



# Creation Matters

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## God of the Gaps by Krister Renard

*Editor's note: This article is condensed from that which first appeared in Genesis (Number 3, 1990), the magazine of the Swedish creation organization, Foreningen GENESIS.*

Until the middle of the 18th century great scientists such as Johannes Kepler, Isaac Newton, Wilhelm von Leibniz, Carl von Linné, etc., were all of the opinion that they, through their scientific discoveries, understood more and more how the Creator had thought and acted when he created the universe. When Kepler after many years of hard work had discovered his three laws, describing the planetary orbits around the sun, he bent his knees to God and thanked the LORD for allowing him to understand some of the beauty and harmony of the creation.

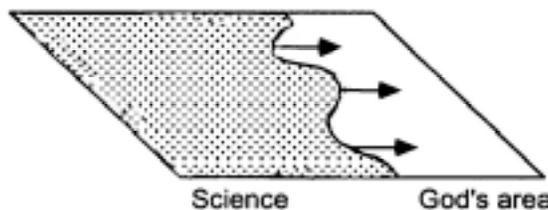
Newton, who besides being a scientist par excellence was also a man of God, did not maintain that the discovery of, for example, the law of gravitation in any sense reduced God or made Him less necessary or important. On the contrary! He asked:

Whence is it that Nature does nothing in vain and whence arises all the Order and Beauty that we see in the World?

His own answer to this was — God!

However, at the end of the 18th century and at the beginning of the next century a shift in perspective slowly took place. More and more thinkers and philosophers began to cherish the opinion that progress in science meant a real and serious reduction of God's power, and that such a progress might even threaten His very existence. This eventually led to what we today often call "God of the gaps." The meaning of this concept is that reality is divided into two mutually exclusive areas:

1. God's area — where faith and feeling are important.



God of the Gaps

2. The scientific area — where reason and logic are the main components.

All that could be explained rationally and scientifically was assigned to the area of reason and logic. When this area rapidly grew during the latter half of the 18th century, many philosophers concluded that "God's area" simultaneously decreased. The scientific explanation of the mechanisms governing the universe was supposed to intrude upon the Christian explanation of the meaning of the creation.

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**1999 CRS Board of Directors.** The board recently held its annual meeting. Pictured from left to right: Gene Chaffin (*Vice President*), John Meyer, Gary Locklair, Bob Gentet (*Treasurer*), Emmett Williams, Glen Wolfrom (*Membership Secretary*), George Howe, David Kaufmann (*Secretary*), Don DeYoung (*President*), Lane Lester, Ted Aufdemberge (*Financial Secretary*), Bob Goette, Wayne Frair, Russ Humphreys. Not pictured is Michael Oard. Dr. Meyer, not a board member, is director of the Society's Van Andel Creation Research Center. Photo by Bryce Gaudian.

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When science at the end of the 19th century seemed to be able to explain almost everything observable, a majority of scientists felt that it was no longer necessary to believe in or assume the existence of anything supernatural or divine.<sup>1</sup>

Let us give an example. The old Vikings believed that thunder and lightning was caused by one of their gods — Thor — when he was fighting with the giants and threw his hammer, Mjolner. A god was used to explain what at that time could not be explained rationally. Today we can give a scientific explanation of thunder, which is mainly an electrical phenomenon. As thunder today can be explained by physical, rational laws without alluding to anything outside the closed physical world, there is no longer any need for assuming divine power behind it.

According to this way of reasoning, there is only room for God as long as there are gaps in our rational knowledge. God is more and more pushed out and eventually “he will hang on his fingertips on the windowsill outside the window.” If and when science someday in the future is able to answer the final question, it will be as if somebody had stepped on God’s fingers. He will lose his last, desperate hold on mankind and fall into the abyss and disappear for good. This was, for example, what Karl Marx was convinced eventually would happen. How wrong he was! If anything was going to disappear, it was Marx’s own teachings.

Characteristic of that time was the famous mathematician Pierre Simon de Laplace (1749-1827) who had formulated, using Newton’s laws as a basis, the mathematical equations for the orbits of the celestial bodies. When Napoleon asked him why God wasn’t mentioned in his works, Laplace replied, “I have no need for that hypothesis.”

It is not difficult to understand why this way of reasoning was popular among zealous atheists. Unfortunately a majority of Christians swallowed the bait, “hook, line and sinker” and started to defend their

faith from this new position. Instead of criticizing this erroneous argument proposed by the “God of the gaps” proselytes, they accepted it. The accepted way of thinking became: “This cannot be explained scientifically so God is still needed;” or “If we want to believe in a great God, science must not be allowed to explain too much.” Many Christians thus tacitly accepted that if science were one day able to explain all that is observable, there would be no God — or at least no need for God — a way of reasoning totally alien to Kepler, Newton and many of the other pioneers of science. Kepler himself once said:

That day is impending when people will admit the pure truth both in the book of Nature as well as in the Holy Bible and rejoice at the harmony between these two revelations.

