

Is It Reasonable to Believe in a Recent, Six-Day Creation?

BY GHEORGHE RAZMERITA

Before answering the question of whether it is reasonable to believe in a recent, six-day creation, it is important to define its key elements: “reasonable” and “recent, six-day creation.”

Definitions

While science has been associated with “reason” and thus is expected to be reasonable, creationism has been associated by many with “faith” and thus seems to be incompatible with anything “reasonable.”¹

But biblical faith, in this case faith in creation, is “reasonable” in the sense that it is not mythical and/or irrational; on the contrary, it presents historical (the Bible is also a historical document), natural and sensible evidence for its claims. While it is true that the Bible is not a modern scientific record of the process of creation but rather expects us to accept its record of creation by faith (Heb 11:3, 6), it does not expect us to exercise a blind or simplistic faith.² On the contrary, the Bible offers a framework and arguments in order for this faith to be convinced that the events and elements presented by the Bible are true cosmologically and historically. Leonard Brand and David C. Jarnes summarize the Judeo-Christian evidence for the reasonability of Scripture by listing the following: (1) the historical fulfillment of biblical prophecies/predictions; (2) the archeological support for biblical historical locations, persons or events; (3) Mosaic health regulations which differed radically from those of Egypt, pointing to a supernatural revelation. The above



three biblical sources of evidence are testable and so strengthen our consideration of the Bible as reasonable also in the portions of the Scriptures which are untestable—a characteristic due not to the pre-scientific character of the Bible but to the limitations of science.³

Justo Gonzales defined “creationism” as “the response of some conservative Christians to the theory of evolution, which they see as a threat to the Christian doctrine of creation.... According to creationists, the biblical story...of creation is scientifically defensible, and there is an irreconcilable difference between the Christian doctrine of creation and the scientific theory of evolution....”⁴ One form of creationism, “recent six-day creationism,” emphasizes that life and the organization of this planet originated supernaturally in the span of six days and recently (some thousands rather than millions of years ago).⁵ Thus, while allowing that planet Earth might have been created at an earlier time (prior to Gen 1:2), it avoids siding with either young-earth creationism, which insists that the rocky planet itself, if not the whole universe, is about 6,000 years old and thus posing no gap between Gen 1:1 and 1:2,⁶ or the “active gap” theory, which inserts a speculative description of what might have happened in the gap between the events of Gen 1:1 and 1:2.⁷

Evidence from Biblical-Theological Studies

So, is it reasonable to hold to a recent, six-day creation? We believe so, for a number of reasons. The first three will be persuasive primarily for those who already believe the Bible, while the others may be more pertinent for the not-yet believing.

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EDITORIAL

Jesus the Creator

In the current debate on creation versus evolution, Adventists typically go back to Genesis 1 and 2 which is appropriate. Yet it would also be worthwhile to consider the New Testament with its statements on creation, especially those made by Jesus (for instance, Mark 2:27-28; 10:6-8; 13:19), and those that speak about Jesus as Creator and Sustainer of the entire creation. The theological implication of understanding Jesus as both Creator and Savior is significant for the creation-evolution debate.



This is a unique contribution that the New Testament makes to the theology of creation. Although the Old Testament points to Christ as the Creator in a hidden way (e.g., the plural in Gen 1:26), it is the New Testament which clearly spells out that Jesus is the Creator. While a number of verses emphasize that God has created all things (e.g., Acts 4:24; 14:15; 17:24, 26; Rom 1:25; 1 Pet 4:19), several crucial New Testament passages stress more specifically that Jesus is the Creator (John 1:3; Col 1:15-16; Heb 1:2, 10) and thus exclude Him from the realm of created beings. In addition, the cosmic perspective, which includes more than the creation that we encounter on earth and its vicinity, is spelled out most clearly in Colossians.

John 1:1-4 portrays Jesus as the Word, as God, as the Creator, and as Life. Creation is expressed in several ways: (1) the Word existed already “in the beginning,” a reminder of Gen 1:1; (2) the Old Testament background is at least partially found in Ps 33:6, 9—Jesus is this creative Word of God; (3) John tells us explicitly that all things came into existence through Him.

Heb 1:10 applies a quotation, namely Ps 102:25, to Jesus, although the Old Testament context talks about Yahweh as the Creator. The phrase “in the beginning” alludes to Gen 1:1.

Col 1:15-20 is an extensive christological hymn. The first part, stressing Jesus as Creator (verses 15-16), corresponds with the last part (verses 18b-20) in which Jesus is the Reconciler. The very same person who has created all things is able to reconcile all things through His blood shed on the cross. The Creator is also the Savior. The two concepts are inseparably linked. Therefore, to claim that Jesus has saved us through His once for all death on the cross, a relatively brief event in history, and still maintain that He has created us through an evolutionary process, which takes millions or billions of years, is inconsistent.

Furthermore, Jesus’ creative power is seen in the fact that His followers are spiritually recreated (Eph 2:10; 2 Cor 5:17) and that Jesus has created His church (Eph 2:15). Neither of these creative processes, which depend on Christ’s sacrifice on the cross, requires a long, evolutionary process.

On the other hand, if it is true that Jesus is the Creator, He can best inform us as to the process by which He has accomplished creation. His words carry a weight that surpasses all human knowledge. Since Jesus is the Creator, we cannot talk about the topic of creation and the problems related to faith and science without focusing on Him. As crucial as Genesis 1-11 is for the current debate, Jesus can-

not be excluded from this discussion. Whatever we decide on protology, it has a direct impact on soteriology.¹

Ekkehardt Mueller, BRI

¹See John Templeton Baldwin, ed.; *Creation, Catastrophe, and Calvary: Why a Global Flood Is Vital to the Doctrine of the Atonement* (Hagerstown, Md.: Review and Herald, 2000), discussed further in Book Notes, beginning on p. 15.



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Biblical Research Institute
 General Conference of Seventh-day Adventists®
 12501 Old Columbia Pike
 Silver Spring, MD 20904, USA

Phone: 301.680.6790 • Fax: 301.680.6788
www.adventistbiblicalresearch.org

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(continued from page 1)

1. *Recent six-day creationism is reasonable in the same way and to the same degree that faith in the Bible is reasonable.* It is as reasonable to believe in the historical, non-mythical, factual character of the creation account as it is reasonable to believe in other biblical accounts, such as the account of the incarna-

While science has been associated with “reason” and thus is expected to be reasonable, creationism has been associated by many with “faith” and thus incompatible with anything “reasonable.”

tion, resurrection, ascension, and promise of the second coming of Christ.⁸ In other words, recent six-day creationism is a matter of faith, but a faith supported by evidence. Naturalistic evolutionism is also ultimately

founded on philosophical presuppositions (such as the eternity of matter/energy, abiogenesis, absolute uniformitarianism, and reductionist naturalism). And so it also searches for evidence to establish its reasonableness. Consequently, one important aspect of this discussion about reasonableness concerns the degree of authority that should be given to the foundations underlying evolutionism and creationism respectively. Are the presuppositions and/or conclusions of evolutionary scientists more trustworthy than Scripture?

Brand and Jarnes, having described the relativity of scientific theories on the one hand and the reasonability of faith in the Bible on the other, conclude that “if naturalism is false and God actually communicated with the writers of the Bible, we would have reason to believe that it is more worthy of trust than human authorities.”⁹

2. *There is a connection between a straightforward interpretation of the Genesis creation account and the posited date of creation.* Richard Davidson argues convincingly that the biblical account of creation clearly points to a literal, historical record of the events described, implying a short creation process spanning just six 24-hour days. He shows that even the most cautious historical-critical scholars have insisted that the author of Genesis intended his readers to understand the whole process of creating life on earth within that timeframe. The story of creation does not exhibit any sign of allegorical or mythological language and thus does not

allow for a day-age interpretation of creation week.¹⁰ Also, the fourth commandment of the Decalogue (Exod 20:8-11) presumes the creation days to be literal 24-hour days, inextricably connecting the celebration of the Sabbath (and its legitimacy) with that original week.¹¹ Thus, any attempt to reconcile creation with a view of evolution based on an extended history of life on earth, such as theistic evolution and old earth creationism/progressive creation, is at odds with the clear intent of Scripture.¹²

The extension of the history of life on earth to fit either theistic evolutionism or old earth creationism is based on the presupposition that the Genesis genealogies are either symbolic or representative. B. B. Warfield set the foundation for this approach by arguing that we can trust to some extent the biblical genealogies beginning with Abraham since we have additional information besides these genealogies, but that we cannot do so with the earlier genealogies because “we are dependent entirely on inferences drawn from the genealogies recorded in the fifth and eleventh chapters of Genesis. And if the Scriptural genealogies supply no solid basis for chronological inferences, it is clear that we are left without Scriptural data for forming an estimate of the duration of these ages.” Applying the Matthean and Lukan style of genealogies to the genealogies in Genesis 5 and 11, Warfield explained that “there is no reason inherent in the nature of the scriptural genealogies why a genealogy of ten recorded links . . . may not represent an actual descent of a hundred or a thousand or ten thousand links.”¹³ However, Davidson argues conclusively that the genealogies of Genesis 5 and 11 contain two special

The Bible expects us to accept its record of creation by faith, but not by a blind or simplistic faith.

features that make an extra effort to prove the contrary, that is, “that there are no gaps between the individual patriarchs mentioned”: (1) “unique interlocking features” of the text (“A patriarch lived x years, then begat a son; after he begat this son, he lived y more years, and begat more sons and daughters; and all the years of this patriarch were z years”) make it “impossible to argue that there are significant generational gaps”; and (2) unlike other biblical genealogies which use the Qal form of “begat,” the Hiphil form (*yamad*) is used, which “is the special causative form that always elsewhere in the OT refers to actual direct physical offspring, i.e., biological father-son relationship (Gen 6:10; Judg 11:1; 1 Chr 8:9; 14:3; 2 Chr 11:21; 13:21; 24:3).”¹⁴ Thus, these biblical genealogies exclude the extensive history of life so much needed by those who want to reconcile the Bible with evolution and represent a reasonable historical tool for positing a recent age of life on earth.¹⁵

3. *A recent six-day creation is consistent with the*

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biblical-theological concepts of divine omnipotence, justice, and love. Darwin's "disillusionment" with the notion of a just and loving God was based on his rejection (and apparent misunderstanding) of the classical theodicy which attributes our planet's current predicament to the abuse of the freedom of the will.¹⁶ But, if God is indeed not only omnipotent but also loving and just, then it is perfectly reasonable that He would create and organize life on this planet in a short, harmless, and orderly process, because anything less, such as the violent progression of life during long ages described by the theory of evolution, would be repugnant to His nature.

