



Johann Kepler

The Founder of Modern Astronomy

German astronomer and mathematician Johann Kepler (1571–1630) was a central figure in the 17th century scientific revolution. He was not only the founder of the physical astronomy discipline, “the first astrophysicist,” and an outstanding scientist, he

by
Jerry Bergman

was also a committed Christian (Morris, 1998, p. 33; Gingerich, 1993, p. 305). Kepler is best known for discovering the three laws of planetary motion that provided a foundation for Isaac Newton’s theory of universal gravitation (Dao, 2008, p. 8). The problem that motivated the discovery of his three laws was observational astronomy did not support the circular orbit belief, and Kepler was able to determine why.

The first law named after him is that planets travel in elliptical paths and not perfect circular orbits as commonly believed. Kepler’s second law states that planets sweep out equal areas in equal times, producing an elliptical orbit (Sagan, 1980, p. 62). His third law is that the square of the periodic times are proportional to the cubes of their

mean distance from the sun (Dampier, 1949, p. 128). Although the third law is only roughly true, and the discovery of new planets has rendered it of little use today, it was an important step in achieving the insight about the planets that we have today.

The three laws were not his only major scientific contribution to science. He also completed fundamental scientific work in the field of optics, having invented an improved version of the refracting telescope that today is called the Keplerian Telescope. His telescopic discoveries were critical in helping Galileo Galilei overthrow the view that the sun circles the earth, called the geocentric worldview.

Inspired by His Biblical Faith

Kepler believed that God was the creator of the Cosmos, and his lifelong goal was “to learn the eschatology of the world,” and to do this he “dared to contemplate the Mind of God” (Sagan, 1980, p. 56). This goal “became a lifelong obsession,” and the hubristic longings of Kepler “were to carry Europe out of the cloister of



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Coming Soon

Creation Weekend 2016

Features World Class
Scientist Dr. John
Baumgardner

Dr. John Baumgardner is one of the world’s leaders in terms of significant contributions to science. He has used his expertise to develop computer models to study many aspects of our world. For example he developed a model to study how Earth’s rock systems work and have worked in the past (as for example during the Flood), weather and climate systems and how popular scientific ideas about mutation and natural selection (Darwinism) simply cannot work to produce evolution.

Dr. Baumgardner was a scientist on the staff of Los Alamos National Laboratory in California. During his 20 years there, he developed a 3-D spherical model of Earth’s mantle. This code was the first 3-D spherical code of its kind and even now, almost 30 years later, it continues to be state of the art and is used by several research groups around the world. One major application of this model is to explore the onset of the global Flood and how it possibly proceeded.



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Coming Soon

Creation Weekend 2016

**Features World Class
Scientist Dr. John
Baumgardner**

Continued from page 1

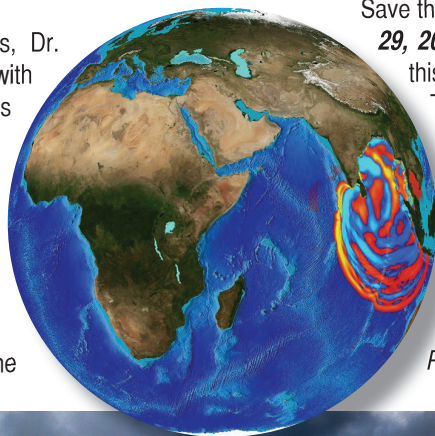
Dr. Baumgardner has spectacular graphics of this process which everyone will enjoy!

Dr. Baumgardner also, while at Los Alamos, assisted the German Weather Service to model a sophisticated next-generation weather forecast model named GME. Since the year 2000, this model has been used in Germany and currently also in more than 20 countries!

Since leaving Los Alamos, Dr. Baumgardner has worked with some geneticist colleagues to develop a state-of-the-art population genetics program which examines the role of mutations and selection in living populations. The results clearly demonstrate that natural selection does not, and cannot produce the

appearance of new and more successful creatures that the evolution model requires from this process.