**One common misunderstanding is that the laws of science have a governing or controlling function. This is wrong! The physical laws do not "tell" Nature how to behave, but are consequences of the properties of the fundamental building blocks of the universe.**

A very good illustration of the “God of the gaps” is found in the debate that took place among chemists at the beginning of the last century. The issue at stake was whether it was possible to make organic compounds out of inorganic. Nobody had yet managed to do so. Christians and many others insisted that organic compounds contained some kind of a nonmaterial, supernatural “life substance.” This theory, called *vitalism*, was used as an argument from the Christian side to prove that it was impossible to explain the world without considering God. However, in 1828 the German chemist Friedrich Wöhler managed to synthesize urea<sup>2</sup> from inorganic compounds. God once again had to retreat one step further out on the windowsill, and many Christians presumably felt their faith waver. Not because Wöh-

ler’s discovery as such threatened the Christian faith, but because these Christians had fallen into the trap of the “God of the gaps.”

This trend was to have a disastrous influence on the Christian church. One of the worst consequences of the “God of the gaps,” *liberal theology*, originated during the last century and was (and is) perhaps the most dangerous attack on the true Gospel since the Gnostic threat about 1900 years earlier. According to liberal theology, everything supernatural and miraculous in the Scriptures is denied, and the Christian faith is reduced to a social and powerless message with hardly anything at all in common with the Biblical revelation.

### Mechanism vs. meaning

The weak point in the “God of the gaps” way of reasoning is that reality is reduced to “nothing but” physical mechanisms.

The obvious fact — from the human standpoint — that every aspect of reality can be looked upon from two different viewpoints, *mechanism* and *meaning*, is disregarded. The Nobel prize winner Ilya Prigogine talks about this tendency to deny everything that cannot be expressed in scientific terms in his book *From Being to Becoming*.

The dynamics of Isaac Newton, completed by his great successors such as

Pierre Laplace, Joseph Lagrange, and Sir William Hamilton, seemed to form a closed universal system, capable of yielding the answer to any question asked. Almost by definition, a question to which dynamics had no answer was dismissed as a pseudoproblem. Dynamics thus seemed to give man access to ultimate reality. In this vision, the rest (including man) appeared only as a kind of illusion, devoid of fundamental significance.<sup>3</sup>

To deny the existence of meaning is to deny everything that is important to us as human beings! Einstein once said, about scientists denying the miraculous order of the universe, “Don’t listen to their words,

fix your attention on their deeds.” I think this principle could also be applied to philosophers who deny the existence and importance of meaning and purpose. Besides demanding that a worldview should be consistent and agree with observations, it must also be “livable” — i.e., it must be possible to live consistently according to this worldview. Those who deny the existence of meaning, permanently — 24 hours a day — deny “their own words with their deeds.” According to John Murray, “reason is the capacity to behave in terms of the nature of the object.”<sup>4</sup> To deny the existence of meaning and the limitations of science is to actually maintain that, “the nature of the object ought to conform to my definition of reason.”

All important human questions are connected mainly with meaning and very little, if at all, with mechanism. Or, as the Christian physicist John Polkinghorne writes:

The inescapably personal character of knowledge will be respected and we shall not give way to a “passion for achieving absolutely impersonal knowledge which, being unable to recognize any persons, presents us with a picture of the universe in which we ourselves are absent.”<sup>5</sup>

Science solely explains the mechanisms behind material objects and their interactions. The arena in which these objects and interactions dwell and happen is the so-called space-time (i.e., the physical universe). The advances of science occur on the level of mechanism. Thus, the progress of science does not in any sense affect the level of meaning. Mechanism and meaning are two different levels of explanation, not reducible to one another, but both necessary to get a full understanding of the world in which we are living. God, who is the originator of meaning (and mechanism), is therefore not less necessary just because science partly can explain the mechanisms behind the creation. Science and faith are not mutually exclusive, but are in fact complementary. Charles Alfred Coulson, professor in mathematics in Oxford, expresses this in the following way:

Religion [meaning] and science [mechanism] are two alter-

native approaches, which though apparently irreconcilable, are both true, being complementary to each other.<sup>6</sup>

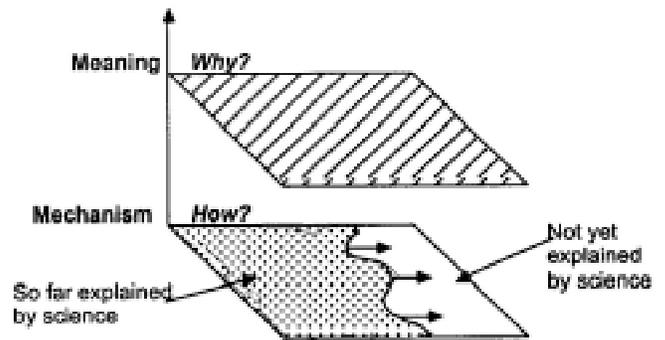
The God of the Bible has created everything, *both* meaning and mechanism! He is not banished to the esoteric heights of the upper level, while the lower level of physical phenomena is totally independent of Him.

As mechanisms are rational and operate in the physical realm, they can, however, unlike meaning, be studied and exhaustively analyzed by human reason, assisted by the tools of the scientific method. The mechanism by no means gives us the whole truth. Even if the explanation of the mechanism behind a phenomenon is true, it is a greater lie than a truth, because of what it does not consider.

Suppose that we want to study a particularly beautiful painting. We want to answer the question, “Why do people find it so beautiful?” We might first ask a physicist to study the painting and to give us a complete, physical description. After having done a lot of experiments he gives us his conclusion. Accordingly, we are told that certain areas of the painting absorb certain wavelengths of the incoming light. We also get a detailed description of the molecular arrangements and interactions in the paint, etc. If we ask the artist whether he thinks that this description is complete, he looks very offended. From his point of view the physical description is totally uninteresting.

