked to the Hebrew and Greek definitions from Strong's Concordance. The search feature also includes

In this long war, our best weapon is the Word of God.

the study notes from the *Defender's Study Bible* by ICR founder Dr. Henry Morris.

ICR's articles, focused on the Bible's accuracy and authority, are viewed millions of times each year. ICR's online resources include hundreds of technical articles that demonstrate the truth of recent creation. Solid scientific information analyzed within a thoroughly biblical frame-

work is immediately available to everyone, anywhere, and at anytime.

Communication during battle is a key to victory. ICR's free email publi-



cations provide in-depth creation science news, research, commentary, and devotions. Many of ICR's subscribers pass this information on through their own email messages to equip other believers and challenge unbelieving friends with new evidence for recent creation. Sign up for ICR's

free publications at icr.org/subscribe.

In-depth training is another vital element for victory in battle. ICR's Graduate School offers online distance education for a Masters degree in Science Education, with minors in Astro/Geophysics, Biology, Geology, and General Education. The Creationist Worldview is an Internet-based one-year program of study designed to equip Christian leaders with biblical apologetics, scientific confirmation of creation, medical ethics, applications of the biblical worldview in business and government, and much more.

A fresh new look is coming to ICR's website that will increase the ease of use. Improved navigation links between content pages will help to organize ICR's vast library of research that clearly demonstrates the scientific support of the Genesis record. Expanded access to key information will assist believers in defending God's Word.

Two thirds of Americans strongly believe or mostly believe in recent creation.³ In the coming years, with your assistance, ICR wants to reach these people with compelling evidences that support their convictions. The Internet is a powerful tool in communicating the vital truth that the Bible is scientifically accurate.

Ready for battle? Log on to icr.org! ●

References

- 1 PEW Internet & American Life Project http://www.pewinternet.org/PPF/r/191/report_display.asp
- 2 Eph. 6:17 And take the helmet of salvation, and the sword of the Spirit, which is the word of God.
- 3 ICR News: "Gallup Poll: Two Thirds of Americans Believe God Created Them" <http://icr.org/articles/view/3379>

CALL TO ACTION

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- Refer icr.org to your friends for in-depth analysis and reporting on science and creation news and research.
- Support ICR prayerfully and financially as we seek to expand awareness of the evidence for creation.
- Look for creation science resources at icr.org/store.

RATE in Review

LARRY VARDIMAN, P.H.D.

Professor of Atmospheric Science and Director of Research at ICR

In the two years since RATE (Radioisotopes and the Age of the Earth) reported its findings in several books, articles, and documentaries, the response within the creationist community has been generally positive concerning the quality of the work and the significance of the findings. However, some have raised legitimate questions, particularly regarding the concept of accelerated decay, its production of heat, and its theological implications.

In this first of several columns I would like to review some of the considerations the RATE group encountered when the project first began. In future columns I will discuss the implications of the research and its limitations.

In 1997, the newly-formed RATE team of scientists wrestled with how to approach the issue of radioisotopes and their bearing on the age of the earth. The conflict? The billions-of-years timeframe taught in the conventional scientific community versus the thousands-of-years timeframe of the Bible.

Could the study of the rates at which radioactive decay had occurred in the past solve this issue? Success by this approach meant that the decay of parent isotopes and the production of daughter isotopes would have occurred at rates many orders of magnitude greater than the conventional view. The RATE team knew it would be breaking new ground.

The concept of so-called accelerated decay was highly controversial and would not be easily accepted by the scientific community without strong supporting evidence. Global catastrophic events, possibly even cosmic catastrophic events, had to have operated at scales and speeds far beyond anything observed today. Until recently it had been believed that the rate of nuclear decay could only be changed by, at most, a few tenths of a percent even under rather extreme temperature, pressure, and chemical conditions.

Thus, the basic hypothesis of this view required some overt action by God at one or more periods within the mass-space-time continuum of earth history. Of course, any reference to supernatural intervention is strictly taboo according to the conventional definition of the scientific method today. Even scientists who are Christians often react negatively to such suggestions.

While literature review and research design were progressing, two additional hypotheses were considered. They were: (1) Large initial concentrations of daughter isotopes in the mantle that were mixed into the crust on Day 3 of Creation week, and (2) large concentrations of daughter elements produced during the six days of Creation week that were later mixed

into the crust by the Genesis Flood. Both required supernatural action by the Creator, occurring either at the very beginning of time or during the early events of the Creation week. Processes subsequent to these supernatural events could be studied by conventional scientific methods and would be less controversial. These alternative hypotheses were initially considered in parallel with accelerated decay.

With the publication of the first RATE book in 2000, accelerated decay was determined to be the primary research hypothesis. The other two concepts would be investigated secondarily. In fact, the final explanations offered by this study are actually a combination of all three hypotheses.

Accelerated decay during several periods of earth history became the primary hypothesis because evidence had accumulated that a large amount of nuclear decay had occurred in the rocks after the initial Creation. Some of the decay may have occurred during the Creation events, but a large amount must have also occurred during later periods, such as the Genesis Flood. Some accelerated decay had apparently occurred during and following the Flood, even up until recently, with evidence seen in the presence of fission tracks, radiohalos, and residual helium

in rocks containing uranium and other radioactive elements associated with Flood rocks.