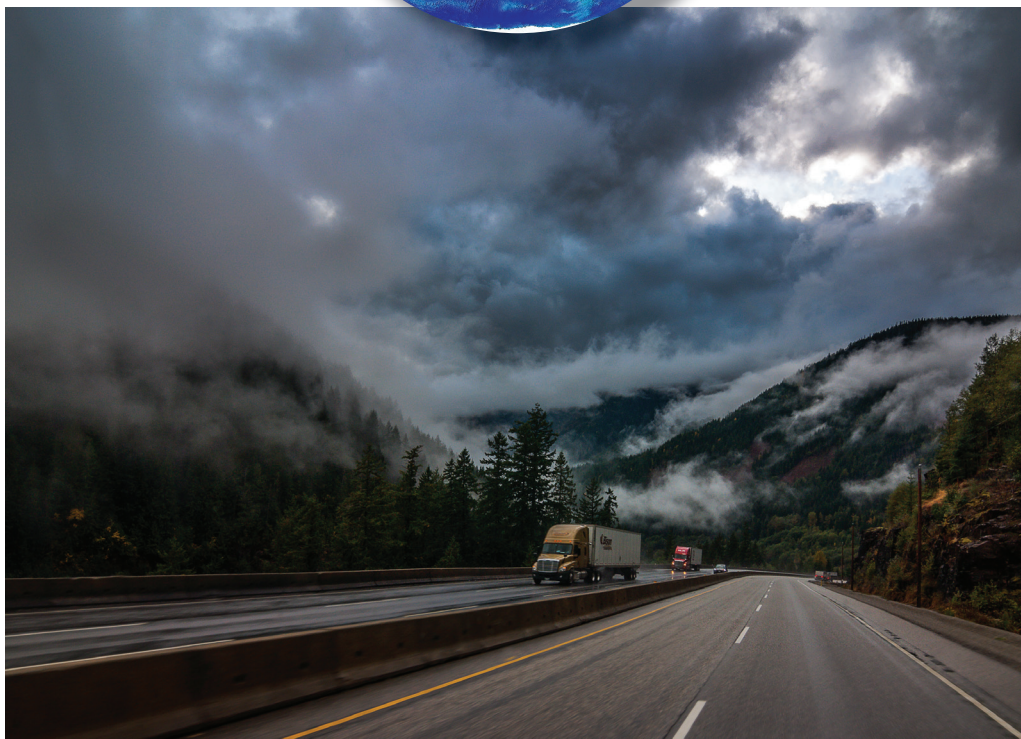
Dr. Baumgardner is brimming with Christian enthusiasm for the gospel and the ways that we can see God's work and character displayed in the creation. With his expertise and enthusiasm, Dr. Baumgardner has other interests as well, which include the development of languages and the dating of rocks and other objects.



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Johann Kepler

The Founder of Modern Astronomy

medieval thought,” and into the modern scientific age (Sagan, 1980, p. 56). Furthermore, Kepler believed that his study of the solar system allowed him to glimpse the “image of perfection and cosmic glory” of the universe. He was searching for “ultimate causes, the mathematical harmonies in the mind of the Creator” (Dampier, 1949, p. 127). Kepler later wrote that geometry “is co-eternal with the mind of God” because it provided God with a model for the Creation ... If the world was crafted by God, should it not be examined closely? Was not all of creation an expression of the harmonies in the mind of God? The book of Nature had waited more than a millennium for a reader (Sagan, 1980, p. 56).

That reader, Sagan noted, was Kepler himself. After studying both the Ptolemaic and the Copernican models of planetary motion, Kepler concluded that the evidence favored the Copernican system (Donahue, 1982). As a student, he defended heliocentrism from both the theoretical and theo-

logical perspectives, maintaining that the Sun was the principal source of the force that holds the solar system together.

His original goal to become a minister was never fulfilled (Dao, 2008, p. 8). However, Kepler was eventually able to obtain a position teaching mathematics and astronomy at the Protestant school in Graz, Austria. He later became an assistant to the famous astronomer, Tycho Brahe, and eventually was appointed the empirical mathematician to Emperor Rudolf II.