We then ask a chemist to give us a description from her perspective. She starts to talk about the different chemical compounds in the different colors, etc. Neither does this description give us any idea of the true nature and purpose of the painting.

Not even the analysis made by an expert in art satisfies the artist. The expert makes a statement that the style of the painting is expressionistic, and that the technique used for mixing colors is typical



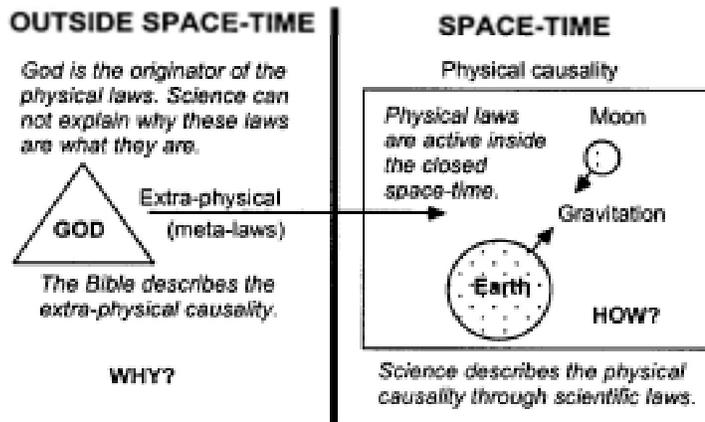
### Mechanism and meaning are two different levels of explanation

of some professor in Paris. This may be true, but nothing of this deals with the internal or implicit message of the painting — the “why?”

Finally, we let a person who loves art<sup>7</sup> look at the painting. He is moved to tears by the beauty he finds. He might not be able to express what he feels in words, but his tears tell us enough. The artist is at last satisfied. The painting has fulfilled its purpose, to talk to another human being in a meaningful way.

The first three descriptions — from the physical, the chemical and the science of art perspective — are of course, as already pointed out, true; but they are only different descriptions of the mechanisms. Science cannot, and will never be able to, explain and describe the meaning or purpose of what we observe. Science answers the question, “how?”, while meaning is always associated with the question, “why?” Meaning can never be reduced to mechanism. Logical reasoning — the foundation of modern science — formulates conceptions, which are manipulated according to the laws of logic. As the meaning of the painting includes the human experience, this meaning can neither be described by logic nor by words. It can only be “felt within our hearts”!

This does not mean that the aspect of meaning is less valuable or important than the aspect of mechanism, but is rather a consequence of the limitations of rational thought. Logic does not give us access to the entire reality. If that were the case, the painting could be completely replaced with a logical description. Instead of going to an art museum to look upon *Wheatfield with Crows* by Van Gogh, you could just send for a complete logical description of



God has created the laws of Nature to support His creation, so that Man can exist. God has created the phenomenon called gravitation. The nature of gravitation is described by Newton's law of gravitation.

One common misunderstanding is that the laws of science have a *governing* or controlling function. This is wrong! The physical laws do not "tell" Nature how to behave, but are consequences of the properties of the fundamental building blocks of the universe. Their character is *describing*. They describe and summarize — from our limited perspective — the observed regularities of the physical world.<sup>9</sup> If this means that every single atom is controlled by the almighty Creator, or if this is taken care of by the inherent mechanisms of the laws of Nature, is not clear, nor does it matter.

the mechanisms behind this painting and get exactly the same experience.

Not even the meaning of a novel or a poem can be expressed by words. This might sound a little bit strange, as the tools of an author are words and nothing but words. Artists, authors, composers, etc., however, often try to express what cannot be communicated by words — the unspeakable. What a poet tries to tell us, is for that reason more frequently found *between* the words and the lines, than in the words themselves.

The laws of Nature give us a closed-world, cause-effect description of the interactions between material objects. Science does not and cannot explain the origin or the nature of the physical laws or how something originated out of nothing. This is one of the limitations of the scientific method. The law of gravitation, for instance, explains exactly how the moon is orbiting around the earth. An explanation why this law is as it is cannot, however, be given by science. The Christian answer is found in many places in the Bible, among others Genesis 1 and in Psalm 148.

- Praise the LORD from the heavens, praise him in the heights above.
- Praise him, all his angels, praise him, all his heavenly hosts.
- Praise him, sun, and moon, praise him all you shining stars.
- Praise him, you highest heavens and you waters above the skies.
- Let them praise the name of the LORD, for he commanded and they were created.
- He set them in place for ever and ever; he gave a decree that will never pass away. (Ps 148:1-6)

This law gives us a complete description of the moon's orbit from the mechanistic, causal point of view. Science is however only concerned with this closed-world, mechanistic causality, while God is the originator of all the creation, meaning as well as mechanism.

In Genesis 1 we read about the creation of light:

And God said, "Let there be light," and there was light. God saw that the light was good, and he separated the light from the darkness. (Gen. 1:3)

God created light because light is something good. He only creates what is in accord with His own character. The Biblical account gives us the meaning behind the creation of light. The other perspective, the mechanism of light, is given by Maxwell's famous equations<sup>8</sup>:

$$\nabla \cdot \mathbf{B} = 0 \quad ; \quad \nabla \cdot \mathbf{E} = 0$$

$$\nabla \times \mathbf{B} = \epsilon_0 \mu_0 \frac{\partial \mathbf{E}}{\partial t} \quad ; \quad \nabla \times \mathbf{E} = -\frac{\partial \mathbf{B}}{\partial t}$$

These equations describe the nature of light and more generally all types of electromagnetic radiation. They are used in optics, when constructing radios, computers, etc., and are regarded as some of the most important physical relations.