Most creationists who had previously considered this problem believed that the large quantity of daughter isotopes present today were formed primarily during Creation and that the concentration of daughter isotopes was non-zero when time began. If this were true, then the problem could be solved simply by resetting our clocks to account for this non-zero starting point. However, the evidence said otherwise.

Thus, the RATE research was bound by two major constraints—the clear statements of Scripture that the time since Creation was only thousands of years, and the evidence that a lot of nuclear decay had occurred since Creation. ●

**THE CONCEPT OF SO-CALLED
ACCELERATED DECAY WAS HIGHLY
CONTROVERSIAL AND NOT EASILY
ACCEPTED BY THE SCIENTIFIC
COMMUNITY WITHOUT STRONG
SUPPORTING EVIDENCE.**



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Meeting Highlights

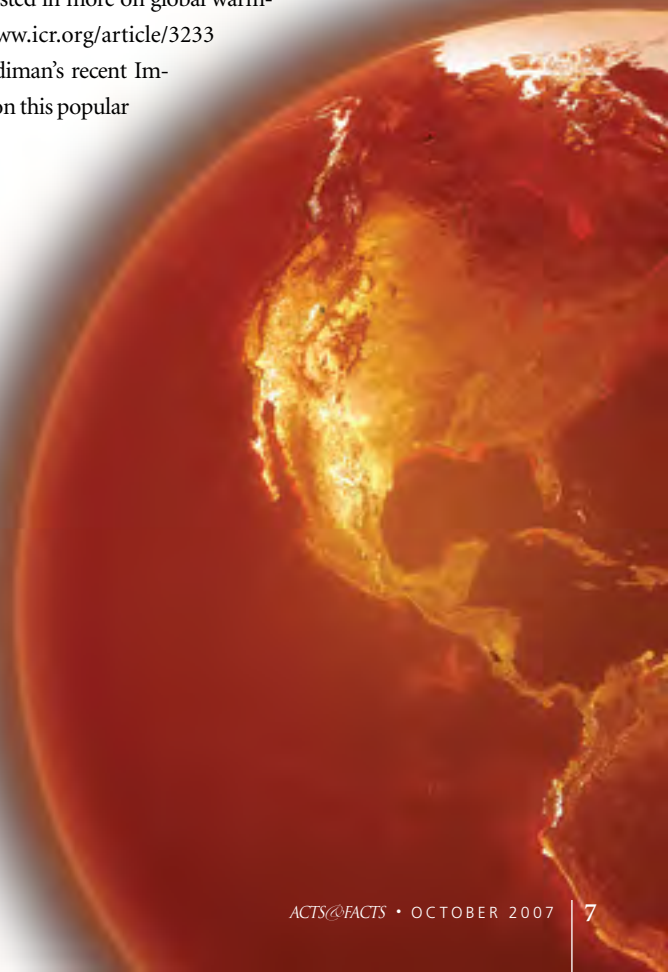
Vardiman Addresses Global Warming Catastrophism

Is mankind the cause of global warming? Will human activity and technology send the earth into a catastrophic meltdown?

Dr. Larry Vardiman tackled these issues at a meeting of the Creation Science Fellowship in Pittsburgh, Pennsylvania, on August 22. About 150 attended the gathering. Dr. Vardiman's presentation "Evidence for Global Warming" was accompanied by segments of the video documentary *The Great Global Warming Swindle*.

Increased sea-surface temperature in the Gulf of Alaska, decreased ice coverage in the Arctic, and increased hurricane frequency in the Caribbean and the Gulf of Mexico lead Dr. Vardiman and other scientists to conclude that global warming has been occurring for at least the past 30-50 years, but that mankind is probably not the cause. A recent increase in solar activity has apparently deflected cosmic radiation away from the earth, reduced cloud cover, and caused warming at the earth's surface. This observed increase in carbon dioxide is likely a *consequence* of global warming, not its cause.

Interested in more on global warming? Visit www.icr.org/article/3233 for Dr. Vardiman's recent Impact article on this popular subject. ●



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Two Months Left Before the IRA Window Closes



On August 17, 2006, President Bush signed into law the Pension Protection Act of 2006 (PPA 2006), which allows individuals who are 70½ years or older to make a direct charitable contribution of up to \$100,000 from their IRA without having to declare it as income—but only until January 1, 2008. For those who qualify, this is an excellent opportunity to practice good stewardship and support those tax-exempt organizations that God has laid on your heart. For further information on the PPA 2006 IRA rollover provision, please contact your financial advisor, or call ICR's Stewardship Services at 800.337.0375.

A Time of Change

HENRY M. MORRIS III, D.MIN.

Chief Executive Officer

As John Morris has noted in this month's President's column, change is "rarely a comfortable process." When the "normal" environment (whatever state that may be) is disturbed, it seems like the whole rhythm of life gets out of whack.