Kepler was evidently the first scientist to proclaim that his astronomical research was merely “‘thinking God’s thoughts after Him,’ a motto adopted by many believing scientists since his time” (Morris, 1998, p.13). Kepler also wrote: “Since we astronomers are priests of the highest God in regard to the book of nature, it befits us to be thoughtful, not of the glory of our minds, but rather, above all else, of the glory of God” (Morris, 1998, p.13). Furthermore, Kepler’s astronomical research also involved the study of Biblical chronology, concluding that “the world was created about 7,000 years ago” (Morris, 1998, p. 13).

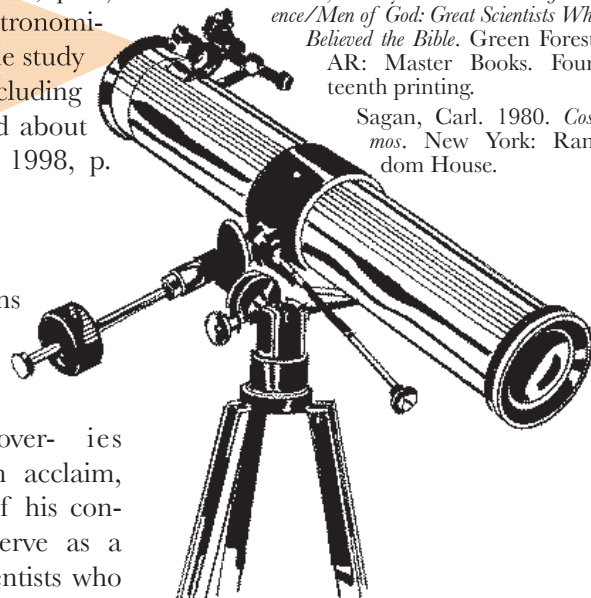
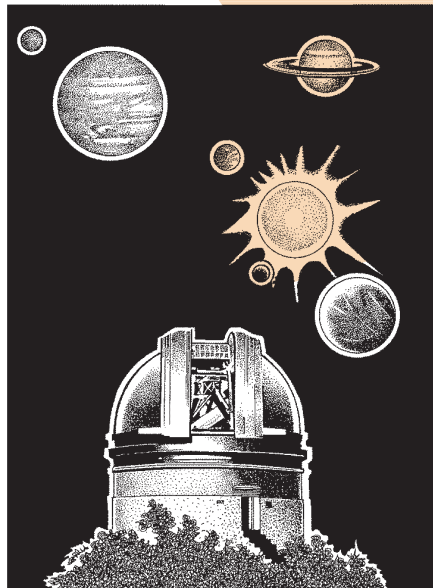
Summary

Although his conclusions garnered much opposition at first, in the end he “stayed true to his faith ... and his scientific discoveries would eventually win him acclaim, legitimize the discoveries of his contemporary Galileo, and serve as a major influence on the scientists who

came after him” (Dao, 2008, p. 8). As Harvard astronomer Owen Gingerich noted, Kepler’s gifts were so great that “any assessment of this man’s genius must be incomplete and imperfect” (1993, p. 305). An impressive monument to him exists in Germany, and his home has been preserved as a tourist site (Love, 2015, pp. 189-190). Let us never forget Johann Kepler, an exemplary scientist and Christian.

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The Living Cell: Frankly Created

by
Margaret Helder

We hear all the time about how complicated living cells are. It makes us think that such entities were designed to work as they do. People who support the idea that all things came about by natural processes, however, do not want to think that there is a mind behind what we see in all living creatures from microbes up to the largest, most complicated organisms. These latter people want to show how the living cell developed spontaneously, without any direction. So they want to demonstrate that there were early cells which were much much simpler than what we see today, cells that could have appeared through natural processes. These scientists want to demonstrate that the barriers to spontaneous development are not too high.

In this context, generations of scientists have devoted themselves to origin of life studies. Thus interest was high in a major study published in March 2016. The results however were not at all what the evolutionists were looking for. When intelligent design apologist biophysicist Cornelius Hunter commented on his blog "Darwin's God: How religion drives science and why it matters" on the significance of the new study, 125 comments were posted to his blog, most of them extremely angry and many with highly inappropriate language. What Dr.