There is no contradiction between the perspective of Genesis and that of Maxwell's equations. When God spoke, these equations were exactly what He said. That Man has been able to find out what God said does not lessen the Creator, but is rather a proof that we indeed are created in His image!

The rational behavior of matter and energy is — from this point of view — a consequence of the Creator's logical nature and of His fidelity. Miracles — i.e., the irrational<sup>10</sup> behavior of matter and energy — are similarly a consequence of the Creator's love!

### Christian faith and science

We are in a very vulnerable position if our faith depends upon whether science can explain certain observed phenomena or not. This is to accept the false "God of the gaps" way of reasoning. If our faith is threatened by every new evolutionary or cosmological model, we end up in an untenable position. We then have to choose between two alternatives; to give up our faith right now or to keep continuous track of the latest developments in evolutionary biology and cosmology to be able to find counter arguments. If no such arguments can be found, faith must accordingly be abandoned.

There are many historical examples of Christians who have declared, "This problem can never be solved by science," only to be proved wrong a few years later amidst roars of laughter.<sup>11</sup> If I remember rightly, an English bishop at the end of the last century claimed that he had proved the impossibility of building an airplane by the argument, "If God had meant that we should fly, He would had given us wings."

How difficult it is to predict what science and technology can achieve is shown by the following episode. In 1956, when I went to junior high school, I once had a fist fight with a classmate about whether space travel one day would be possible or not. My own opinion was that Man probably would land on the moon

within two hundred years or so, while my classmate maintained that this never would happen. Who could have guessed that Neil Armstrong should take his first hesitating footsteps on the surface of that very celestial body only twelve years later.

In my book<sup>12</sup> *Faith and Science, Two Ways to a Worldview*, I criticized the common view that fundamental Christianity is always in *opposition* to modern science. I claimed, instead, that modern science is a *consequence* of the Judeo-Christian worldview. The philosopher and mathematician Alfred N Whitehead (1861-1947) said in 1925, when he lectured at Harvard University under the title *Science and the Modern World*:

Christianity is the mother of science because of the medieval insistence on the rationality of God.

The belief in a rational God gave the first scientists an unshakable faith that each event can be linked together with a cause in an exact and distinct way. In that manner you can discover general principles in nature. Without this belief the indefatigable labor of the scientists would be in vain. The philosopher N. Maxwell says in the same spirit:

Science constitutes a search for an underlying simplicity, unity, harmony, order, coherence, beauty or intelligibility which we conjecture to be inherent in nature.<sup>13</sup>

An atheistic scientist has no foundation for such a statement. If there is no intelligent Creator, there is no reason to conjecture that there is an inherent order in nature. Albert Einstein once remarked concerning this issue:

You find it surprising that I think of the comprehensibility of the world...as a miracle or an eternal mystery. But surely a priori one should expect the world to be chaotic, not to be grasped by thought in any way ... and here is the weak point of positivists and of professional atheists, who feel happy because they think that they have not only pre-empted the world of the divine, but also of the miraculous.

In another context he said:

Certain it is that a conviction, akin to religious feeling, of the rationality or intelligibility of the world lies behind all scientific work of a higher order. This firm belief, a belief bound up with a deep feeling, in a superior mind that reveals itself in the world of experience represents my conception of God.

Thus it was no coincidence that modern science was born under the influence of the Judeo-Christian culture. True Christianity is not hostile to science, but a condition for modern science.

In the worldviews of the East, the starting point is that all observations are of an illusionary character. A Hindu considers that the western (Judeo-Christian) division of reality into opposite poles as true-false, good-evil, etc., is a sign of an immense immaturity. The Hindu philosophers regard our conceptions as empty of content. Conceptions as true, false, good, evil are to them Maya; i.e., void and illusion. However, the Eastern way of thinking which also includes the view that something simultaneously can be true and false, does not work when we study physical reality. Two-valued logic, i.e., the assumption that a proposition is either true or false, is one of the foundation stones of modern science.

It is therefore not difficult to understand why science neither was born in India nor in China.<sup>14</sup> The prevailing worldviews in these countries effectively prevented that.

## Endnotes

- <sup>1</sup> The reason for this was that many people by now had lost their belief in a personal God. They had no living faith, had never met God personally, only used Him for "explaining" the unexplainable.
- <sup>2</sup> Soluble colorless crystalline compound contained especially in urine of mammals.
- <sup>3</sup> W.H. Freeman and Co (1980), page 3.
- <sup>4</sup> Torrance, T.F. (1969), *Theological Science*, Oxford University Press, page 12.
- <sup>5</sup> *Science and Creation*, by John Polkinghorne, New Science Library, 1989, page 90.
- <sup>6</sup> *Christianity in an Age of Science*, Oxford University Press, London 1953.
- <sup>7</sup> Of course the physicist, the chemist or the art expert can, besides being professionals in their own subjects, also simultaneously be lovers of art.
- <sup>8</sup> Here the equations for vacuum are given.
- <sup>9</sup> Which means that exceptions from these regularities — miracles — fall outside the scientific

area of competence.