Some of the change brings excitement—like the purchase of our new campus in Dallas. This transaction is an important milestone in the process that began in 2004, when I first moved to Dallas to explore possibilities for developing and opening the Henry M. Morris Center for Christian Leadership. Working through the many details and getting the various involved parties into agreement has been an "excitement" altogether different from our "normal" day-to-day operations. Thankfully, all is well and the Lord has "gone before" (1 Chronicles 14:15) and prepared the way for us.

By the time you read this, we should be refurbishing the ICRGS building on the new Dallas campus, setting up

faculty offices and laboratories, as well as a library and other ICR departments.

August saw the completion of the business offices in our main building, in preparation for the move of that function from Santee to Dallas. The third and largest building on the new campus will be reserved for future expansion—probably a new museum. We are (I hasten to say for those of you in the San Diego area) going to maintain the Museum of Creation and Earth History in the Santee location. The buyer of our California campus is very interested in helping ICR maintain the museum, and we have no immediate plans to dismantle or close that ministry.

Although the overall transition is going well, certain members of our faculty have found it difficult to relocate, and some of our long-time support personnel will not make the move to Dallas. We have thus faced one of the "uncomfortable" aspects of change: the challenge of separating from friends and restructuring a smaller office for those who will remain in southern

California. Gratefully, even those difficult decisions have been made, and the transfer of mission, ministry, and ministers to the new location is almost complete.

Arranging for the sale of our Santee campus was somewhat bittersweet. There is no doubt that the Lord opened a wonderful door for ICR by enabling us to unlock those assets so that we could accomplish the move and begin to develop a strategic plan to increase our scientific research faculty and support personnel. The opportunities for the future have never been more exciting—even amidst the rapidly growing opposition from evangelical sources toward the historicity of Genesis and the foundational epochs of the creation, fall, and flood of Noah.

In next month's *Acts & Facts*, I will try to give you a more complete picture of the new aspects of our Dallas campus and provide an update on our plans for ICR's immediate future. ●



A groundbreaking new technical paper¹ shows that several creationist cosmologies can explain the “Pioneer anomaly,” a decades-old mystery about distant spacecraft. Big Bang theorists cannot use this solution, yet they have found no alternative explanation they can agree upon. Thus the Pioneer data are evidence against the Big Bang and for a biblical, young universe.



In 1980, scientists at the Jet Propulsion Laboratory (JPL) in Pasadena, California, began to notice a peculiarity in the trajectories of their spacecraft Pioneer 10 and 11, which are now very distant, far beyond the orbit of Pluto (FIGURE 1). Later they noticed the same peculiarity in the trajectories of the Ulysses and Galileo spacecraft. Radar-like signals between earth and these spacecraft showed that the spacecraft were slowing down in their outward travels away from the sun more than computations of all the gravitational forces (mainly from the sun) could explain. They checked the calculations thoroughly, even using a different program on a different computer. Year by year, the anomaly (the difference between expected and observed speeds) continued to increase.

Finally, in 1998, they reported their observations in a major physics journal.² All the spacecraft were losing speed more than expected by about 0.85 billionths of a meter/sec per second. Theorists were quick to notice that this number is very close to the Hubble constant (H) times the speed of light (c). The Hubble constant describes how redshifts in the light spectra of galaxies increase in proportion to their distance. This apparent connection to cosmology stimulated a flood of theoretical papers trying to explain the anomaly.

Some theorists suggested the number was only a coincidence, and that the cause of the de-