Hunter said was that these studies are making things worse and worse for evolutionists. "Simply put," he said, "the

science contradicts the theory. What the science is telling us is that evolution is impossible, by any reasonable definition of that term."

Dr. Hunter was commenting on origin of life studies. In keeping with their interest in evolution and their belief that life originated from non-life (chemicals), many scientists have sought simpler cells than we see today. They are looking for hints about those early stages of life (if any). One scientist involved for almost two decades in pursuit of the dream of producing a simple cell, is J. Craig Venter. Dr. Venter began with a disease causing bacterium called *Mycoplasma genitalium*. He was able to eliminate some genes and still have a cell that could live (just barely). That was 1995. But this organism grew too slowly and was hard to work with.

Next Dr. Venter's team switched to a similar but more robust species *Mycoplasma mycoides*. He started with a complete record of the nucleotide bases (like alphabet letters) in the bacterium's DNA (genome). The 901 genes in the genome were composed of a total of one million nucleotides. As a first step in his quest to find a minimalist cell, he first set out to string together all these genes artificially and then insert them into a cell from which its own DNA had been removed. This he was able to do. The new artificial DNA was inserted into a different species of *Mycoplasma* from which its own DNA had been removed. And the new artificially put together genome expressed the characteristics of the former species from which its information had been copied.

This new living organism was labelled JCVI-Syn. 1.0. The significance was that an artificially pieced together string of DNA had been shown to work in directing the life activities of a cell. Of course the biologists had not developed anything original, they had simply copied an existing design (long string



of nucleotides conveying information). This however was to provide the platform for further studies into a minimalist cell.

The biologists drew up a list of what genes they believed would be essential in a minimalist cell. They pieced the genes together (as they had previously with Syn.1.0) and they inserted their designed genome into a cell from which the real genome had been removed. However in this case their designed genome failed to support life. They did not really know what genes were essential to life. The bottom up approach (composing a genome based on their ideas) had failed.

So they went back to their Syn. 1.0 organism with its 901 genes. They tried knocking out various genes in order to discover how small a genome they could produce which yet supports life. Eventually they managed to knock out 428 genes. That is a lot of information eliminated!! The result was a genome of 473 genes consisting of 531,000 nucleotides. This was a major achievement. They labelled it JC-VI-Syn. 3.0. The science media were very impressed and well they might be. This achievement represented a lot of careful work. However the researchers had not created any new genes of biological functions and they had merely eliminated a number of genes that were not essential for keeping the cell alive.

From the point of view of seeking a very simple primitive cell, it is obvious however that Syn. 3.0 is a failure! The cell has 473 genes and is thus still very complicated, way beyond the capacity of natural processes to develop such a system through trial and error (chance processes). And another fascinating detail is that 31% or 149 genes in this "minimalist" cell exhibit no functions that we know about. Yet the cell dies if any of them is missing! What we have learned from these studies is that there is no simple cell. Living cells require hundreds of genes (each coded for by an average of about 1000 nucleotides in a very specific order).

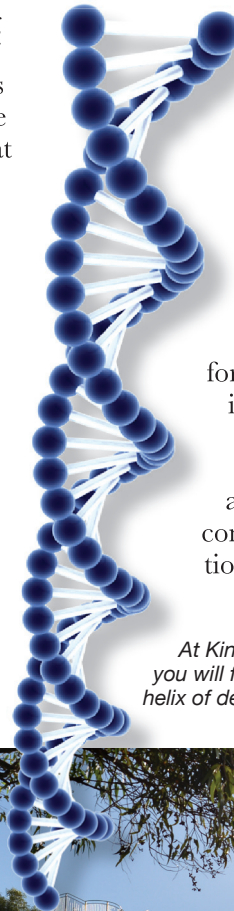
Scientists at the J. Craig Venter In-

stitute in La Jolla, California had managed to reduce the number of genes in a bacterial cell down to 473 genes. If the number of genes were any fewer, the cell did not survive. Dr. Hunter, for his part, declared that this is an enormous level of complexity, far beyond evolution's meager capacity to work with random change. (Natural selection, by the way, works only on living reproducing cells, not on systems which might be progressing toward a living condition. Thus claims that natural selection eliminates arguments concerning chance, are not valid). Most of the news stories describing this work, concentrated on what the scientists had achieved, while at the same time ignoring the scientists' main objective which they had failed to achieve.