<sup>10</sup> Irrational from the scientific point of view.

<sup>11</sup> As Christians we should not be afraid of being laughed at. "Rather a fool in the eyes of the world for the sake of God, than honored and admired by the world." But we shall not be fools for the sake of our own inventions and ideas, but for the sake of God! We must not be the reason why people laugh at God!

<sup>12</sup> Published at Libris, 1989 (only in Swedish).

<sup>13</sup> "The Rationality of Scientific Discovery," *Philosophy of Science* (1974) 41, page 124.

<sup>14</sup> Science in this context means the systematic striving to fully and completely explain mechanisms and origins of all observable phenomena in the physical world. Eastern "science" is perhaps better described as "engineering science." According to the Eastern worldview, logic can never give man access to the ultimately true nature of the world. A successful Hindu scientist therefore has to think according to the Western way as long as he is working in his laboratory.

*Krister Renard is the author of a Swedish textbook in modern physics, The Fundamentals of Modern Physics — from Microcosmos to Macrocosmos. He has taught electronics at the Merchant Marine Academy in Stockholm, and mathematics at the Royal Institute of Technology. During his years at the latter institution he wrote a book on faith and science entitled Science and Faith, Two Roads to a World View (1989). Currently, he teaches mathematics, physics and philosophy at a Christian High School in Sweden. Since 1978, when he converted from atheism to Christianity, Krister has been busy teaching, lecturing and preaching in various churches, schools, universities and other institutions, mainly on the subjects of faith vs. science and creation vs. evolution.*

# Three Views on Creation and Evolution

(Grand Rapids: Zondervan Publishing House, 1999) by J. P. Moreland (Ed.), John Mark Reynolds (Ed.), Paul Nelson. 144 pages, \$17.99

Reviewed by Bill Donahue

In this book only the creation side of the question is discussed, and this from a young-earth creation (YEC), old-earth creation (OEC), and traditional Theistic Evolution perspective. The book contains arguments and rebuttals from each of these positions, although not as even-handedly as one might at first think. The three positions are presented and then rebutted or commented on by six different people whose personal beliefs on the issue are not made clear until you read their comments. The four reviewers are (1) Vern S. Poythress of Westminster Theological Seminary, (2) John Jefferson Davis of Gordon-Conwell Theological Seminary, (3) J.P. Moreland of Talbot School of Theology, BIOLA University, and (4) Walter L. Bradley of Texas A&M University.

The two other people who provide comments but not specifically reviews are (1) Richard H. Bube of Stanford University and (2) Phillip Johnson of UC Berkeley. The arguments in favor of each respective position are given as follows: (1) the YEC perspective is presented in a joint essay by John Mark Reynolds of BIOLA University, and Paul Nelson of The Center for Renewal of Science and Culture located in Seattle; (2) the OEC “Progressive Creation” position is presented by Robert C. Newman of the Biblical Theological Seminary in Pennsylvania; and finally (3) the OEC “Theistic Evolution,” or as he prefers “The Fully Gifted Creation Perspective,” is presented by Howard J. Van Till of Calvin College.

Now, J.P. Moreland admits that he is torn between the YEC and OEC positions, but leans towards the OEC position 4 out of seven days. I have had the privilege of having J.P. as a teacher, and from the comments that he has made in class and in other written materials, I respectfully suggest that he appears to be an OEC with nagging doubts about the theological issues that his position raises. I have no

doubt that he is making an honest assessment of his position, but from my perspective I simply disagree with that assessment. Both Newman and Davis admit in the book that they are OECs. Phillip Johnson’s position as an OEC is fairly well established. I haven’t previously read anything by Walter Bradley but in his critique of the YEC position it appears that he, too, is an OEC. I could not tell from the comments of Vern Poythress what is his personal opinion, and found his comments the most objective and thought-stimulating. The comments by Richard Bube are also not clear on his position, but his section

## Will the real Theistic Evolutionists please stand up?

mostly just states the factual differences in the positions and an abbreviated case for intelligent design which no writer in the book would dispute.

The editors seem to believe that the position of Van Till would be underrepresented, so they give him twice the amount of words in which to present his case. The result, then, is that two-thirds of the words used in the positive arguments are from an OEC perspective. Three-fourths of the reviewers at least lean toward if not admit openly to being of the OEC perspective. We have one critic whose position is unknown to me, and half of the concluding comments are from an OEC, with the other half being on intelligent design. There is not one word of critique of either the Progressive Creation or the “Fully Gifted Creation” positions (which are OEC positions) from a YEC perspective.

I’m unfamiliar with the work of Paul Nelson. John Mark Reynolds is a capable

apologist for the YEC position, but sadly this book has no evidence of that talent. Both appear to be almost apologetic for taking the position of YECs. They admit without qualification that the evidence is stacked against their position and choose not to address any of the evidence directly.