Evidence from Scientific Studies

4. *The reasonableness of a recent six-day creation is evident from the centuries-long debate between science and Christianity.* The postulation of a long history for life on earth arises out of eighteenth and nineteenth-century concepts of uniformitarian geology and biological evolution from a common source based on perceived probabilities and natural selection.¹⁷ Ariel Roth, however, shows how recent developments in science have increasingly challenged uniformitarianism in favor of global catastrophism, noting that the departure began

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with observations of global phenomena such as turbidity currents producing rapid deposition; even more revealing is the rise of recent theories explaining dinosaur extinction by means of a global catastrophe resulting from an asteroid or comet.¹⁸ The emergence of neocatastrophism, which adds further support to flood models explaining the geological deposits in terms of rapid and recent developments, has provided additional

support for a recent creation.¹⁹

5. *Biological evolution has even encountered significant challenges from its own proponents.* Interestingly enough, scientists such as Stephen J. Gould and Niles Eldredge have promulgated the concept of punctuated equilibrium in order to explain the lack of evidence for transitional fossils.²⁰ And Michael Denton, on a purely scientific basis, has challenged the validity of evolutionists arguing from paleontology to molecular biology.²¹ In short, the theory of evolution is far from being a proven fact, making room for the biblical account of creation as a reasonable alternative.²²

An old Romanian proverb says, "Do not exchange the sparrow in your hand for the one on the fence." Considering the combined weight of all the reasons mentioned above, it is clearly reasonable to believe in a recent, six-day creation.



Gheorghe Razmerita is Assistant Professor of Church History and Systematic Theology, Adventist University of Africa

¹Cf. Leonard Brand and David C. Jarnes, *Beginnings: Are Science and Scripture Partners in the Search for Origins?* (Nampa, Id.: Pacific Press, 2005), 25, 27; also Norman R. Gulley, "Basic Issues between Science and Scripture: Theological Implications of Alternative Models and the Necessary Basis for the Sabbath in Genesis 1–2," *Journal of the Adventist Theological Society* (hereafter *JATS*) 14 (2003): 195–228, esp. 203–204.

²See also Norman L. Geisler, "Faith and Reason," *Baker Encyclopedia of Christian Apologetics* (Grand Rapids, Mich.: Baker), 239–243.

³Brand and Jarnes, *Beginnings*, 30–32.

⁴Justo L. Gonzales, *Essential Theological Terms* (Louisville, Ky.: Westminster John Knox, 2005), 42.

⁵Ariel Roth, *Origins: Linking Science and Scripture* (Hagerstown, Md.: Review and Herald, 1998), 316; Richard M. Davidson, "In the Beginning: How to Interpret Genesis 1," *Dialogue* 6/3 (1994): 9–12, cited 26 August 2009, online: http://dialogue.adventist.org/articles/06_3_davidson_e.htm.

⁶Jim Gibson, "Issues in 'Intermediate' Models of Origins," *JATS* 15 (2004): 74–75; Roth, *Origins*, 341–342.

⁷Roth, *Origins*, 316–318, 340–341. Adventist scholars continue to debate the existence of a "passive gap" between Gen 1:1 and 1:2. Marco T. Terreros, "What Is an Adventist? Someone Who Upholds Creation," *JATS* 7 (1996): 147–149 allows for the passive gap only in theory but has some theological reservations, arguing that the theory is imposed by science and that there is no need for gaps in God's creation. However, according to Richard M. Davidson, "The Biblical Account of Origins," *JATS* 14 (2003): 5–10, Gen 1:1 should be translated as an independent clause, which then does not exclude the passive gap theory towards which he inclines without being dogmatic (*ibid.*, 19–25).

⁸Brand and Jarnes, *Beginnings*, 30–32, 27.

⁹Lamech Liyayo, *Ted Peters' Proleptic Theory of the Creation of Humankind in God's Image: Critical Evaluation* (Ph.D. Diss.; Silang, Cavite, Philippines: Adventist International Institute of Advanced Studies, 1998) notes that Ted Peters accepts the possibility of a historical second coming of Christ on the basis of his faith in the historicity of the first coming of Christ but that he also groundlessly rejects as non-historical the Genesis account of creation, despite its belonging to the same Scripture; see also, Gulley, "Basic Issues," 213. Randall W. Younker, "Consequences of Moving Away from a Recent Six-Day Creation," *JATS* 15 (2004): 64–65, states that for "Neo-Evangelical" scholars (who reinterpret Genesis in a non-literal fashion) "to be consistent, they must also deny an historic Patriarchal period (Abraham), the Sojourn (Israel in Egypt), the Exodus (Red Sea), Mt. Sinai (Ten Commandments – Sabbath), the Conquest (Jericho), and probably the existence of the Monarchy (Solomon and David) – even the resurrection of Christ could be denied" (emphasis his).

¹⁰Davidson, “The Biblical Account of Origins,” 10-19; see also Gerhard F. Hasel, “The ‘Days’ of Creation in Genesis 1: Literal ‘Days’ or Figurative ‘Periods’/‘Epochs’ of Time?” *Origins* 21 (1994): 5-38; Jacques B. Doukhan, “The Genesis Creation Story: Text, Issues, and Truth,” *Origins* 55 (2004): 12-33.

¹¹See Gulley, “Basic Issues,” 212-216, 221-224.

¹²For a description of these models, see Gibson, “Issues,” 73-87; Roth, *Origins*, 342-344.

¹³See B. B. Warfield, “On the Antiquity and the Unity of the Human Race,” in *Biblical and Theological Studies* (ed. Samuel G. Craig; Philadelphia, Penn.: The Presbyterian & Reformed Publishing, 1968), 240-241.

¹⁴Davidson, “The Biblical Account of Origins,” 26; see also, Gerhard F. Hasel, “Genesis 5 and 11: Chronogenealogies in the Biblical History of Beginnings,” *Origins* 7 (1980): 23-37.

¹⁵The apparent discrepancy in mention of *Kainam* in Luke 3:36, a name not found in the Hebrew text of Gen 11:12, can be explained on the basis of Luke’s use of the Septuagint at this point in the genealogy (Francis D. Nichol, ed., *Seventh-day Adventist Bible Commentary* [7 vols.; Washington, D.C.: Review and Herald, 1956], 5:723).

¹⁶See Nigel M. de S. Cameron, *Evolution and the Authority of the Bible* (Exeter, U.K.: Paternoster, 1983), 50-63. On Darwin’s problems with design, see Charles Darwin to Asa Gray, 22 May 1860, in Francis Darwin (ed), *The Life and Letters of Charles Darwin* (2 vols.; New York: Appleton, 1905), 2:105, quoted in Neil Messer, *Selfish Genes and Christian Ethics: Theological and Ethical Reflections on Evolutionary Biology* (London: SCM, 2007), 39.

¹⁷Roth, *Origins*, 197-198.

¹⁸Roth, *Origins*, 199-200; see also, L. James Gibson. “Contributions to Creation Theory from the Study of Nature,” *JATS* 14 (2003): 147; Harold G. Coffin, Robert H. Brown, and R. James Gibson, *Origin by Design* (rev. ed.; Hagerstown, Md.: Review and Herald, 2005), 394.

¹⁹Roth, *Origins*, 200-230; see also, Coffin et al., *Origin by Design*, 37-43, 72-103, 183-194.

²⁰*The Columbia Encyclopedia* (6th ed.; s.v. “Gould, Stephen Jay”); cited 23 August 2009, online: <http://www.questia.com/PM.qst?a=o&d=112861604>. Although the idea of punctuated equilibrium was introduced earlier, it became highly influential with the publication of the landmark article by Niles Eldredge and Stephen Jay Gould, “Punctuated Equilibria: An Alternative to Phyletic Gradualism,” in T. J. M. Schopf, ed., *Models in Paleobiology* (San Francisco: Freeman Cooper, 1972), 82-115, esp. 85-90; cited 26 August 2009, online: <http://www.blackwell-publishing.com/ridley/classictexts/eldredge.pdf>; see also, Coffin et al., *Origin by Design*, 258-271.

²¹Michael Denton, *Evolution: A Theory in Crisis* (3d rev. ed.; Bethesda, Md.: Adler & Adler, 1986).

²²See Roth, *Origins*, 332-333; Jonathan Wells, *Icons of Evolution: Science or Myth?* (Washington, D.C.: Regnery, 2000); Coffin et al., *Origin by Design*, 393-394; Bert Thompson, *Creation Compromises* (2d ed.; Montgomery, Ala.: Apologetics, 2000), 50-71; cited 25 August 2009, online: http://www.apologeticspress.org/pdfs/e-books_pdf/cre_comp.pdf.

“The greatest minds, if not guided by the Word of God in their research, become bewildered in their attempts to investigate the relations of science and revelation.” 3SM 307.

THEOLOGICAL FOCUS

Crucial Questions of Interpretation in Genesis 1

BY RANDALL W. YOUNKER

Many issues, both theological and scientific have been raised in connection with the account of creation in Genesis. These issues are related and have resulted in numerous attempts at answering the many interpretative questions involved in an understanding of Genesis 1 and 2. Having dealt with the relation between these chapters elsewhere,¹ the focus of this article will be on Genesis 1. While space limitations do not allow an examination of every verse, the most crucial questions which are persistently raised will be considered, including the relation of v. 1 to the rest of the chapter, the meaning of the terms “deep” (v. 2) and “expanse” (vv. 6-8), and, finally, the creation of light on the first day with the somewhat oblique references to the sun, moon, and stars on the fourth day.