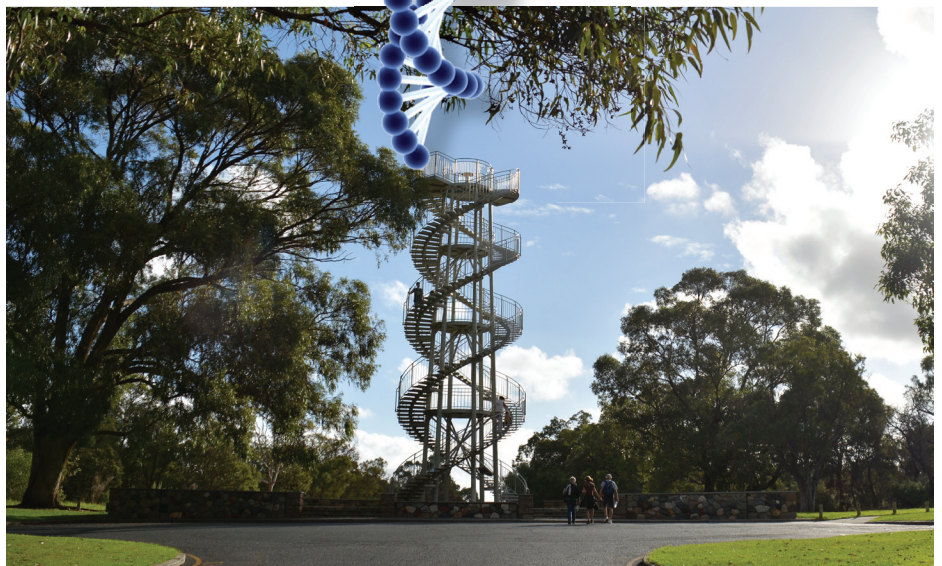
The living cell is obviously an all or nothing system. Either it has all the information/programming it needs (in the DNA), or it does not. The "minimalist" cell that the Venter lab produced was managed by 473 genes. Each gene in itself contains complex information too. Nobody thinks that the very same genes will be found to be the ones essential for every species. However this study provides a clear indi-

cation of the amount of information required for the living condition. Investigators previously had been able to reduce parasitic *Mycoplasma genitalium* down to about 375 genes, but this is a bacterium that is strongly dependent on its host for support and which does not do well outside the body of a living victim. Thus *M. genitalium* is not a good indication of how an original "simple" cell could manage in the environment. Yet it too is highly complex.

So Dr. Venter's work, although interesting, has certainly been most discouraging for scientists looking for an original evolutionarily-primitive living cell. The living cell is clearly a designed system, irreducibly complex and something that could never develop on its own. Highly trained scientists have been looking for almost a century for a minimalist, primitive cell. On the contrary however what their studies are revealing, are cells which are frankly complex and full of information, obviously created!!



At Kings Park in Perth, Western Australia you will find a tower, resembling the double helix of deoxyribonucleic acid. Hence it was named the DNA Tower.



A prominent biology journal has withdrawn a research article which it had published a few weeks previously. The sole reason was three references to the "Creator" in connection with the structure and function (design) of the human hand. Retractions or withdrawing scientific articles from publication used to be almost unheard of. In recent years however such events have become increasingly common. The most common reason is that the information contained therein was falsified or fraudulent (made up).