Van Till’s presentation of the “Fully Gifted Creation” position was as good as I have seen since a book I read years ago called “The Phenomenon Of Man” (I don’t recall the author). I found it interesting that Van Till is even trying to avoid the label of “Theistic Evolutionist.” Those Christians who have incorporated the theory of evolution into their theology, but don’t want to be accused of leaving God out, have opted to call themselves “Progressive Creationists.” Who wouldn’t identify with being “progressive”? Now, even traditional Theistic Evolutionists are creating a new title, being proponents of the “Fully Gifted Creation Model.” Will

the real Theistic Evolutionists please stand up? This game of semantics is clouding the issue. We have one camp that consists of YECs and the other camp that believes that the Bible needs to be interpreted in light of the most popular current scientific theory. The poor Gap Theorists are left with no group at all and are excluded from this book.

Perhaps someone will write a book wherein the different views are presented fairly and critiqued by representatives of the other camps, but in my opinion this book isn’t it. The structure is so stacked in favor of the OEC position that one needs not wonder which view is being promoted as the most rational. In the introduction Moreland uses tainted phrases such as “responsible thinkers agree” and “the few irresponsible popularizers.” Any semblance of fairness in this book is simply an illusion.

*CRS Books does not distribute this book.*

# Neodiprion (Sawfly)

by Mark Stewart

The adult conifer sawfly, or *Neodiprion*, is a serious pest of coniferous trees. A medium-sized insect, ranging from 18 to 25 mm in length when fully grown, is common throughout Northern Asia, Japan, and most of North America (except the Midwest). In Europe it occurs from southern Italy to northern Finland, in the European Alps up to elevations of 6,500 feet, and is characterized by a smaller body size. Sawfly larvae are notorious for defoliating various types of pine trees and other conifers.

At first glance this may not seem like a particularly noteworthy accomplishment. To many insects the pine tree is a virtual no-man's land. Its resins and oils, which may smell sweet to us humans, are highly toxic — but not to the sawfly larva! This little critter not only can tolerate pine oil and resins, but it even “knows how” to chew them up without being poisoned.

## A unique digestive system

The sawfly is aided in its curious dietary habits by a unique digestive system which

allows it to regurgitate the poisonous oils and resins found in these leaves. While munching on its staple diet of pine needles, the larva separates the poisonous oils and resins from the digestible pulp, and stores them in two goiter-like sacs located at the sides of its oral cavity. If provoked, it instantly turns its head toward its aggressor and secretes a drop of its stored liquid. This foul-smelling brew is usually enough to discourage would-be predators such as spiders, ants, and birds.

How does the sawfly accomplish this phenomenal feat? Exactly how the separation takes place — i.e., how the larva is able to let all resinous bits disappear into the sacks during the chewing process while the other components enter the rest of the digestive tract — is still a puzzle, but one which may eventually be understood. One sawfly expert believes the powerful muscles of the sacs somehow aid in this separation of ingredients. A chitinous membrane protects the storage sacs from the effects of the acidic resins.

## An evolutionary enigma

The sawfly's digestive system is more than just an oddity. It presents a number of thorny questions regarding its origin. The unique digestive ability of the *Neodiprion* could not have evolved step by step. Let me explain. First, try to imagine the difficulties some ancient variety of sawfly larva would have encountered had it tried to switch from a normal leafy diet to one of pine needles. Think about it. According to evolutionary theory, the changes necessary to enable it to digest the pine needles could only have occurred through small mutations in a step-by-step fashion. But in the case of the sawfly larva, such piecemeal transitions become totally impractical, and one is immediately confronted with one of evolution's basic problems of logic.

The sawfly larva's diet could not consist of pine needles until the mechanism for separating the poisonous from nonpoisonous components was fully developed and working with perfect reliability. But such a mechanism, if it came gradually into existence by small muta-

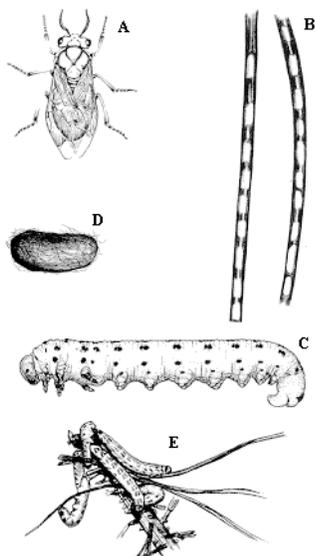
tions, would have developed only if the food already consisted of pine needles. Yet any intermediate transitional larva with an incompletely developed digestive system would clearly have been unable to adequately cope with the poisonous effects of the pine needles.

On the other hand, if there were no pine needles around for the larva to feed on, there would be no reason for it to develop any mechanism for digestive separation and protection. In any event, there would have been no evolutionary progress.

No matter how intelligently the theory of evolution may present the reasons for the step-by-step development of already existing organs or parts of the body, the difficulties in trying to explain how certain independent anatomical-physiological systems could originate by evolution seem insurmountable.

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Redheaded pine sawfly. A, Female. B, Eggs. C, Larva. D, Cocoon. E, Damage.

### Redheaded Pine Sawfly

*Neodiprion lecontei*(Fitch), Diprionidae,  
HYMENOPTERA

Figure reprinted from website by the Center for Integrated Pest Management, North Carolina State University:

<http://ipmwww.ncsu.edu/AG189/html/index.html>

# Mars Global Surveyor Confirms Creation!

by D. Russell Humphreys, Ph.D.

A spacecraft orbiting Mars, the Mars Global Surveyor, has confirmed **yet another** prediction of Humphreys' "crazy theory of planetary magnetic field origins"!