CREATION COSMOLOGY SOLVE SPACECRAFT

D. RUSSELL HUMPHREYS, P.H.D.
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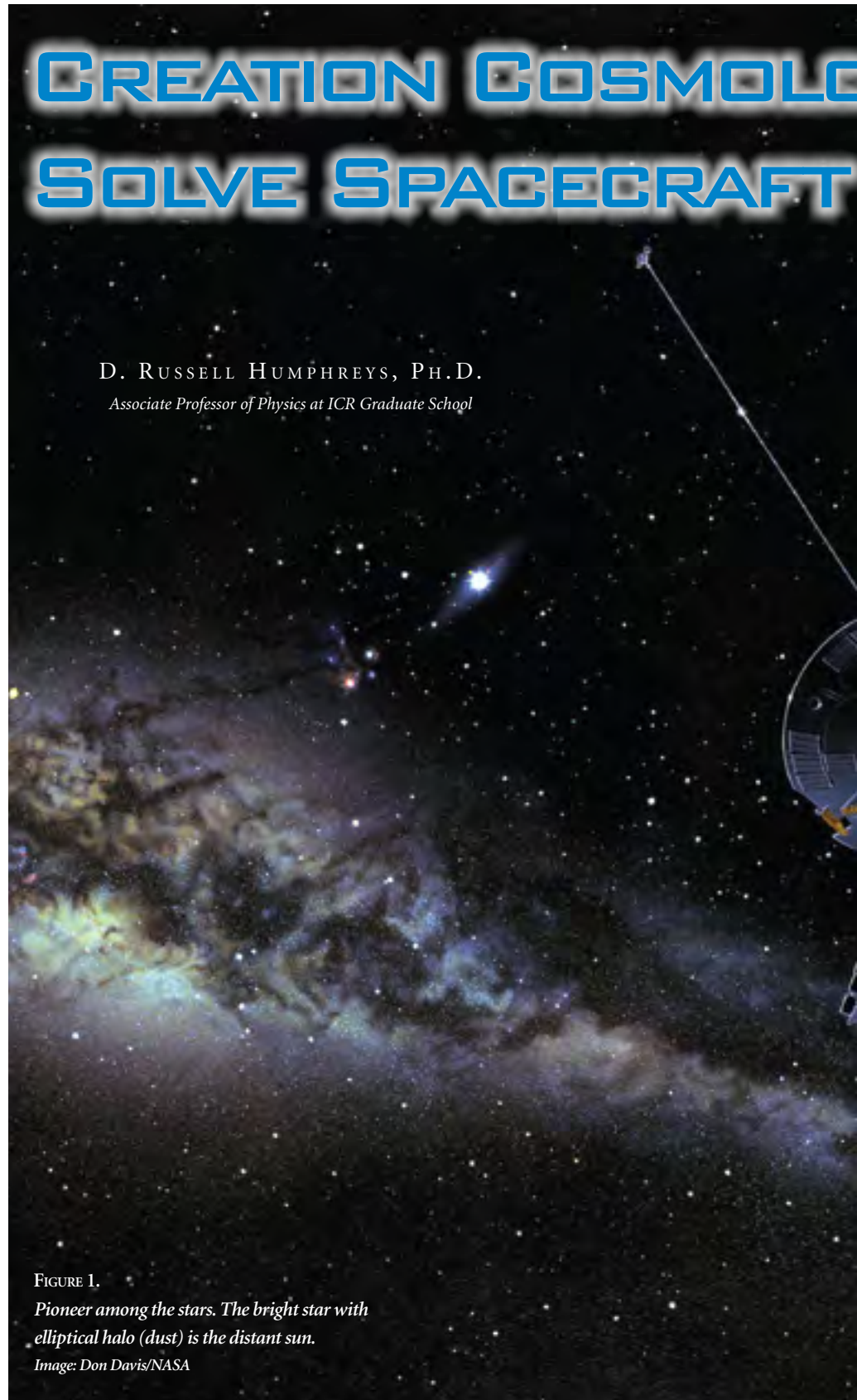
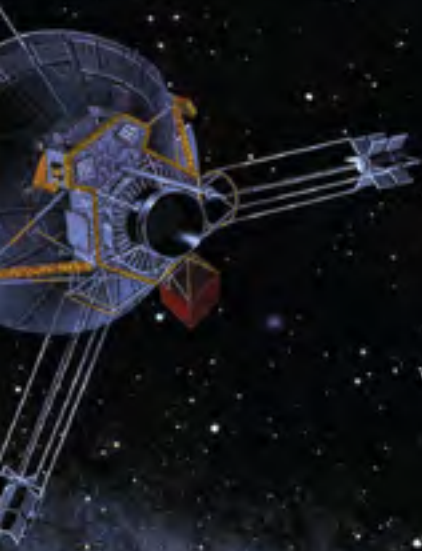


FIGURE 1.

Pioneer among the stars. The bright star with elliptical halo (dust) is the distant sun.

Image: Don Davis/NASA

LOGIES MYSTERY



celeration was something simple, such as gas leaks at the right rate in the right direction on all four spacecraft. The JPL team quickly answered such remarks, and then in 2002 completely refuted them in a detailed fifty-page review³ of the data from Pioneer 10 and 11, the two spacecraft showing the effect most clearly. Other theorists invented new laws of physics, invoking such exotica as “braneworlds” or “mirrorworlds.” A few theorists tried to apply conventional physics in new ways, such as appealing to larger-than-expected gravitational forces from the as-yet-unobserved Oort comet cloud. The JPL team surveyed all the theoretical offerings, and as of late 2005 found them all unsatisfactory. Below I outline how the essential features of several creationist cosmologies offer a coherent solution to the mystery.

The cosmos has a center and has expanded

My 1994 book *Starlight and Time*⁴ pointed out a “trade secret” of Big Bang cosmologists: they assume that at all times, *all the space that exists* is completely filled (roughly uniformly) with matter and energy. That means the Big Bang has no “farthest galaxies” beyond which there is a lot of empty space. It has no “edge of space,” either. Some versions of the Big Bang have infinite space (and matter), while other versions have the fabric of space curved back upon itself. (If you don’t understand the latter, buttonhole your nearest available Big Bang theorist and make him explain it to you!) The Big Bang theories do not have a large empty space surrounding all the galaxies. That means the Big Bang theories cannot have all the stars falling toward, or orbiting around, a common center of mass. The Big Bang is centerless.

But the Bible implies that the real universe indeed has a center! Appendix B of *Starlight and Time* details much of what follows. After creating a light-years-size ball of water (Genesis 1:2, “the deep ... the waters”), God said, “Let there be an expanse [or “firmament”] *in the midst* of the waters” (Genesis 1:6, italics mine). So the expanse started near the center of the large ball of water as a thin spherical layer separating a planet-size ball of water inside it from the much larger amount of water outside it (Genesis 1:7).