Many might wonder how anyone would imagine that faking observations could ever be good for one's career (even apart from consideration of moral issues.) Yet there have been many horror stories. A Dutch social psychologist, Diederik Stapel, was found to have made up data in at least 30 published papers. An article in *The New York Times* quoted Stapel as remarking "'It was a quest for aesthetics, for beauty - instead of the truth,' he said. He described his behavior as an addiction that drove him to carry out acts of increasingly daring fraud, like a junkie seeking a bigger and better high." (Yudhijit Bhattacharjee April 26, 2013)

In another case, in 2009, colleagues realized that a medical researcher in Alabama had faked eleven protein structures. The descriptions of these proteins were published in 10 scientific articles. Some of these descriptions appeared to provide important leads in the search for drugs to combat diseases like dengue fever, a debilitating mosquito borne virus disease com-

mon in the tropics. The 10 articles had been cited more than 450 times, an indication of how important others considered these results. Now we know that any work which others conducted based on the faked structures, was entirely wasted.

The public is happy to hear when fraudulent papers are withdrawn, but why does fraud occur in the first place? Surely most people understand that it is futile to make up results. The problem seems to stem from a lack of respect for the truth. Perhaps these people do not believe in truth, or at least in standards of conduct like honesty.

In the United States, agencies that fund biomedical research, have been concerned about ethics for many years. In fact, the National Institutes of Health has required that participating scientists obtain formal training in "responsible conduct of research." Apparently these efforts at communicating the importance of honesty, have not been working. A Commentary piece on the topic in *Nature* (June 19, 2008) declared: "Nearly one generation after the effort to reduce misconduct in science began, the responses by NIH scientists suggest that falsified and fabricated research records, publications, dissertations and grant applications are much more prevalent than has been suspected to date." (p. 982) Similarly an opinion piece in the same journal on July 22, 2010 began: "Despite attention to research misconduct and other issues of research integrity, efforts to promote responsible behavior remain ineffective." (p. 436)

Moreover concerning those entering college since 2000, the authors of the opinion piece declared that "misunderstandings about academic integrity, suggests that this generation may cheat throughout their lives, whether they are scientists, builders or bankers." What a bleak picture of society!

This was the situation with scientific papers as the year 2016 dawned. Any calls for the retraction of a scientific paper, often as the result of fraud, were never undertaken lightly and the process might take a long time. There were however no suggestions about fraud concerning an article published on January 5, 2016 in the on-line open access peer-reviewed journal PLoS ONE (Public Library of Science). The paper was entitled "Biomechanical Characteristics of Hand Coordination in Grasping Activities of Daily Living." The work was conducted by four scientists in China, none of whose first language is English and the work was funded by two grants from the Chinese government.

The scientists used an instrumented glove with multiple sensors to study what parts of the hand were used and how they were used in various grasping tasks. The studies involved 33 different task types carried out by 15 males and 15 females all about 25 years old. Armed with the data recorded by computer, extensive statistical analyses were carried out. The objective of the work was to find a link between the fancy anatomical details of the human hand, and the various precise tasks that the hand is able to accomplish.

The ultimate



Zero Tolerance f

objective of the study is to yield insights on how to design better robotic hands.

These scientists found that the human hand is indeed wonderfully designed for many tasks. Thus they declared: "In humans, the presence of the FPL [flexor digitorum profundus muscle] exactly satisfies the functional requirement and offers the human hand superior capacities to perform a variety of complex functions compared to other primates." (p. 7) The authors pointed out that many investigators have studied the relationship between fingers and joints, but the present study involved a far greater range of motions and tasks. (p. 5)

Most people might wonder what could possibly have been so controversial in this paper that the journal would withdraw it within days of publication. Even in cases of blatant fraud, the process can take years. There was no fraud here. What was the problem? It so happens that the translator of the article used the term "Creator" rather than "Nature" which perhaps might have suited the authors' intentions better. In the abstract the authors declare that the links between the muscles and tendons in the hand are the "proper design by the Creator to perform a multitude of tasks in a comfortable way." (p. 1) Also in the introduction they write: "Thus, hand coordination affords humans the ability to flexibly and comfortably control the complex structure to perform numerous tasks. Hand coordination should indicate the mystery of the Creator's invention." (p. 1) Finally

in the conclusion we read: "our study can improve the understanding of the human hand and confirm that the mechanical architecture is the proper design by the Creator for dexterous performance of numerous functions following the evolutionary remodeling of the ancestral hand millions of years ago." (p. 8)

The Chinese authors clearly had no conception of the extreme aversion of most mainstream scientists to any hint of the creator which might be observable in nature. Similar attitudes were evident in 2004 when a review article on Intelligent Design by Stephen C. Meyer was published in the *Proceedings of the Biological Society of Washington* (a publication of the Smithsonian Institute). Other officials from the Smithsonian repudiated the article because of its support for Intelligent Design. Moreover the editor, Richard Sternberg, lost his jobs at the National Institutes of Health and the Smithsonian Institute.