Divergent Approaches to Genesis 1:1

There has been considerable debate over the translation of Gen 1:1, “In the beginning, God created the heavens and the earth.” In recent scholarship there have been two basic approaches. The first (and most traditional) approach is to understand the first verse of Genesis as a complete sentence (an independent clause). In this case the verse would be translated simply, “In the beginning God created the heavens and the earth” (period). The second approach is to translate Gen 1:1 as a “dependent clause,” that is, an incomplete part of a sentence that would need to be connected to v. 2 to make a complete sentence; vv. 1-2 together would, thus, be translated something like, “In the beginning, when God created the heavens and the earth, the earth was without form and void....” Good linguistic arguments have been presented in support of both positions by various commentators.

Only after the six days of creative activity on this earth is a completed creation of the universe proclaimed!

Recently, a number of scholars have proposed a modified form of the first view.² They note that, from the context of v. 3 onward, Genesis 1 is clearly talking about the *creation of this earth* but that this does not appear to be the case with v. 1. The “beginning” in this verse clearly involves *both* the heavens (Heb. *shamayim*) and the earth (*eret*). “Heavens,” of course can be understood in both a local sense as pertaining to the earth’s atmosphere (i.e. the

“sky”) or in a cosmic sense (i.e. the entire universe). How should it be understood in v. 1? Several Hebrew scholars have observed that when these two terms “heavens and earth” are used *together* they take on a distinct meaning as a special figure of speech known as a “merism.”³ A merism combines two words to express a single idea; it expresses “totality” by combining two contrasts or two extremes. As John Sailhamer notes, “By linking these two extremes [“heavens and earth”] into a single expression ... the Hebrew language expresses the *totality of all that exists*.”⁴ That people in antiquity understood the expression as a merism is supported by extra-biblical literature such as *The Wisdom of Solomon* 11:17 which, in paraphrasing Gen 1:1, refers to the “cosmos” (*kosmos*) rather than the “earth” (*gē*).

If this understanding of “heavens and earth” is correct, it would suggest that “in the beginning” in Gen 1:1 does indeed describe God’s creation of the *entire* universe, including the sun, moon, and stars—that is, it refers to the *ultimate* beginning of everything in the universe.⁵ However, there is a subtle, yet critical nuance to the meaning of the expression “heavens and earth” in Gen 1:1. As Mathews points out,

... the expression may be used uniquely here since it concerns the exceptional event of creation itself.... “Heavens and earth” here indicates the *totality* of the universe, not *foremost*ly an *organized, completed* universe.⁶

The idea that the creation of the heavens and earth in Gen 1:1 was *not* complete is *supported* by Gen 2:1, which reads, “*Thus* the heavens and the earth *were completed* in all their vast array” (emphasis added). Gen 2:1 is the first explicit indication in Scripture that the creation was *now* finally complete. Only *after* the six days of creative activity on this earth is a completed creation of the universe proclaimed!

The implications of this understanding are interesting and significant. First, it is faithful to the most traditional and probably the best translation of Gen 1:1 as a complete sentence: “In the beginning God created the heavens and the earth” (period). Second, the “heavens and the earth” of Gen 1:1 do indeed mean everything—the *entire* universe. Third, it clearly places God as the Creator at the *absolute beginning* of *everything*, a point that is in harmony with the rest of Scripture (and a major concern to the author of Genesis vis-à-vis Mesopotamian

claims). Fourth, it does create a separation between the creation of the rest of the universe and this earth. That is, there are other worlds and beings whose creation *preceded* our own.⁷ Fifth, it means that there is a shift in meaning from the “earth” in the expression “heavens and earth” of Gen 1:1 to the “earth” that was “without form and void” in v. 2. Indeed, several scholars have discerned this distinction regarding the different meanings of “earth” in Gen 1:1 and 1:2. As Mathews notes, “The term ‘earth’ in v. 1 used in concert with ‘heaven,’ thereby indicating the whole universe, distinguishes its meaning

from ‘earth’ in v. 2, where it has its typical sense of terrestrial earth.”⁸ Finally, this means that, from God’s perspective, the whole universe was not complete until our little planet was finished.

The last three points raise the question, how much *time* separated the creation of the “heavens and earth” in Gen 1:1 from the commencement of the six-day creation of this earth beginning in Gen 1:3. For that we simply don’t know. It was apparently during this time that Satan’s fall from heaven took

place. It could have been a considerable time. All the Bible tells us is that, as God began the six days of creation, the earth was “without form and void.” The two Hebrew synonyms involved here are *tohu* “without form, empty” and *bohu* “empty, void.” Even in English, we are a bit baffled by what without form and void means—an empty, shapeless blob? nothingness? Some have equated the expression with “chaos.” However, it actually appears simply to be describing an earth that is a sterile wasteland awaiting the creative word of God to make it habitable for human life. As Isa 45:18 says, “He did not create it [the earth] to be empty (*tohu*), but formed it to be inhabited.”⁹ In this verse “empty” (*tohu*) is equated with “uninhabited.” The point of Gen 1:1-2 is not that there was no matter here when God began the six days of creation, but rather that there is no matter anywhere in the universe (on this earth or in the heavens) that God did not create. There is no problem with God’s use of matter which He had already created to form or create something else—humans themselves were created from clay. Within a Mesopotamian context, Gen 1:1 claims that the Biblical God existed in the beginning of everything, thus repudiating any claims of divine sovereignty for any other deity.

Darkness Over the “Deep” (Gen 1:2)

The biblical *tehom* “deep” simply refers to waters that were here when the earth was in the condition of

Although we usually associate the debate between a heliocentric cosmology versus a geocentric cosmology to the thoughts of Copernicus and Galileo, the Greeks at Alexandria were already entertaining early forms of these two cosmologies.

tohu wbohu “without form and void” between the initial creation and the completion of the earth to make it inhabitable. The earlier scholarly opinion that the biblical *tehom* (“deep”) is derived from the Babylonian primordial water deity Tiamat has been shown to be wrong¹⁰ and virtually no scholar holds to this view any longer. Rather, it is now clear that both the Babylonian *Tiamat* and Hebrew *tehom* are derived from a common Semitic word for ocean and, therefore, do not necessarily have any relationship to each other. The fact that it has now been shown that the Enuma Elish (which names *Tiamat*) is a *later* creation story than Genesis 1–11 merely reinforces this conclusion.

Yahweh’s power over the *tehom* was important to the Mosaic community. It was the *tehom* that confronted Israel at the Red Sea, but Yahweh was able to overcome it (Exod 15:5, 8; cf. Ps 106:9; Isa 51:9-10; 63:13). As Mathews reminds us, the *tehom* not only stands in the way of Israel as they leave Egypt, this same word is used as an analogy for the Canaanites whom the Israelites must overcome (with God’s help!) in order to possess the Promised Land (Exod 14:21-22; Josh 3:14-17).¹¹ In retrospect, Moses reminds Israel that it was this same *tehom* that God controlled at the time of Noah’s flood.

The “Expanse” (Gen 1:6-8)

One still widely-held interpretation of *raqia* ‘ “expanse” among modern biblical scholars was expressed long ago by Fosdick:

In the Scriptures the flat earth is founded on an underlying sea; it is stationary; the heavens are like an upturned bowl or canopy above it; the circumference of this vault rests on pillars; the sun, moon, and stars move within this firmament of special purpose to illumine man; there is a sea above the sky, “the waters which were above the heavens,” and through the “windows of heaven” the rain comes down; within the earth is Sheol, where dwell the shadowy dead; this whole cosmic system is suspended over vacancy; and it was all made in six days with a morning and an evening, a short and measurable time before. This is the worldview of the Bible.¹²

Three basic lines of evidence are presented in defense of this view of ancient Hebrew cosmology: (1) the Hebrews held this view in common with their ancient neighbors, especially Mesopotamia; (2) the Greek (LXX/Septuagint) and Latin (Vulgate) translate the Hebrew *raqia* ‘ of Gen 1:6 as *stereōma* and *firmamentum* respectively, showing that *raqia* ‘ means something solid like an inverted metal dome or vault; (3) *raqia* ‘ itself

carries the sense of stamped or pounded metal.

Because arguments 1 and 2 have impacted argument 3¹³—that is, both the assumption that Israel’s ancient neighbors held to such an “inverted metal bowl” cosmology and the Greek and Latin seem to support this have led to how lexicons define the Hebrew *raqia* ‘—it is important to review the evidence for the first two arguments before looking at the meaning of *raqia* ‘ itself.

Firmament in Ancient Mesopotamian Cosmology

Biblical scholars already in the nineteenth century began entertaining the idea that the ancients believed in a solid vault of heaven. Then, in 1850, Hormuzd Rassam discovered seven tablets in Ashurbanipal’s library at Nineveh that were found to contain a Mesopotamian creation account, now known as the *Enuma Elish*.¹⁴ The original composition may date into the late second millennium, ca. 1100 B.C. during the time of Nebuchadnezzar I. One of the first scholars to utilize this creation account in an attempt to reconstruct an ancient Babylonian cosmology was the German Assyriologist Peter Jensen in 1890. In Tablets IV and V the basic Babylonian cosmogony and cosmology were outlined. The creation of the *Himmelswölbung* (“heavenly vault”) appears on line 145 of tablet IV. Works like Jensen’s added support to the pan-Babylonian school led by scholars like Friedrich Delitzsch (1850–1922), who argued that Hebrews received many of their ideas about primeval history, including their creation story, from the Babylonians during the exile. Soon, a number of critical scholars augmented the Hebrew meaning of *raqia* ‘ in lexicons, commentaries, etc. by adding the idea of a solid vault, usually composed of metal.