Then Genesis 1:8 adds, “God called the expanse heavens.” Moses’ first readers, the Israel-

ites in Sinai, would have understood the heavens as being the space that, after the fifth day, would contain not only clouds and birds, but also the sun, moon, and stars (e.g., Deuteronomy 4:19). The distinction between “atmosphere” and “outer space” is a modern idea that is foreign to the original meaning of the word.

Next God stretched out the expanse. Not only is the idea of “spreading out” implicit in the Hebrew word for expanse, but seventeen verses in the Old Testament affirm it, such as Isaiah 40:22, which declares that God “... stretches out the heavens like a curtain and spreads them out like a tent to dwell in.”

God wanted the expanse to be big enough to contain all the stars He created (Isaiah 40:26) on the fourth day (an ordinary-length day by earth’s clocks): “And God made the two great lights ... and the stars ... and placed them *in* [not ‘above’] the expanse of the heavens” (Genesis 1:16-17, my translation and italics). So the heavens include everything from the earth’s surface out to “the waters above” the expanse. Psalm 148:3-4 implies that “the waters above the heavens” still exist and are above the stars and “highest heavens.” (They are not the “windows of the heavens,” one of the sources of water for the Genesis flood.)

FIGURE 2 illustrates this basic biblical cosmos. The “waters above” are beyond the most distant galaxy our telescopes have detected, at least 12 billion light years away (1 light year = 6 trillion miles). If the waters were only a little further away, 13.8 billion light years, they would be beyond cur-



FIGURE 2. Basic biblical cosmos. Not to scale.

SPACECRAFT MYSTERY CONTINUED

rent estimates of the “redshift horizon,” which is the distance limit of what we can observe.

From my interpretation of the Pioneer data, at that distance the waters would have a total mass of about twenty times the mass of all the stars. This shell of water would now be so thin that it would probably have frozen and broken up into a tenuous veil of ice particles. If its composition is similar to the ice particles in Saturn’s rings, it would be about 40 meters thick. Though the “waters above” are as insubstantial as a cloud, they cover such a large area that they have an enormous total mass, which affects the physics in the neighborhood of our solar system.

Lest we forget where the earth is in all this, Genesis 1:9 tells us that the “waters below the heavens” became the seas and solid earth on the third day of creation. Because the initial spherical expanse contained those waters and was “in the midst” of all the waters, it appears that the earth is approximately (on a cosmological scale of distances) at the center of the cosmos. (In contrast to geocentrism, I am not claiming the earth is at the exact center or is motionless with respect to it.)

Expansion causes the Pioneer anomaly

A backyard trampoline helps to illustrate how the expansion of a cosmos with a center explains the mystery of the apparent slowdown of the Pioneer spacecraft. This trampoline has thumbscrews around the rim that can tighten and stretch out the elastic fabric considerably. Now make a two-foot diameter ring of heavy wet sand on the trampoline. The weight of the



FIGURE 3. Trampoline dented by ring of sand.

sand makes a dent in the elastic fabric, as FIGURE 3 shows. Inside the ring of sand, the fabric is flat. The depth of the dent is, say, four inches below the rim of the trampoline.

Now turn the tightening screws and stretch out the fabric until the ring of sand is larger, three feet in diameter. The *tension* in the fabric (force tending to pull it apart) has become greater, and the dent is shallower, say only three inches deep. Stretching out the fabric has raised the sand ring and the dent by one inch. That has increased their *gravitational energy*, the energy it takes to lift an object.

The trampoline has only two horizontal dimensions, say east-west and north-south. Except for that limitation, it obeys the same kind of equation that gravity does, either Newtonian (three dimensions) or Einsteinian (four dimensions). As God stretches out the fabric of space, the spherical shell of waters expands outward with it. Inside the shell, the gravitational energy of the fabric of space increases, just like the gravitational energy of the trampoline fabric did. The tension of the fabric of space also increases.

Now imagine waves traveling in the trampoline. If you karate-chop one side of the trampoline fabric, a wave travels out from the point of impact. The higher the tension in the fabric, the faster the wave travels. You can see the same effect more easily with a heavy cable attached to a tree. Stand a few dozen feet away from the tree with the loose end held near your eye. Pull steadily on the cable to apply some tension to it. Move the cable sharply up and down, just once, and you will see a pulse move down toward the tree and bounce back to you. The harder you pull on the cable, the higher the tension, and the faster the pulse will move.

The same thing happens to the fabric of space. The main differences are that the tension of that fabric is its total energy per unit volume, and the waves are electromagnetic. The gravitational energy contributes to the total energy of the fabric of space, so when the gravitational energy increases, the total energy increases, and so does the tension of the fabric. Looking at it another way, the increase of the gravitational energy of the fabric of space and the shell of waters comes from God increasing the tension in the fabric of space to stretch it out. The increase of tension increases the speed of light waves and radio waves through space.