In the conclusion (page 147) of my December 1984 *CRSQ* article,<sup>1</sup> I went out on a limb and made several predictions on the basis of my theory. Prediction number 3 [and the parts below equations (30) and (31)] concerned the strengths of the magnetic fields of Uranus and Neptune, which Voyager II later confirmed.<sup>2,3</sup>

However, I made other rash predictions in that 1984 article. Prediction 2, requiring a remeasurement of Mercury's field to detect its few percent decay, hasn't yet been attempted. Prediction 1 was:

Older igneous rocks from Mercury or Mars should have natural remanent magnetization, as the Moon's rocks do.

"Natural remanent magnetization" means rock magnetization caused by Mars' formerly strong (and now non-existent) planetary magnetic field. I was expecting to have to wait for a manned expedition to bring back rock samples for laboratory testing. But the Mars Global



NASA photo

Surveyor did it "way ahead of time"! As the spacecraft orbited low over Mars' surface, its magnetometers recorded strong magnetization in Mars' crustal rocks. In fact, the magnetized rocks were in stripes of alternating magnetic polarity, strikingly reminiscent of the magnetic "stripes" on earth's seafloors.<sup>4</sup>

The reason the prediction is important is that my theory required evidence of a strong field formerly on Mars. The evolutionary "dynamo" theorists were uncertain as to whether their theory would require a former field on Mars, strong or not, so they

made no such predictions, as far as I know. But there was no way around it in my theory. Thus, if my theory were correct, rocks cooling down within a few centuries after creation would have to record a strong field. It looks like they did.

Three cheers for NASA; they've spent at least some of our taxes to further confirm a creationist view of origins!

## References

- <sup>1</sup> Humphreys, D.R. 1984. The creation of planetary magnetic fields. *Creation Research Society Quarterly* 21(3):140-149. [http://www.creationresearch.org/crsq/21\\_3.html](http://www.creationresearch.org/crsq/21_3.html)
- <sup>2</sup> Humphreys, D.R. 1990. Good news from Neptune: the Voyager II magnetic measurements. *Creation Research Society Quarterly* 27(1):15-17.
- <sup>3</sup> See also *ICR Impact* No. 203, May 1990. <http://www.icr.org/pubs/imp/imp-203.htm>
- <sup>4</sup> Connerney, J.E.P., et al. 1994. Magnetic lineations in the ancient crust of Mars. *Science* 284(5415):794-798. See also "Signs of plate tectonics on an infant Mars" by R.A. Kerr on p. 719 of the same issue.

*Dr. Humphreys, a Senior Physicist at Sandia National Laboratories, is a board member of the Creation Research Society, and a leader in the Creation Science Fellowship of Albuquerque.*

## Letters

### Men and Women of Mathematics and of God

In a letter regarding the above-named article (*Creation Matters*, Volume 4, No. 2), Craig M. Szwed presented an interpretation of Revelation 17:1-9 that the Catholic Institution is the "...whore that sits on the seven hills...." Is *Creation Matters* an appropriate forum for a sectarian argument, especially one as divisive as calling someone else's church a "whore"?

I believe the mission of the Creation Research Society will die if we go down that road. I'm certain Mr. Szwed's is not a majority view, and I hope Catholics who read his letter will realize this. In fact I

would prefer to see Catholics, Jews and even Moslems stand with us on issues where we agree. I am not advocating removal of the name of Jesus Christ from our Society's creed, nor do I believe there is salvation in any other name. I simply believe that our Society's purpose (the conduct and publication of sound scientific research) and sectarian arguments belong in different forums.

Wouldn't it be better to leave the space in *Creation Matters* for creation matters?

John L. Estes  
jestes@intellivoice.com

### Editor's reply

Mr. Estes raises an important point. The main thrust of Mr. Szwed's letter was that some of the mathematicians mentioned in Dr. DeYoung's article were not clearly identifiable as born-again Christians. However, the specific sectarian comments by Mr. Szwed should not have been included in the published version. We shall try to be more circumspect in the future.

# Special Announcements

## Position Available

The Creation Research Society is accepting inquiries for the position of:

**Laboratory Director  
Van Andel Creation Research Center  
Chino Valley, Arizona**

Our current Director, Dr. John Meyer, plans to retire in June, 2000. Applicants must be voting members of the CRS.

For a position description and other details, interested individuals may contact:

Dr. Don DeYoung  
200 Seminary Drive  
Winona Lake, IN 46590  
office phone: 219-372-5209  
dbdeyoung@grace.edu

## Assistance with Egyptian Mummy

The Creation Research Society has received an Egyptian mummy of an ibis bird. We are seeking the assistance of CRS members in researching this artifact.

**1. Does anyone have access to an MRI machine to obtain an internal picture? The mummy is about 40 cm in length and can be shipped. Funds are available for this analysis.**

**2. Does anyone have expertise in unwrapping / opening a mummy, or know someone who does?**

We hope to compare modern ibis bones with this 3,000-year-old sample. If you can help, please contact:

Dr. Don DeYoung  
200 Seminary Drive  
Winona Lake, IN 46590  
office phone: 219-372-5209  
dbdeyoung@grace.edu

## Debate Workshop with Dr. Duane Gish: How to Win Debates With Evolutionists

This is a *preliminary announcement* of a debate workshop to be held in Atlanta, GA on Thursday, May 18, 2000. The workshop, sponsored by the Creation Research Society, will last the entire day. Activities will include lectures, workshops, and analyses of video excerpts from past debates.