Then, in 1975, when Assyriologist W. G. Lambert tried to locate the idea that the Babylonians conceived of the firmament as a solid vault in original Babylonian sources, his search came up empty! The closest support he could find was Jensen’s original 1890 study which translated the Babylonian word for “heaven” in *Enuma Elish* IV 145 as *Himmelswölbung* or “vault of heaven.” Although Lambert generally admires Jensen’s pioneering work, he notes that Jensen made this translation without any support or justification whatsoever. Rather, Jensen simply makes the translation and then proceeds thereafter as if “the point is proved.”¹⁵ Apparently Jensen accepted the common assumption that the Babylonians conceived of the firmament in this way and arbitrarily translated the Babylonian word for heaven as a vault! However, after reviewing the evidence, Lambert concluded, “The idea of a vault of heaven [in ancient Babylonian literature] is not based on any piece of evidence.” Rather, Lambert notes that the ancient Babylonians viewed the cosmos as a series

of *flat*, superimposed layers of the same size separated by space, held together by ropes; there was no hint of a solid dome.

Lambert's study was taken up by his student, Wayne Horowitz, who notes that "although the clear sky seems to us to be shaped like a dome, rather than a flat circle, there is no direct evidence that ancient Mesopotamians thought the visible heavens to be a dome. Akkadian *kip-patu* are always flat, circular objects such as geometric circles or hoops, rather than three dimensional domes."¹⁶ The fact remains that there is no word for a heavenly domed vault in ancient Mesopotamia.¹⁷

Translations of Raqia'

This brings us to the second line of evidence that is used in support of the idea that *raqia'* meant an inverted metal bowl—the translations of the word with the Greek *stereōma* (LXX/Septuagint) and the Latin Vulgate's *firmamentum*. Why did the Greek and Latin translators use these words—both of which convey the sense of something solid? According to the *Letter of Aristeas*, the Septuagint version of the Hebrew Scriptures was commissioned by the Egyptian ruler, Ptolemy (II) Philadelphus, who wanted to include this work in the famous library he was establishing at Alexandria. While all fields of knowledge were pursued in Alexandria, prominent among them was cosmology. The Greeks, who had been aggressively pursuing this topic since the seventh century B.C. in a manner that really must be considered the forerunner of our modern "scientific" approach, were not simply interested in ancient cosmogonies, myths and legends; they really wanted to know the precise physical nature of the universe, including what stuff was made of and how it actually functioned in a mechanical way.

To assist their investigations, the Greeks combed through the astronomical materials of both the ancient Babylonians and Egyptians. Already by the sixth century B.C., Greek discourse on the cosmos had moved beyond the flat disc models common in Egypt and Mesopotamia and were revolving around the idea that one or more solid *spheres* surrounded the earth (note—these were not half spherical or hemispherical domes or a vault that rested on a flat earth). Thus, ironically, it is from the Greeks that the earliest "metal" sky or sphere model emerges. Interestingly, although we usually associate the debate between a heliocentric cosmology versus a geocentric cosmology to the thoughts of Copernicus and Galileo, the Greeks at Alexandria were already entertaining early forms of these two cosmologies.¹⁸ Therefore, the idea that the earth was

enclosed within one or more hard spheres was commonplace within the academy at Alexandria when the Septuagint was being translated and is undoubtedly the main factor (rather than etymology) in the Hellenistic Jewish translators' choosing the Greek *stereōma* for the ancient Hebrew *raqia'*.¹⁹

Biblical Usage of Raqia'

This leaves us with the final line of evidence for *raqia'*—its actual usage in the Hebrew Bible. The basic verb *raqa'* simply means "to stamp, spread out, stretch."²⁰ The idea is to make something *thin* by stretching it out. It is important to note that there is nothing inherent in the word that evokes either a specific shape (dome) or material (metal). *Raqia'* is also used as a verb for non-metal objects such as the cloth of a tent or gauze—in which case the idea of "stretching" and "spreading out" makes a lot more sense. Whether the object is hard or soft must be determined from context.

While the uses of *raqia'* in Genesis 1 do not provide any *direct* indication as to the nature of the material, Gen 1:14, 20 provide some insight from a phenomenological perspective as to how the ancient Hebrews understood *raqia'*. In v. 14, *raqia'* is where the sun, moon and stars are located but v. 20 indicates that birds can fly upon it or (better) *in* it! The full Hebrew expression *al-pni raqia'* is often translated "in the open heavens," meaning "up," "above," or "in" the heavens. In other words, the birds would be flying *below* the firmament (and the sun, moon and stars) if the *raqia'* was thought of as a solid structure! The text has birds flying *in* the *raqia'* but clearly at a lower level than the sun, moon and stars. Either

***The stars were not created
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the night.***

the writer conceives of multiple layers or a continuous expanse from the level of the birds to the level of the sun, moon, and stars. Sailhamer, preferring the latter explanation, argues that *raqia'* should be understood simply as "sky."²¹ The author's own review of Bible commentators from the Byzantine period, Middle Ages, and up to the time of the Enlightenment shows that *raqia'* is commonly translated as "expanse"—something not solid—and not understood as an upside down metal bowl.

The Light and the Sun (Gen 1:3-5, 14-19)

One final issue in the creation story that probably should be discussed briefly is the creation of light on the first day and the reference to the sun, moon, and stars on the fourth day. Without pretending to provide a final answer to this, Sailhamer notes that there is a subtle but

significant difference in the Hebrew grammar and syntax of v. 14 when compared to v. 6.²² Specifically, v. 6 reads “Let there be an expanse,” creating something that was not there before. However, in v. 14 God does not say, “Let there be lights in the expanse to separate the day and night...” as if there were no lights before his command and afterward they came into existence. Rather, the Hebrew text says, “Let the lights in the expanse *be for separating* the day and night...” According to Sailhamer:

The meaning of God’s command in verse 14 is that the “lights” which were created “in the beginning” now are to serve “to separate the day and night” and “to be signs to mark the seasons and days of the year.” Given the difference between the Hebrew syntax of verse 6 and verse 14, the narrative suggests that the author did not understand his account of the fourth day to be an account of the creation of the lights but merely a statement of their purpose. The narrative assumes that the heavenly lights already were created “in the beginning.”²³

Interestingly, a similar argument with reference to the stars is used by Colin House, who indicates that the Hebrew of Gen 1:16 is best translated as “and God made the two great lights; the greater light to rule the day, the lesser light to rule the night *with* the stars.”²⁴ The implication is that the stars were not created on day four but rather were simply joining the moon in its task of “governing” the night.

Another important detail is the fact that the usual Hebrew terms for sun and moon are avoided, being described instead as the “greater” and “lesser” lights (v. 16). By shunning these names, the author of Genesis further diminishes the stature afforded them by neighboring Mesopotamians, Canaanites, and Egyptians—all of whom deified the sun and moon.

Conclusion

Although Genesis 1 does not provide a detailed, scientific description of what happened at creation, it does offer a historically reliable account of God’s creative activity that is both authoritative and accurate. It describes the creation of this earth and life on it as the culmination of the more generalized creation of the universe summarily mentioned in Gen 1:1.



Randall W. Younker is Professor of Old Testament and Biblical Archaeology at the Seventh-day Adventist Theological Seminary and Director of the Institute of Archaeology, Andrews University

¹Randall W. Younker, “Are There Two Contradictory Accounts of Creation in Genesis 1 and 2,” in *Interpreting Scripture* (ed. Gerhard Pfandl; Silver Spring, Md.: Biblical Research Institute, forthcoming).

²E.g., John Sailhamer, *Genesis Unbound* (Sisters, Ore.: Multnomah, 1996); Kenneth A. Mathews, *Genesis 1-11:26* (NAC; Nashville, Tenn.: Broadman and Holman, 1996); John D. Currid, *Ancient Egypt and the Old Testament* (Grand Rapids, Mich.: Baker, 1997), 65.

³See Sailhamer, *Genesis Unbound*, 56 and 102-3 where he convincingly argues that v. 1 cannot simply be a title for the chapter; also Mathews, *Genesis 1-11:26*, 142. This idea is not original with Sailhamer. Franz Delitzsch and C. F. Keil, *Biblical Commentary on the Old Testament* (trans. J. Martin et al.; 25 vols; Edinburgh, 1857-1878; Hendrickson reprint, 10 vols., Peabody, Mass., 1996), 1:37 noted that the expression “the heaven and the earth” is “frequently employed to denote the world, the universe, for which there was no single word in the Hebrew language.”

⁴Sailhamer, *Genesis Unbound*, 56 (emphasis added); see also Richard M. Davidson, “The Biblical Account of Origins,” *JATS* 14 (2003): 32-33 n. 88, pointing to Isa 44:24 and Joel 3:15-16 where the idea of totality in the reference to “heavens and the earth” is explicit (cf. John 1:1-3). Notably, the reference to “a new heavens and a new earth” in Isa 65:17; 66:22 reflects a different Hebrew construction which seems to refer more particularly to the recreation of this earth and its atmosphere (cf. 2 Pet 3:13; Rev. 21:1).

⁵As Sailhamer (*Genesis Unbound*, 106-7) points out, in Exod 20:11 the cosmologic merism “heavens and earth” is not used; rather, the triad of “heavens, earth, and seas” is used, reflecting not Gen 1:1 but Gen 1:2-31 with the creation of the three earthly habitats (heavens for birds, seas for fish, and earth for animals and man). Thus Exod 20:11 reflects the Sabbath command of Gen 2:2, *after* the creation of earth was completed.

⁶Mathews, *Genesis 1-11:26*, 142 (emphasis added).

⁷See Ellen G. White, *Early Writings*, 39-40, describing the existence of intelligent beings on other planets, who have trees of knowledge of good and evil but who chose differently from Adam and Eve and thus did not fall into sin.

⁸Mathews, *Genesis 1-11:26*, 142.

⁹See *ibid.*, 143.

¹⁰Claus Westermann, *Genesis 1-11* (Trans. John J. Scullion; Minneapolis: Fortress, 1994), 104-5.

¹¹Mathews, *Genesis 1-11:26*, 134.

¹²Henry Emerson Fosdick, *The Modern Use of the Bible* (New York: Macmillan, 1924), 46-47.