The upshot is that God’s stretching of the fabric of space increases the speed of radio waves, the basis of radar measurements. Recall that in the first paragraph of this article, I said that it was “radar-like signals between earth and these spacecraft” that showed the changes in the spacecraft speeds. In the technical paper I show that the speeding up of the radio waves reduces the “radar” distance of the spacecraft below what is expected in precisely the right way as to explain the apparent deceleration. The Pioneer anomaly is the first evidence we have that the expansion of space is occurring today and locally, not just in the past and far away.

The bottom line

Another important result is that to fit the Pioneer data, the “dent” in the fabric of space has to be very deep, so deep that only thousands of years ago there would have been strong time dilation (changes in the rates of physical processes). That can explain how light from distant galaxies got to the earth quickly, by the end of the fourth day of creation. Several creation cosmologies (not all developed by me) feature recent time dilation, a center of mass, and expansion of space. These essential features explain the Pioneer anomaly. In contrast, Big Bang theories cannot invoke this explanation. So the Pioneer data represent striking support for a straightforward biblical view of a young universe, while presenting yet another serious problem for Big Bang cosmologies. ●

For more references, please see the end notes of the technical paper cited in the first footnote listed below. Email questions and comments to Info@icr.org. Please do not relay technical remarks before reading the technical paper.

References

1. Humphreys, D. R. 2007. Creationist cosmologies explain the anomalous acceleration of Pioneer spacecraft. *Journal of Creation* 21(2):61-70. Can be downloaded as a PDF document from the following page of the Creation Ministries International website: <http://www.creationontheweb.com/content/view/5181/>.
2. Anderson, J. D. et al. Indication from Pioneer 10/11, Galileo, and Ulysses Data, of an apparent anomalous, weak, long-range acceleration, *Physical Review Letters* 81:2858-2861, 1998.
3. Anderson, J. D. et al. Study of the anomalous acceleration of Pioneer 10 and 11, *Physical Review D*65:082004-1 to 082004-50, 2002.
4. Humphreys, D. R. 1994. *Starlight and Time*. Master Books, Green Forest, Arkansas. Available at: <http://www.icr.org/store/>.

Varves: Proof for an Old Earth?

JOHN D. MORRIS, P.H.D.

President of the Institute for Creation Research

Visit any anti-creationist website and you're certain to find a discussion of *varves*, tiny laminae thought to be annual deposits within sedimentary strata. In some areas millions of these are found in succession, which are offered as "proof" of long ages. More importantly, many feel that this proves the Bible's account of recent creation to be in error.

Most often mentioned is the Green River Shale in the western U.S., famous for its precisely preserved fossilized fish. Here several million varves are found, one on top of the other, throughout this wide depositional basin. Does this discovery really disprove the biblical chronologies, or is there another explanation? First, let's gather the data.

It is true that under perpetually calm and regular conditions, varves do form in winter-summer couplets, with coarser materials on the bottom. But it's also true that in many natural settings, multiple pseudo-varves have formed quickly due to individual storms or unusual conditions. In many field observations and in laboratory experiments, multiple laminae can form almost instantaneously in simulated bottom-hugging density flows, now widely recognized as frequent throughout the geologic strata. Few knowledgeable geologists still cling to the myth of one varve equals one year.

One major problem has to do with the untold millions of fish fossils entombed within, exquisitely preserved over the extensive area. These fish are complete with eyes, scales, and other fine details. But fish quickly rot and disintegrate unless they are

rapidly buried and kept away from scavengers, oxygen, and bacteria. Some appear to have burst from gases formed in their body cavities after death, but no evidence for much time can be adduced. Furthermore, the fish fossils are found in great numbers, which is hardly how fish carcasses behave under normal circumstances. Perhaps during a rapid deposition event one fish might be rapidly buried, but millions? Some of the fish appear to have been caught in life activities, such as in the process of eating another fish, not in a position a dead fish would assume if it quietly floated to the bottom of a lake to slowly await burial and fossilization.

This problem for uniformitarian thinking is compounded by the great numbers of other fossils present in the same formation. Many species of fish are preserved, seemingly from different habitats. Certainly different habitats are implied from the many reptile fossils found, as well as the varied plant fossils, upland species along with sub-tropical species. Many insects are present, as are marine invertebrates. Most remarkable are the multitudes of bird fossils, from shorebirds to forest dwellers to ocean feeders. Truly a remarkable mix of environments! Surely, this was not an everyday event. A rapid burial of organisms from varied life zones over wide portions of the continent is demanded.

Creationists haven't solved all the problems associated with this classic site, but research is continuing. We can be certain it won't be solved by the sterile uniformitarian thinking of the past. However, reasoning from the standpoint of the great Flood of Noah's day and its aftermath holds promise. ●



Megafloods

IN THE ENGLISH CHANNEL

WILLIAM A. HOESCH, M.S.

Research Assistant in Geology

Sir Charles Lyell, the father of geological gradualism, may have just turned in his grave. A hidden series of gouges on the floor of the English Channel suggests that huge torrents of water once traveled west from Dover Straits. The massive valleys, 50 meters deep and tens of kilometers wide, have puzzled geologists since the 1970s, but a recent high resolution sonar survey has sharpened the focus of scientific research.