This is the intellectual environment in which the article on the human hand appeared. Somebody noticed the use of the term "Creator" and initiated a firestorm of protests on twitter. The editors, for their part, fearful for their own jobs, did not dare to resist the calls for reprisals. Thus on March 4, 2016, two months after publication of the article, and about one month after the protests began, PLoS ONE announced that the article had been retracted.

The announcement concerning the retraction declared that officials

from the journal had now identified problems with the scientific rationale (suggestion of good design), and language. Thus "the editors apologize to readers for the inappropriate language in the article." There was no apology to the four authors whose work had been sacrificed to political expediency. There was also no apology to the Chinese government which had funded this project.

During the course of the controversy, one of the authors had suggested references to Creator be removed from the article and the word Nature substituted. The editors of the journal however did not dare to show any consideration for a paper which had included such a term as Creator. The authors and their article were collateral fallout in the effort to control damage to the journal's reputation.

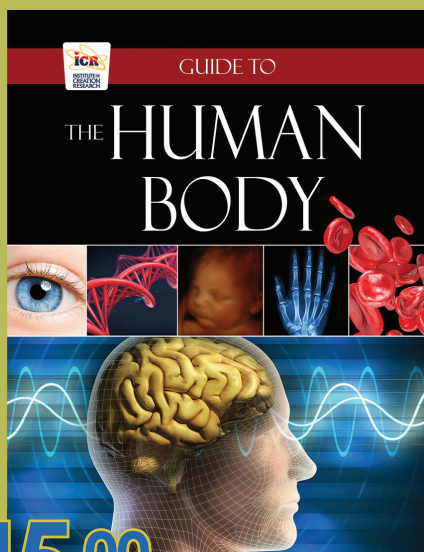
Many well-meaning people wonder why scientific studies with creation based conclusions are never published in mainline scientific journals. This case all too clearly demonstrates why this is so. The mere hint of anything beyond nature is totally rejected. The event is an object lesson to other scientists not to include references (however obscure) to design or to creation in their discussions of science. This event is also a clear indication to Christians that there is zero tolerance for anyone who sees God's work and character reflected in the things that have been made. It is to be hoped therefore that this will make Christians much more skeptical of many pronouncements by evolutionary scientists.



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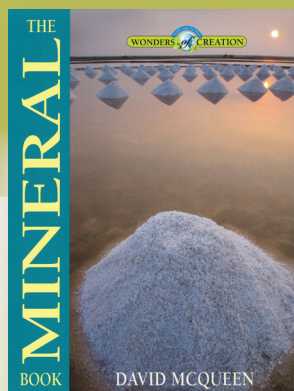


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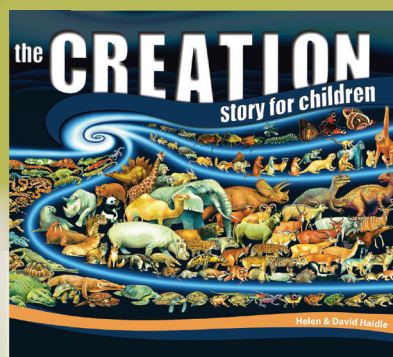
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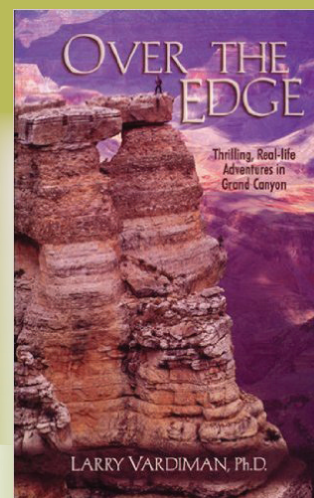
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