¹³E. A. Speiser, *Genesis: Introduction, Translation, and Notes* (AB 1; New York: Doubleday, 1964), 6.

¹⁴For a convenient review of the discovery and publication history of these tablets, see John H. Walton, *Ancient Israelite Literature in its Cultural Context: A Survey of Parallels between Biblical and Ancient Near Eastern Texts* (Grand Rapids, Mich.: Zondervan, 1989), 21-22.

¹⁵W. G. Lambert, “The Cosmology of Sumer and Babylon,” in *Ancient Cosmologies* (ed. Carmen Blacker and Michael Loewe; London: George Allen & Unwin, 1975), 62.

¹⁶Wayne Horowitz, *Mesopotamian Cosmic Geography* (Winona Lake, Ind.: Eisenbrauns, 1998), 264-65.

¹⁷Further, see *ibid.*, 262-63.

¹⁸As early as Homer (*Odyssey*, lines 325-29) the Greeks were speculating that the heavens were an inverted metal bowl (*sideron ouranon*). Variations on the original crude Greek model can be traced through various philosophers, including Anaximander,

Pythagoras, Anaximene, Empedocles, Aristotle, and Aristarchus of Samos who proposed a heliocentric cosmology.

¹⁹See Bert Thompson, *What Was the Firmament of Genesis 1?* (Montgomery, Ala.: Apologetics Press, 2000); online: <http://www.apologeticspress.org/articles/2168>.

²⁰According to BibleWorks 4, “In the OT, the foot-stamping connotation of *raqa*’ may be understood literally, indicating either a malicious glee (Ezek 25:6) or a threatening excitement (Ezek 6:11). It may be used figuratively to describe beaten and crushed enemies (2 Sam 22:43). In the Piel and Pual stems, the verb *raqa*’ acquires the sense of beating out precious metals, and of the spreading that results” (e.g. to overlay an image (Isa 40:19; cf. Exod 39:3; Jer 10:9). Also, *raqa*’ can denote “God’s spreading forth the tangible earth” (Isa 42:5; 44:24), “stretching out its land above the water (Psa 136:6), or spreading out the intangible sky (Job 37:18).”

²¹Sailhamer, *Genesis Unbound*, 116; cf. Mathews, *Genesis 1-11:26*, 150. Biblical texts that seem to describe the heavens in a solid, metal-like fashion are poetic, rich in metaphors, and dif-

ficult to take literally because they would then be contradicted by other passages that describe the heavens in completely different terms (see Thompson, *What Was the Firmament of Genesis 1?*).

²²In v. 6, the Hebrew verb *hyh* (“let there be”) appears alone, while in v. 14 it appears with an infinitive (*whyw*). See Sailhamer, *Genesis Unbound*, 132-35, justifying his approach to the grammar and syntax of Gen 1:14 with arguments from *Gesenius’ Hebrew Grammar* (ed. E. Kautzsch; trans. A. E. Cowley; Oxford: Clarendon, 1910), 348. For a different interpretation of the syntax, see Benjamin Shaw, “The Literal Day Interpretation,” in *Did God Create in Six Days?* (ed. Joseph A. Pipa, Jr. and David W. Hall; Taylors, S.C.: Southern Presbyterian, 1999), 211-12.

²³Sailhamer, *Genesis Unbound*, 132.

²⁴Colin L. House, *The Successive, Corresponding Epochal Arrangement of the “Chronogenealogies” of Genesis 5 and 11B in the three textual traditions: LXXA, SP, and MT* (Ph.D. diss., Andrews University, Berrien Springs, Mich., 1988), 241-48, noting also that the object marker *et* can be translated “in addition to” or “also.”

The Mystery of Life¹

BY GEORGE T. JAVOR

The study of living matter is at the center of all current scientific efforts. Recent triumphs include the cloning of Dolly the sheep and acquisition of the complete sequence of three billion nucleotides of the human chromosomes.² But, strangely, life itself is not the object of much study. Scientists seem to take the existence of life for granted.

Suppose we take apart living matter, and then recombine the isolated components. The work will yield an impressive collection of inert substances—but not life. So far, science has not created living matter in the laboratory.

What is the Origin of Life?

More than 100 years ago Louis Pasteur and others proved the folly of abiogenesis—the spontaneous transformation of non-living matter into living organisms. Nevertheless, scientists generally accept the concept that life developed abiologically on a primordial Earth and conveniently assert that conditions on a “primordial world” were conducive to generate life spontaneously.

Others theorize that perhaps life was imported to Earth from outer space. But while Earth is covered with millions of different species of organisms, there is no evidence of life anywhere in the solar system. The last logical option for the origin of life is creation by a supernatural Creator. But science, in its attempt to explain everything by natural laws, rejects the creation option as being outside the scientific realm.

What is Life?

The term *life* has different meanings, depending on whether it refers to an organism, an organ, or a cell. Survival of a transplanted liver, kidney, or heart means something quite different from human “life.” All manifestations of life depend on living cells, the most fundamental units of living matter. When a live cell is taken apart, a collection of very complex, but lifeless sub-cellular structures remain: membranes, nuclei, mitochondria, ribosomes, etc.

Structurally, living matter is composed of a combination of water and of large, fragile, *lifeless* molecules, proteins, polysaccharides, nucleic acids, and lipids. Water serves as the medium in which all chemical changes occur. Proteins and lipids are the principal structural components of cells. Proteins also control all chemical changes. Without chemical changes, life cannot exist. How proteins interact with chemical changes is central to understanding the chemical basis of life.

The Language of Proteins

Proteins come in thousands of different forms, each with unique chemical and physical properties. This diversity is due to their size: Each protein can contain hundreds of amino acids, and there are 20 different amino acids. What each protein is capable of doing depends on the order in which its amino acids are linked. This is like language, in which the meaning of words depends on the sequences of letters. The millions of different proteins represent but a tiny fraction of all possible combinations of amino acids.³

***More than 100
separate chemical
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for protein synthesis
to happen.***

When words are misspelled or misplaced, their meaning is garbled or lost. Likewise, for proteins to function properly, their amino acids must follow one another in the correct order. The results of alterations in the amino acid sequence can be drastic. The oxygen-carrying protein in blood, hemoglobin, is built from four chains of more than 140 amino acids each. In sickle cell anemia, an inherited disease, an altered amino acid occurs in the sixth position of a specific sequence of 146. This change causes distortion of the red blood cells, resulting in anemia and many other problems.

The Genetic Key to Life

How does the protein-building apparatus know the correct amino acid sequences for each of the thousands of proteins? The chromosomes of each cell are libraries filled with just such information. Each volume in this library is a gene. When the cell needs a particular protein, it activates the protein's gene and synthesis begins. The details of this process are not important here except to note that more than 100 separate chemical events have to occur for protein synthesis to happen.

All manifestations of life depend on chemical changes. A class of proteins known as enzymes bind specific molecules and facilitate their chemical transformations. Enzymes speed up reactions enormously. This could be a huge problem, because once the reaction is completed, its endpoint—known as equilibrium—is reached and no further chemical changes occur. Because life depends on chemical changes, when all reactions reach their endpoints, the cell dies.

Amazingly, in living matter *none of the reactions ever reach equilibrium*. This is so, because the chemical transformations are *interlinked*, so that the product of one chemical change forms the starting substance of the next. In living matter, every one of the millions of molecules is kept track of. Any shortage or excess immediately results in adjustment in the rates of chemical transformations. The interdependence among cellular components in the vertical direction parallels the logical relationships of written language among letters, words, and sentences all the way to the level of a book.

There is horizontal complementation among cell components as well. For example, proteins cannot be manufactured without assistance from nucleic acids, and nucleic acids cannot be made without proteins. The life of the cell depends on the harmonious and nearly simultaneous operation of its many components. During balanced growth, a steady state exists since none of the reactions is permitted to reach its endpoint. This means

that *each of the thousands of inter linked chemical reactions is in a non-equilibrium, steady state*.

Why Death is Irreversible in a Laboratory

If there are forces in nature that bring about life, we should search diligently to discover and harness them. If abiogenesis is possible, it could be harnessed to restore dead cells, organs, and even organisms to life. Under simulated primordial conditions protein-like matter has been made by heating powders of amino acids to high temperatures. However, these “protenoids” were amino acids randomly linked by unnatural bonds⁴ and have little resemblance to actual proteins.

Even though it is not possible to make biologically useful biopolymers under simulated primordial conditions, we can obtain them from once-living cells. Mixing these isolated biopolymers shortcuts chemical evolution, making it possible to test whether life will start from such a mixture. But in such preparations everything is at equilibrium. Since life happens only

when all chemical events within the cell are in a state of non-equilibrium, the best that can be accomplished by this method is the assembly of dead cells.

Fashioning living cells requires absolute control over every molecule, large and small. This is a capacity that science does not have. Chemists can manipulate large numbers of molecules from one form into another, but they cannot transport selected molecules across membranes to reverse conditions of equilibria. This is why we cannot reverse death.

So how did life originate on Earth? This article has revealed the great discrepancy between the biochemistry of living matter and the claims of those who would explain its origins by spontaneous abiogenesis. For the believer in the Creation account of the Bible, the assertion that only the Creator can make life is not an argument for the “God of the gaps.” We have a pretty good idea of what it takes to create life, only we cannot do it. It is an affirmation that life cannot exist apart from God. Indeed, life itself becomes an evidence for an all-wise Creator who chose to create life and share it with us.

George T. Javor is Professor Emeritus of Biochemistry and Microbiology, Loma Linda University School of Medicine



We have a pretty good idea of what it takes to create life, only we cannot do it.

¹This article, reprinted and condensed with permission, originally appeared in *Dialogue* 14/1 (2002): 12-16.

²S. Lander and 253 others, “Initial sequencing and analysis of the human genome,” *Nature* 409 (2001): 860-921. See also J. C. Venter and 267 others, “The sequence of the human genome,” *Science*: 291 (2001): 1304-51.

³The number of possible different sequences for a 100 amino acid-long protein is 1.2×10^{130} , or 12 followed by 129 zeros!