The picture that has emerged includes long ridges and grooves that run parallel to the Channel, v-shaped scours that taper upstream, streamlined islands, and at least one “hanging valley.” All these features are remarkably well-preserved in the sub-sea bedrock, and represent geological scars from a decidedly non-gradual event.

The sub-sea features point in the direction of the 21-mile-wide Dover Straits. For over a hundred years geologists have been puzzled by these narrows that connect the English Channel to the North Sea. The scenic chalk cliffs that line the straits on both the English and French sides are familiar to many. What is perhaps less obvious is that the cliffs are the interrupted edges of a once-continuous ridge that spanned the straits,

called the Weald-Artois anticline.

At a time when sea level was about 100 meters lower, during the post-Flood Ice Age, this ridge apparently formed a dam that held a large lake, perhaps the size of one of the smaller Great Lakes. Breaching of the rock dam at Dover Straits instigated catastrophic drainage of the lake; peak discharges on the order of one million cubic meters per second (200 times the discharge of Ni-

The new findings add to a swelling body of evidence for Ice Age megafloods as major landform-generating agents.

agara Falls) are demanded to explain the scours in the lowlands below. The scours resemble those caused by the Lake Missoula Flood (17 times this discharge), another Ice Age deluge. When sea level rose to present levels following the Ice Age, the scoured lowland became the English Channel and the Dover “dam breach” became the Dover Straits. The course of English history was forever changed.

The new findings add to a swelling body of

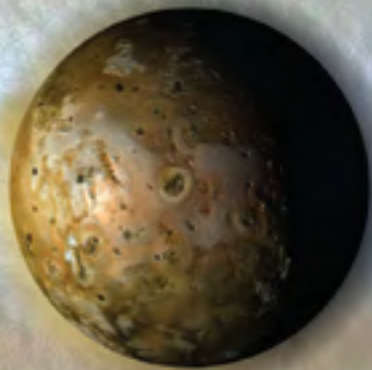
evidence for Ice Age megafloods as major landform-generating agents. Evidence suggests that the Ice Age ended abruptly and catastrophically. A few regions of the world that have been shaped by Ice Age megafloods include: a major portion of Washington state, the Snake River Plain of Idaho, the Altai region of southern Siberia, the Black Sea basin, the upper Mississippi River Valley, the Hudson River Valley including New York City, Wyoming’s Grand Canyon of the Yellowstone, Owens River Gorge in California, and the Great Lakes/St. Lawrence drainage basin, including Niagara Falls. Now the English Channel and Dover Straits can be added to the list. A few decades ago it would have been preposterous to appeal to such non-observable events. Mere extrapolation of the processes operant in observed historic floods cannot approximate the power of the megaflood. For example, cavitation is a rock-pulverizing process that operates *only* when certain thresholds of velocity and power are crossed. There is a need to break away from the kind of linear thinking that was so encouraged by Lyell and others; secular scientists are to be praised for being unafraid to do so today.

Catastrophism has finally come of age. ●

Spewing Hot Rocks on Old Ideas

DAVID F. COPPEDGE

Jet Propulsion Laboratory, NASA



The most volcanically active body in the solar system is a little moon of Jupiter named *Io*. This moon is pumping out the hottest lavas known, from equator to pole, 24/7. That a small body could be this hyperactive is one of the major mysteries for adherents to the billions-of-years-old universe hypothesis.

Scientists at the Jet Propulsion Laboratory stood astonished when Voyager 1 transmitted the image of a volcanic plume rising above the limb of *Io* in 1979. These volcanoes have not ceased in the 28 years since. *Io*'s pizza-like surface, devoid of impact craters, suggests this activity has continued much longer. Every square inch of the moon has been resurfaced by volcanic ejecta. In comparison, the surface of *Io* emits five times more energy than Yellowstone's thermal basins: 13.7 watts per square meter.

When the New Horizons spacecraft passed *Io* on March 1, 2007, it photographed a plume shooting 200 miles high near *Io*'s north pole. This area sported a bright lava fountain when the Galileo spacecraft photographed it in 1999. Now, eight years later, the lava lake remained visible as a bright spot. Galileo observed one plume 370 miles high. Material from these eruptions forms a large donut-shaped ring, or *torus*, around Jupiter. This little moon has mountain ranges rivaling the Rockies and Himalayas.

Spectra of the lavas show them to be much hotter (2000° K) than earth lavas (1200° K). These *ultramafic* lavas contain the heavy elements iron and magnesium. If *Io* were as old as claimed, the heaviest elements should have sunk to the core, leaving a light crust 50km thick that heavy elements could not penetrate. Yet if the interior were mushy, it could not support the high mountains. And what generates all that heat?

The usual explanation is that *Io* is squeezed by the gravity of Jupiter and its neighboring moon Europa. Calculations show, however, that the tidal energy is an order of magnitude too low to produce the observed heat flow. A series of papers on "Io after Galileo" in the May 2004 issue of *Icarus* could not solve these problems. One scientist calculated in 2003 that if *Io* has been erupting over "geologic time" at 10% its current rate, it would have erupted its entire mass 40 times over by now.