Dr. Gish, board member of the CRS for 35 years, is the country's foremost debater defending the creationist position. During his tenure at ICR he has participated in over 100 debates with evolutionists.

Please watch for additional details in future issues. If you have specific questions at this time, please contact:

Dr. David Kaufmann  
c/o Creation Research Society  
P.O. Box 8263  
St. Joseph, MO 64508-8263  
kaufmann\_d@hotmail.com

## CRSteen Listserv

CRSteen is an email discussion group for teenagers (junior high, high school, and college) which is modeled after the highly successful CRSnet.

Our evangelical youths frequently face a completely dogmatic approach to the teaching of origins in our schools — viz., an "evolution is a fact" approach. Although many students know better than to swallow such propaganda, they have nobody to talk to about this challenge to their faith. Many churches are basically silent on the subject of origins, or they haven't the scientific background to deal with the questions that arise.

Thus, a new listserv has been established to provide young creation-minded students a place where they can come together to encourage, share, ask, and learn.

CRSteen will be moderated by Dr. Glenn Jackson, who holds two master's degrees and a doctorate in Science Education.

For information about how to participate in CRSteen, please send an email message to Dr. Jackson: [jackson@cncacc.cn.edu](mailto:jackson@cncacc.cn.edu)

# Creation Calendar

**Note:** Items in "Creation Calendar" are for information only; the listing of an event does not necessarily imply endorsement by the Creation Research Society.

June 27 - July 2

*Twin Peaks Family Science Adventure*

Twin Peaks Bible Camp, Collbran, Colorado

Contact: Alpha Omega Inst., Grand Junction, CO (970)523-9943

July 20

*The Rocks Cry Out* by Chuck Danley and Dr. Steve Rodabaugh

Creation Science Fellowship, Pittsburgh, PA

7:30 pm, Mars CM&A Church, Mars, PA

Contact: (412)341-4908; csf@trfn.clpgh.org

July 24

*Kansas University Natural History Museum*

9 am - 4 pm, CSA for Mid-America (Kansas City Area)

Contact: Tom Willis (816)618-3610; csahq@juno.com

Aug. 15-20 or Aug. 22-27

*Redcloud Family Mountain Adventure*

Camp Redcloud, Lake City, Colorado

Contact: Alpha Omega Inst., Grand Junction, CO (970)523-9943

Aug. 17

*The Dead Speak* by Dennis E. Wert

Creation Science Fellowship, Pittsburgh, PA

7:30 pm, Mars CM&A Church, Mars, PA

Contact: (412)341-4908; csf@trfn.clpgh.org

Aug. 21

*Greater Kansas City Geology and Fossil Outing #2*

9 am - 4 pm, CSA for Mid-America (Kansas City Area)

Contact: Tom Willis (816)618-3610; csahq@juno.com

Sep. 18

*Creation Safaris in the West*, by Mark Armitage, M.S.

Season Kickoff BBQ and Big Screen Slide Show, \$5.00

Bible Science Assoc'n, San Fernando Valley Chapter

5:30 pm, Our Saviour's First Lutheran Church, Granada Hills, CA

Contact: Mark Armitage (626)815-6000 x5519; marmitage@apunet.apu.edu

Sep. 21

*Job's Park* by Steve Rodabaugh, Ph.D.

Creation Science Fellowship, Pittsburgh, PA

7:30 pm, Mars CM&A Church, Mars, PA

Contact: (412)341-4908; csf@trfn.clpgh.org

Sep. 24-26

*Ozark Stream Canoe Float and Camp*

CSA for Mid-America (Kansas City Area)

Contact: Tom Willis (816)618-3610; csahq@juno.com

Oct. 16

*La Brea Tar Pit Tales*, by Mark Armitage, M.S.

Bible Science Assoc'n, San Fernando Valley Chapter

7:00 pm, Our Saviour's First Lutheran Church, Granada Hills, CA

Contact: Mark Armitage (626)815-6000 x5519; marmitage@apunet.apu.edu

Oct. 16

*Bicycle Trip — KATY Bike Trail*

9 am - 5 pm, CSA for Mid-America (Kansas City Area)

Contact: Tom Willis (816)618-3610; csahq@juno.com

Oct. 19

*Where Have All the People Gone?* by R. Ivey and R. Moon

Creation Science Fellowship, Pittsburgh, PA

7:30 pm, Mars CM&A Church, Mars, PA

Contact: (412)341-4908; csf@trfn.clpgh.org

Nov. 16

*Creation: What's the Fuss?* by R. Walsh

Creation Science Fellowship, Pittsburgh, PA

7:30 pm, Mars CM&A Church, Mars, PA

Contact: (412)341-4908; csf@trfn.clpgh.org

Nov. 20

*The Petrified Forest*, by Dave Phillipps, M.S.

Bible Science Assoc'n, San Fernando Valley Chapter

7:00 pm, Our Saviour's First Lutheran Church, Granada Hills, CA

Contact: Mark Armitage (626)815-6000 x5519; marmitage@apunet.apu.edu

Nov. 20

*Squaw Creek Wildlife Refuge / Fossil Hunt*

9 am - 5 pm, CSA for Mid-America (Kansas City Area)

Contact: Tom Willis (816)618-3610; csahq@juno.com

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