⁴S. W. Fox and K. Dose, *Molecular Evolution and the Origins of Life* (2d ed.; New York: Marcel Dekker, 1977).

Evidences of a Recent Creation¹

BY HAROLD G. COFFIN

We see and hear much today about an old earth, that it takes millions of years to build mountains or erode canyons. However, all the evidence does not point to great ages.

Cliffs and Lakes

Natural processes will destroy cliffs in time. Rocks and talus, breaking off the cliffs because of erosion, freezing and thawing, earthquakes, etc., accumulate



The Echo Cliffs in Arizona have very little debris at the base. If hundreds of thousands or millions of years had passed, cliffs would crumble and much talus would accumulate.

at the bottom. Without continued tectonic uplift, after millions of years only a low slope or rounded hill will remain.

Lakes also will disappear. Plants that grow along the

margins gradually push in toward the center. Skeletons of small organisms living in the water accumulate on the bottom. Trees, leaves, and other materials that fall or get blown into the water help to fill it. In New England the early settlers rowed their boats across lakes where meadows now exist. That lakes still occur all over the surface of the world is a good sign of its youth. Lakes south of areas formerly covered by glaciers would have been filled to become marshes or meadows if hundreds of thousands or millions of years had passed since their formation.

Sediment Deposits

The Po River flows into the Adriatic Sea on the east side of the Italian boot. We can trace the growth of its delta by historical and archaeological records.² Sites once directly on the coast are now several kilometers inland. The present protruding delta has built out into the sea mostly since 1000 B.C. Although the Po River deposited some sediments not in the present delta but spread along the upper end of the Adriatic Sea, there is no way to extend the age of the Po and its delta-building activity

beyond more than a few thousand years. Such figures do not agree with the ideas of uniformitarian geology that require the deltas of the world's rivers to be much larger and much older than they actually are.

Sediments presently accumulating in the ocean basins derive from dissolved substances and solid material in runoff from

continents and islands; remains of organisms that lived and died in the oceans themselves; glacier- and iceberg-transported sediments; windblown dust; seashore erosion; volcanic eruptions; and cosmogenic (meteor) dust. At the present time such

sources amount to more than 16 billion tons per year.³ Eventually, given enough time, the oceans would fill up. But since they cover about 70 percent of the earth's surface and also have an average depth nearly five times the average height of land above the sea, the land areas would erode down to sea level long before the sea basins became full.

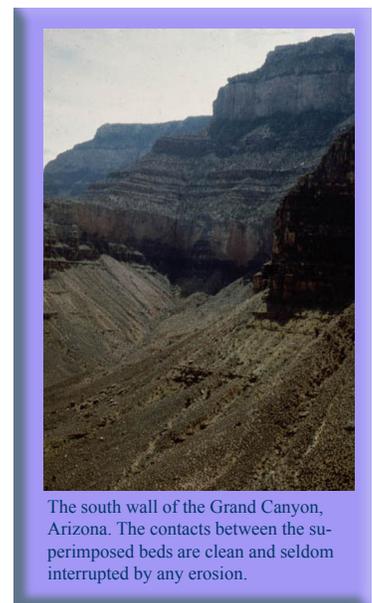
At the present rate of sedimentation into the oceans and the consequent rise of sea level as filling occurred, the continents would

lower to sea level in 12 to 15 million years. The 150 million years that geologists claim that the continents

have been breaking apart would have provided sufficient time for the land areas to erode to sea level 10 to 12 times. The calculated rate of separation of the Western Hemisphere from Europe and Africa since

the Jurassic is so slow that the runoff from the continents would easily have kept the developing Atlantic Ocean filled until the continents eroded to sea level.

Lakes would have been filled to become marshes or meadows if hundreds of thousands of years had passed since their formation.



The south wall of the Grand Canyon, Arizona. The contacts between the superimposed beds are clean and seldom interrupted by any erosion.

The present rate of runoff could have buried the whole of the Gulf of Mexico with sediments in 6 million years. The Mississippi River alone could have eliminated the whole Gulf in 10 million years. The Gulf of Mexico, still largely open, witnesses against long geological ages. Erosion and runoff rates would decrease as land surfaces approached sea level, but the increasing miles of shoreline (more erosion) in proportion to land area would probably offset it. That the continents still rise well

The history of human language and agriculture goes back just a few thousand years and then disappears.

above sea level and the great ocean basins remain largely unfilled surely throws into question the existence of the continents and oceans for hundreds of millions of years, as well as the theory of gradually separating continents for the past

100 million years. The absence of major erosion in the geologic record is a striking feature of its morphology. If long periods of time have transpired between strata, weathering and erosion should have broken up the lower strata. Yet such irregularities are not common and when seen are often minor. The millions of years claimed for the geologic activity on earth may not be as certain as the geological literature would lead us to think.⁴

Human History

Humanity itself may provide evidence for believing that the surface of the earth as we know it is young. On the basis of known rates of increase in human populations, it does not seem possible for humans to have occupied the earth for several million years. The history of language and agriculture goes back just a few thousand years and then disappears.

If the popular theory of evolution were correct, the primitive or uncivilized races of the world could be the less developed peoples--those who had not evolved as far. But it is obviously not the case, because we find such people to be similar to other races in intelligence. Furthermore, their languages are often quite complicated--far more complex than necessary for their survival. Much evidence favors degeneration rather than evolution.⁵

Living Fossils

One of the basic premises of historical geology is that the absence of fossils of a certain group of organisms from sediments of a supposed geologic age suggests that it did not exist then because it is found living in modern oceans. The present-day survival of organisms absent from the fossil record for supposedly long periods of geologic time weakens such an assumption.

Neopilina occurs as fossils in rocks dated 280 million years old. We obviously cannot take its absence from the intervening layers to mean it did not exist then. Since the lack of fossils of *Neopilina* proves nothing, we cannot use the absence of any other group of organisms at any period of geological history to support geological ages or evolutionary development.

Two living plant fossils are *Ginkgo* and *Metasequoia*. Botanists found the latter living in China at the turn of the twentieth century. Both genera are abundant in the fossil records.⁶ Difficult to believe, especially for those who think in terms of many millions of years, are the reports of living fossil bacteria. Salt beds of Mesozoic, Paleozoic, and even Precambrian ages possess them. Scientists have successfully cultured fossil bacteria both in North America and Europe.⁷ Most scientists suspect contamination by modern bacteria. With the discovery of abundant living bacteria in deep sediments, the opinion developed that living bacteria have successfully contaminated and penetrated many sedimentary beds.⁸

However, several factors, besides meticulous care in extracting the samples, argue against contamination or recent penetration in some cases. The organisms are not typical contaminants, efforts to pick them up in deliberately exposed cultures have not been successful, and their metabolic and biochemical capacities are greater than their modern living counterparts. If the bacteria have not been circulated into deep sediments recently, they would be living fossils of 100 million to more than 500 million years of age by standard geologic reckoning, depending on where found. Recent research on rock salt considered to be of Permian age (250 million years) reaffirms that some of these bacteria are not contaminants.⁹ It is understandable that uniformitarian geologists find such longevity

incredible. It amazes even creationists, many of whom think in terms of only thousands of years since the Genesis flood. However, bacteria existing for

5,000 years is certainly much more possible than for them to live for hundreds of millions of years. Thus it appears that the abundant living bacteria found in deep sediments might derive from two sources: recent contamination from the surface and burial by the Genesis flood only a few thousand years ago.

Rapid Geological Activity

In the town of Thermopolis, Wyoming, a large hot spring emerges from the ground and flows into the Big-horn River nearby. The local inhabitants began piping

Under the correct conditions stalactites, stalagmites, and other cave structures can develop quickly.

some of this water to the city park in 1905. Travertine from minerals in the water that flowed from the top of the pipe has formed a tent-shaped dome around the



This mound of travertine in Thermopolis, Wyoming, has formed since 1905.

pipe. It now has reached a height and width of about 20 feet. This dome even has a couple of small caves with stalactites inside. Obviously, under the cor-

rect conditions stalactites, stalagmites, and other cave structures can develop quickly.

Under large pillars in New Cave, near Carlsbad Caverns in New Mexico, park staff have found Indian projectile points. When water drips from the ceiling of a cave, stalactites may form on the ceiling where some evaporation occurs before the drop falls. On the floor, a stalagmite may build from minerals left by water dripping from the ceiling. Eventually the two may join to produce a column. These pillars in New Cave were two to three feet in diameter and about 15 feet tall. The Indian artifacts definitely limit the amount of time available for these large pillars to form. Stalactites have developed under limestone bridges, in the basement of the Washington Monument, and in other human-made structures. Factors involved in the rate of stalactite formation are the solubility and thickness of the limestone; the amount, temperature, and acidity of the water; and the air flow in the cave. The long time figures given for rates of stalactite formation may correctly represent some present processes, but may not apply to markedly different conditions that existed in the past.

The upright floating of trees and their sinking to the bottom in the same stance raises doubt about the wisdom of the automatic assumption that any fossil tree that is upright represents one preserved in its original position of growth. The eruption of Mount St. Helens and the formation of a large log raft in Spirit Lake illustrated a mechanism that would be widely available at the time of the Genesis flood. The rapid formation of beaches and cliffs on the island of Surtsey and the scouring of canyons quickly during the volcanic eruptions of Mount Katmai and Mount St. Helens have surprised geolo-

gists. Turbidity currents with the resulting turbidities have forced a major change in the interpretation of many sediments from slow gradual accumulations to sudden, almost instantaneous deposition. The identification of tidal cycles in certain sediments likewise changes the time for deposition from hundred of thousands or millions of years to as little as months, weeks, or even days. The good preservation of animal remains (sometimes even with scales, flesh, feather, etc.) and intact skeletons require rapid burial and little disturbance since burial. If repeated uplift and erosion of land had occurred, most fossils would be fossil hash. The recent discovery of soft, unpetrified tissue, including red blood cells, in dinosaur bones casts serious doubt on the geological ages usually attached to the bones.