Meanwhile, *Io* continues to sneeze at old-age beliefs. A record outburst on February 22, 2001, was the largest ever seen in the solar system. It covered a thousand times the area of Mt. Etna. This one outburst rivaled all of *Io*'s other volcanoes put together. Another significant burst occurred less than a month later at a different location. Observations published in July 2007 indicated a doubling of sodium in the torus over a few months.

Io stands as a dynamic witness against the belief that the planets are 4.5 billion years old. Unfortunately for evolutionists, it's not the only one. ●

LETTERS TO THE EDITOR



I really think the new *Acts & Facts* format is well done. Congrats! Keep up the good work.

—G.B.

Really like the new format. Excellently done—thanks for doing this.

—J.U.

I like the new format, finding it better to follow an article.

—D.H.

I love the new look! I've been subscribing since the mid-1970s and have seen a number of changes along the way. This one is tops!

—M.N.

Love the new *Acts & Facts* format. It's terrific!

—J.P.

Thank you for your *Days of Praise* devotional booklet. I learn from it and mark in my Bible the meanings of Greek words and other things made clear. *Days of Praise* has been a part of my daily devotion for many years. May God bless your work to sow His seed.

—M.M.

Thank you so much for putting together this website and especially the *Days of Praise*. I helped a close friend become a Christian and I have been sending her the *Days of Praise* ever since I heard about them. They have really helped her to grow in Christ as a new believer. So thank you for doing the great job you are doing!

—C.M.

The whole issue of *Acts & Facts* was outstanding, and another great success in the new "super format."

—J.S.

I posted [the] enclosed letter to the editor on August 10, 2007, by U.S.P.S. I received the September issue [of *Acts & Facts*] August 31. Since this letter was not included, would you...ask the editor to have my name and address deleted from the mailing list for *Acts & Facts*? ...I request that you continue to send me *Days of Praise*.

—L.S.

Dear L.S.:

We have submitted your name for removal from our *Acts & Facts* subscription list. Thank you for your extensive letters, but please understand that ICR's ministry extends around the world and *Acts & Facts* is read by hundreds of thousands of people each month. As a result, ICR receives thousands of inquiries and comments each month. While our staff reads each letter that arrives, space simply does not allow us to print every one. And, unfortunately, your letter arrived after the September issue went to print. We will, as you request, continue your subscription to our daily devotional. *Editor*

Have a comment? Email us at editor@icr.org.

Radio Log



This month on "Science, Scripture, & Salvation"

WEEKEND OF OCT. 6

Columbus and the Flat Earth Myth

Most of us were taught in school that the adventurous Columbus wanted to sail around the globe to prove that the world was round. But is it true that people actually thought the earth was flat? And what does that have to do with creationism?

WEEKEND OF OCT. 13

Creation and the Feminist Movement

The feminist movement may have started with the worthy goal of women's suffrage, but since then it has catapulted society into an evolutionary frame of mind—not only devaluing life, but also diminishing the uniqueness of women.

WEEKEND OF OCT. 20

Chemical Warfare

Certain animals are equipped with unique built-in defense systems, using chemical warfare to protect themselves. What are some of these fascinating creatures and how do they defend themselves?

WEEKEND OF OCT. 27

Creation and God's Plan for the Family

Today, many would agree that the traditional family is under attack in society. Although Christians know that the Bible has much to say about the family, many don't realize that the family unit was established in the book of Genesis. What is God's plan for the family and how can we protect it?



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The CREATIONIST WORLDVIEW

HENRY M. MORRIS III, D.MIN.

Chief Executive Officer

"For as he thinketh in his heart, so is he." Proverbs 23:7

None but the most radical libertarian is comfortable with the way things are in society. Much of the argument among politicians is over their "cure" for the problems that plague us. But this approach simply treats the symptoms, rather than going after the real cause of the disease.

We have abrogated the issues of human relationships to meaningless debates over techniques, programs, and economic distribution. We have reduced the universal human search for meaning to nothing more than a "fulfilling self-image"—whatever that means. We have encoded the Darwinian "survival of the fittest" with the New Age jargon of empowerment to "be all you can be."

Governmental leaders try to secure peace and prosperity. Educational planners attempt to resize or uplift the classroom environment, hoping that practical knowledge will "end poverty" or "break the stranglehold of crime." Business executives and consultants around the world strive for ways to eliminate employee problems and re-engineer the corporation. Religious clerics, teachers, and gurus stress everything from "positive thinking" to "seeker-driven" environments in their worship—all in an effort to lessen the impact of sin-filled hearts.

The various programs to redistribute income, provide free education, eliminate abortion, subsidize the arts, help the homeless—or whatever the focus—may provide some relief in the short run, but they will never "cure" the disease. It's like fighting the common cold. Medications are designed to relieve the symptoms, to make the disease less painful to bear, not cure the virus.

In biblical terms, the disease is sin, curable only by regeneration through the work of the Holy Spirit, which is made possible by the love of God the Father expressed in the substitutionary death, burial, and resurrection of the Lord Jesus Christ. In human terms, the disease is a naturalistic worldview, curable only by embracing a genuinely theistic worldview that acknowledges the Creator.

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