As we consider all these factors, we come away with the strong suspicion that there is something wrong with conventional geologic time and that in fact only a few thousand years have passed since the formation of the earth's present surface.

Harold G. Coffin, a senior research scientist at the Geoscience Research Institute for 27 years, writes from Calhoun, Georgia.

¹This article is a condensed form of the chapter "Evidences of a Youthful Earth," in Harold G. Coffin with Robert H. Brown and R. James Gibson, *Origin by Design* (rev. ed.; Hagerstown, Md.: Review and Herald, 2005), 365-79, updated by the author.

²Bruce W. Nelson, "Hydrography, Sediment Dispersal, and Recent Historical Development of the Po River Delta, Italy," in *Deltaic sedimentation* (ed. James P. Morgan; Society of Economic Paleontologists and Mineralogists, Special Pub. No. 15., 1970), 152-184.

³Alexander P. Lisitzin, *Sedimentation in the World Ocean* (Society of Economic Paleontologists and Mineralogists, Special Pub. No. 17., 1972), 35-38.

⁴A. A. Roth, *Origins: Linking Science and Scripture* (Hagerstown, Md.: Review and Herald, 1998), 215-232, 262-274.

⁵J. G. Penner, *Evolution Challenged by Language and Speech* (London: Minerva Press, London, 2000).

⁶Chester A. Arnold, *An Introduction to Paleobotany* (New York: McGraw-Hill, 1947), 273-77; E. D. Merrill, "A Living *Metasequoia* in China," *Science* 170 (1948): 140.

⁷Heinz Dombrowski, "Bacteria From Paleozoic Salt Deposits," *Annals of the New York Academy of Sciences* 108 (1963): 453-560; Ralph Reiser and Paul Tasch, "Investigation of the Viability of Osmophile Bacteria of Great Geological Age," *Transactions of the Kansas Academy of Science* 63 (1960): 31-34.

⁸A. A. Roth, "Life in the Deep Rocks and the Deep Fossil Record," *Origins* 19 (1992): 93-104.

⁹Russell H. Vreeland et al., "Isolation of a 250-Million-Year-Old Halotolerant Bacterium From a Primary Salt Crystal," *Nature* 407 (2000): 897-900.

"Through faith we understand that the worlds were framed by the word of God, so that things which are seen were not made of things which do appear." Hebrews 11:3.

Affirmation of Creation

GEOSCIENCE RESEARCH INSTITUTE,
L. JAMES GIBSON, DIRECTOR

Our world is full of evidence of thoughtful and intentional design, from the beauty we see in the brightly colored flowers and birds to the complexity of the cell and the very structure of the universe itself. Evidence of design is seen even in our capacity to appreciate the beauty, and our ability to examine the creation and thoughtfully contemplate its meaning. Inevitably, we are led to wonder how the design came about and what it means for our own existence.

This quest has led many to see a Creator God whose omnipotence is displayed in the size and power of the stars and whose omniscience is seen in the structure of living cells and the precise interaction of physical and organic features of the creation. This conclusion naturally leads one to seek for more information about the God of creation.

Study of the creation has revealed much evidence for the idea that a divine Creator stands behind the scene. Scientists have wonderful opportunities to see the evidence of God's creativity and to ponder His greatness. However, the creation does not speak clearly to our minds. The evidence of design is mixed with evidence



of evil and violence. Organisms may appear to have imperfections that would not be expected from an all-wise Creator God. The ultimate resolution of this problem is not found in study of the creation, but is available to those who accept the



Biblical revelation of God and His relationship to us and our world.

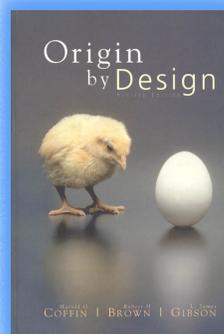
The Bible reveals the story of creation, and teaches us about the Creator God who effortlessly designed the world for His own purposes. In the space of six days, He prepared an environment suitable for living creatures and then filled that world with a diversity of organisms. He created humans in His own image and gave them responsibility for His creation. He gave them the gifts of cognition, language, relationships, responsibility, freedom and purpose. Here we find the explanation for the design seen in the creation – it reflects the character and purpose of the God of creation.

But what about the evil we see in the creation, which turns so many away from faith in Biblical creation? The Bible also reveals the story of evil, and how violence and death entered the perfection of creation. This story tells us something important about the character of the Creator God. It seems that God places a very high value on the kind of relationships that are possible only with beings that possess freedom of choice. The high value God places on human freedom is best understood in the light of the cross of Calvary. There we see the affirmation of the Biblical message of the special creation of humans, their rebellion and its evil results, and the depth of God's self-sacrificing love. The cross reveals the significance of the creation story, with its elements of a six-day creative period, seventh-day Sabbath, original diversity of living organisms, and special creation of humans in a perfectly designed paradise. We would do well to contemplate daily the meaning of the cross and how it illuminates our understanding of the Creator God and His works.

BOOK NOTES

Worthwhile Reading on the Creation-Evolution Debate

The Seventh-day Adventist understanding of origins is rooted in a particular view of Scripture as an accurate record of the past and, consequently, as a guide to the future and salvation. But, since the Bible does not elaborate in scientific detail about our earth and the life that exists on it, we need to be careful. Books claiming to deal with questions about creation and evolution from a scientific perspective abound.¹ These commonly mis-



represent themselves, dealing more with metaphysics than actual science or sound doctrine. One book that should not be overlooked, doing a good job of dealing comprehensively with both science and Scripture, is the recently updated *Origin by Design*.² In considering other, more specialized, books, we must keep in mind that, despite their scientific approach, all of them still attempt to interpret the past. We cannot time travel to do repeatable

experiments, but our view of what happened in the past can be informed by data and our inferences should be consistent with the data we have. With this in mind, we will survey several recent, helpful books on the subject of origins.

David Sedley's brilliant *Creationism and its Critics in Antiquity*,³ though written from the perspective of one convinced of Darwinism, provides a wonderful context for arguments about design in nature by reviewing the debate between various pre-Christian pagan philosophers. Understanding how the ancients employed arguments still in use today reveals that these questions are not ultimately addressed by mere data accumulation. Instead, our answers provide the metanarrative for interpreting the data. For Bible-believers, understanding that the apostles themselves argued for the Creator God and against ideas essentially identical to the materialistic Darwinism of today provides new appreciation and insight into the writings of New Testament authors.

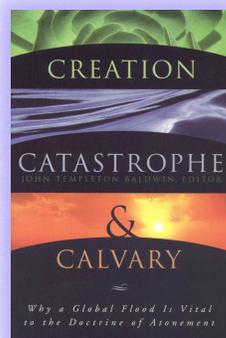
One thing that an appreciation of design in nature can awaken in believers is a genuine appreciation of all creative endeavors. For those who do not naturally come by this, Wiker and Witt's *A Meaningful World*⁴ is a wonderful, almost necessary, read. The Apostles witnessed to the seminal events of history surrounding the Creator's incarnation, death and resurrection, but what is it about the creation that witnesses to the Creator's genius? Most Adventists tend to discuss the genius of nature in terms of its utility and remarkable engineering; Wiker and Witt reveal it as a work of art exhibiting the same traits we recognize as genius in great literature. Any book that ranges coherently from Shakespeare's *Tempest* to the periodic table and does so in a seamless way that leaves the reader choked with admiration, shocked at the brilliant beauty of it all, is a treasure in and of itself.

A book that presents scientific data from a specifically creationist perspective in an interesting and engaging way is *Genetic Entropy* by John Sanford.⁵ Despite the technical-sounding title, Sanford reveals a genuine scientific mystery in a clear, easy-to-understand style. He documents that most DNA changes are not the sort of thing that natural selection can act on. As a consequence "near neutral mutations" accumulate. While these mutations do not have a huge effect, they do have some effect, generally detrimental. The accumulation of these slightly detrimental changes should eventually have a measurable impact and, given enough time, could even cause us and other living things to go extinct. How much time this should take is the mystery. Sanford provides data to show that, given current estimates of the rates of change in genomes, life cannot have existed for millions of years. He makes an interesting argument consistent with the biblical account of history and in

favor of a short chronology for life. His book is particularly valuable because it engages directly with the issue of time. There are a number of excellent books on the evidence of design in nature, such as the books by Michael J. Behe and William A. Dembski.⁶ But even the presence of design does not necessitate belief in a recent, six-day creation.⁷ Significantly, Sanford takes on from a biological perspective the more challenging issue of time and brings a telling argument to bear.

Another book that does a wonderful job of presenting a way of thinking about biology that is consistent with Biblical history is Leonard Brand's *Faith, Reason and Earth History*.⁸ All interpretations of nature spring from a collection of assumptions, some of which are so integral to an observer's thinking that they are unaware of them. Because of this, the interpretation of one person may appear to be bizarre from the perspective of another. In the case of creationism, there are many assumptions behind interpretations that are not necessarily biblical. Brand carefully considers what the Bible actually says and how it can be applied to real-world data. This is a vitally important exercise if we are to avoid arguing for indefensible positions both from the perspective of the Bible and of science. *Faith, Reason and Earth History* also provides a useful foundation of knowledge that enriches our understanding of origins and, equally valuable, avoids claiming too much.

Nancy Pearcey's *Total Truth*⁹ brims with deep philosophical insights, fascinating history, and profound theology in the tradition of Francis Schaeffer. Pearcey concentrates on the concept of worldviews, comparing various materialistic worldviews, like Marxism and Darwinism, with the theistic worldview of Christianity. In doing this, she reveals why there can in principle be no compromise between Darwinism and Christianity. Pearcey's book is particularly valuable for Adventists and should be required reading for Adventist pastors and teachers, giving as it does historical background on the Great Awakening of the nineteenth century out of which Adventism arose and practical guidance on how to effectively engage with others on the issues surrounding Darwinism while avoiding the pitfalls of the past.



Valuable contributions, mostly by theologians but one also by scientist Ariel Roth, may be found in *Creation, Catastrophe and Calvary*. The book considers the vital relation of the biblical accounts of creation, the fall, and the flood to the doctrine of salvation.¹⁰ The initial chapters deal with such fundamental issues as

worldview (from the perspective of Rev 14:7), whether or not the “days” of creation are literal, and the relation between Genesis 1 and 2. Several chapters deal with the flood story, including its universality, implications from the Grand Canyon and the geologic column. The book concludes with several chapters surveying scientific challenges to evolution and the theological implications of our understanding of origins.

Each of the books we have discussed may be useful in some way for those wishing to be better informed about creation and evolution. Even if we cannot agree with everything a given author writes, these informative, honest, and carefully reasoned approaches to origins are stimulating. Those wishing to gain a better grasp of the issues or to expand their understanding will find them a good starting point.

Timothy G. Standish is a research scientist at the Geoscience Research Institute



Clinton Wahlen is associate director of the Biblical Research Institute

¹An excellent balanced introduction to the debate is Denyse

O’Leary, *By Design or By Chance* (Kitchener, Ontario: Castle Quay Books, 2004).

²Harold G. Coffin with Robert H. Brown and R. James Gibson, *Origin by Design* (rev. ed.; Hagerstown, Md.: Review and Herald, 2005).

³D. Sedley, *Creationism and its Critics in Antiquity* (Sather Classical Lectures 66; Berkeley: University of California Press, 2007).

⁴Benjamin Wiker and Jonathan Witt *A Meaningful World: How the Arts and Sciences Reveal the Genius of Nature* (Downers Grove, Illinois: IVP Academic, 2006).

⁵John C. Sanford *Genetic Entropy and the Mystery of the Genome* (Lima, N.Y.: Elim, 2005).

⁶E.g., Michael J. Behe, *The Edge of Evolution: The Search for the Limits of Darwinism* (New York: Free Press, 2007); idem, *Darwin’s Black Box* (New York: Simon & Schuster, 1996), arguing that “irreducible complexity” points to the presence of a Designer. Answering objections that have been raised to Intelligent Design is William A. Dembski, *The Design Revolution: Answering the Toughest Questions about Intelligent Design* (Downers Grove, Ill.: Intervarsity, 2004).

⁷On reasons given by scientists (some of whom are Adventists) for a six-day creation, see *In Six Days: Why Fifty Scientists Choose to Believe in Creation* (ed. John F. Ashton; Green Forest, Ark.: Master Books, 2000).

⁸A revised and updated version of this book should be released soon: Leonard Brand, *Faith, Reason and Earth History: A Paradigm of Earth and Biological Origins by Intelligent Design* (Berrien Springs, Mich.: Andrews University Press, 1997).

⁹Nancy R. Pearcey, *Total Truth: Liberating Christianity from its Cultural Captivity* (Study Guide edition; Wheaton, Ill.: Crossway Books, 2005).

¹⁰*Creation, Catastrophe, and Calvary: Why a Global Flood Is Vital to the Doctrine of the Atonement* (ed. John Templeton Baldwin; Hagerstown, Md.: Review and Herald, 2000).

WORLDWIDE HIGHLIGHTS

Creation Sabbath

The General Conference’s Faith and Science Council is sponsoring its first “Celebration of Creation” Symposium Friday night, Oct 23 and all day Sabbath, Oct 24, 2009, to be held at the University Church on the campus of Loma Linda University. The objective of this gathering is to highlight the truthfulness of the Biblical account of a recent creation, affirming that it took place in six literal, 24-hour, consecu-



tive days. Seventh-day Adventist scientists and theologians will review this wonderful Biblical belief which has to do with our origins, our reason for existence and the prophetic implications of a Creator God who commands us to worship Him as Creator on the seventh-day Sabbath—the same seventh day we worship on today. There are enormous prophetic implications of the seventh-day Sabbath in Revelation which are vitally important today in our relationship to Christ as our Savior and Coming King and His commission entrusted to us to proclaim the three angels’ messages of Rev 14:6-12.

The “Celebration of Creation” will examine various topics including: Reasons to Trust God’s Word, The Evidence and the Book, Getting Science Right—Geology and Biology, How Can A Good God Allow Evil?, The Scope and Limits of Evolution, The Scientific Advantage of a Fresh Worldview, and What Does It All Mean? It is vital to know about our Creator and His creation because of unbiblical secularist and humanist influences in the world today that are attempting to shape our worldview. It is critical to base our understanding about origins on what the

Bible indicates and the amplification of this teaching given through the Spirit of Prophecy.

The event coincides with the General Conference-voted creation emphasis worldwide on Sabbath, Oct. 24 and will be the first in a series of symposia sponsored by the Faith and Science Council in cooperation with the Biblical Research Institute, Geoscience Research Institute, and the Hope Channel. More information may be found at www.CreationSabbath.net including sample sermons, informational articles, children's stories, pertinent Scripture passages, hymns and responsive readings as well as other resources and links. Please pray for God's blessing on this important day and the spiritual impact of this event on students, church members, and the public as God is lifted up as our all-powerful Creator.

***Gloria Patri* Conference Encourages Scholarly Collaboration**

Fifty-three scholars from across the academic disciplines and from six countries gathered for the second meeting of the *Gloria Patri* Interdisciplinary Conference



Series, June 4-8, 2009 in Bobbio Pellice, Italy. Karen Abrahamson and Kathy Demsky organized the conference, jointly sponsored by the Faith and Science Council of the General Conference, the Geoscience Research Institute, and Andrews University. Though a number of non-Adventist scholars

also participate, the *Gloria Patri* conferences strongly support the notion that God is creator, sustainer, and maintainer of the earth and that the seventh-day Sabbath is a memorial of God's historical, creative actions.

While the Seventh-day Adventist Church provides a number of graduate programs throughout its educational system, there are still many young people who, due to the nature of their studies, especially in the natural sciences, attend public universities and work in secular institutions. Thus, an important function of the *Gloria Patri* conferences is to provide a home and community for the church's worldwide consortium of scholars. One young woman, following the Bobbio conference, came to the conclusion that she should formalize her relationship to the Seventh-day Adventist Church through baptism. The next conference is scheduled for September 2010 at Friedensau Adventist University in Germany and will focus on the origin and meaning of evil. For more information, see <http://gloriapatri2010.blogspot.com> or write to thecambridgeproject@gmail.com.

South American Symposium VIII Held

Approximately five hundred administrators, theologians, and pastors addressed the topic of "Theology and Methodology for Mission" at South American Biblical-Theological Symposium VIII, held on the campus of Northeast Brazil College from July 16-19, 2009. Four scholars from BRI presented papers at the conference, including Ángel Manuel Rodríguez, Kwabena Donkor, Clinton Wahlen, and Ekkehardt Mueller. The Sabbath morning sermon was given by Ted Wilson, General Vice-President of the General Conference and Wilson Paroschi queried Mueller on various points of the Sabbath School lesson which



From left to right: Wesley Torres, Wilson Paroschi, Ekkehardt Mueller, Milton L. Torres

he authored, including its relevance for us. More than 40 theologians from across the division contributed to a Statement of Consensus and Commitment, which was voted by the attendees and which reaffirms the priority of the mission of the Adventist Church "to proclaim the everlasting gospel of God's love to all people in the context of the three angels' messages of Rev 14:6-12." In order to accomplish this mission, the statement recognizes that a "diversity of methods" will be required, including the formation of small groups, church planting in unreached areas, and the harmonious action of the various departments of the church, but also emphasizes that these methods must be Christ-centered, Bible-based, and contextualized "without altering the contents of our message."

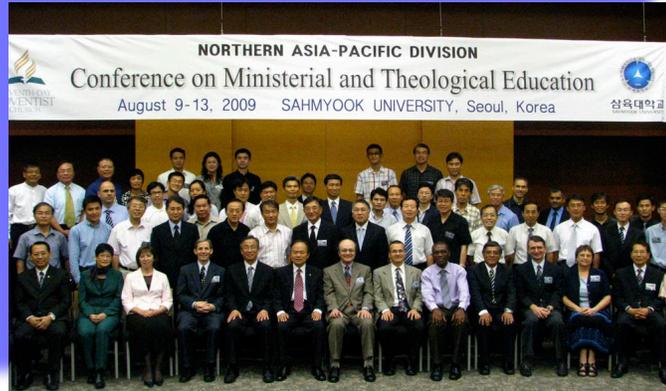
Conference Held for Northern Asia on Ministerial and Theological Education

Three BRI representatives made a total of eight presentations dealing with the issues of Hermeneutics, Mission, and the Role of the Adventist Theologian to a gathering of seventy educators and administrators from throughout the Northern Asia-Pacific Division (NSD), Aug. 9-13, 2009. The meetings were held in the newly constructed Centennial Hall on the campus of Samyook University. Ángel Manuel Rodríguez, Kwabena Donkor, and Clinton Wahlen attended from BRI and, in addition to their presentations,

answered questions from the floor as part of a panel discussion held on the final day of the conference. Other topics considered at the conference included Pastoral Formation and Leadership Needs, the Integration of Faith and Learning, and other practical subjects related to ministerial training. Sizeable delegations from outside Korea were in attendance, including people from Taiwan, Japan, Mongolia, and seventeen from China. Besides the BRI representatives, presenters included a number from NSD, Montemorelos University, the Adventist International Institute of Advanced Studies (AIAS), and the *Adventist Review* and *Ministry* magazines.

“Church growth and successful

missionary work are inseparably linked to ministerial and theological education,” says Jairyong Lee, President of NSD. “We need solid and moderate



biblical scholars and theologians who thoroughly believe in the fundamental beliefs of the Seventh-day Adventist Church including the prophetic gift manifested in the life and writings of Ellen G. White. Those who are studying under these teachers will serve as faithful Adventist pastors, and their efforts and service

will result in steady church growth and marvelous blessings to their church members,” he added.

Recognizing the importance of such continuing education and the interchange of ideas and plans, there was a consensus that further such gatherings be held at least every five years. The delegation also voted to recommend that a Biblical Research Committee be set up in order to examine and address theological issues pertinent to the church in NSD.