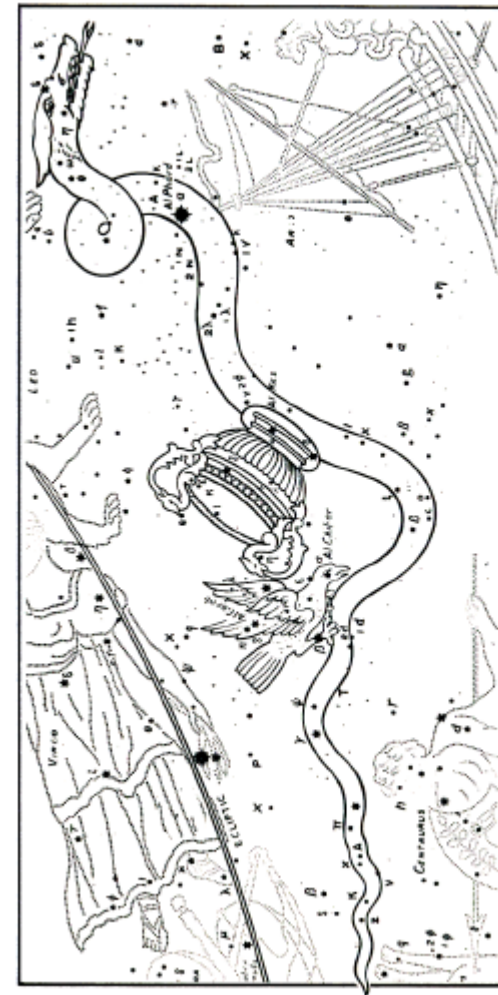


THE
**BIBLICAL
ASTRONOMER**

Summer 2002



HYDRA, THE SERPENT
CRATER, THE CUP
CORVUS, THE RAVEN

(Publications list continued from the back cover.)

The Earth: Our Home by Philip Stott. The wise men, philosophers, and scientists of the world have repeatedly changed their minds about such things as space and our position in it. This book provides and historical look at the topic of geocentricity and offers evidence for it. 32 pp. \$3.50

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Cover: Hydra, the fleeing serpent as depicted by Joseph A. Seiss in his book, *The Gospel in the Stars*.

THE BIBLICAL ASTRONOMER

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EDITORIAL

About the witness of the stars series

It seems that several of our readers have questions about the “Witness of the Stars” and “Draco the Dragon” articles that appeared in issue number 100. Some readers thought that it was an endorsement of astrology, the condemned practice of foretelling the future by the stars (Isaiah 47:13-15). That is assuredly not the case. Nor is the series of articles to be taken as proof that the witness of the stars is the same as the witness of the Scripture. The witness of the stars has demonstrably been corrupted, but not so the witness of Scripture. (For more about that topic see the article entitled “Mr. Fourier and the Missing Neutrinos” in the next issue, Lord willing.)

The witness of the stars series deals with the role of the stars “for signs” (Genesis 1:14). The signs are interpreted as constellations, but I will be the first to say that other kinds of signs are also meant; signs such as we see in the Revelation and as related in Balaam’s prophecy in Numbers 24. So a little more background is appropriate.

Tradition, and it is purely a tradition, has it that God taught Adam astronomy. Adam taught others and eventually the knowledge was passed on to Enoch. Abraham knew astronomy, and, of course, so did Daniel. The upshot of this is that the astronomical knowledge of the ancients ultimately came from God, though it became corrupted over time. Once the Copernican Revolution redefined astronomy, men no longer believed that ancient astronomy was God-given, and so, much ancient authority was relegated to the trash heap of history. Finally, with the advent of evolutionism and its mythology that the ancients knew nothing and that modern man knows everything there is to know, the ancient lore was depreciated even more.

And so it came to pass in the nineteenth century that some Christian astronomers and archaeologists decided to document the ancient witness of the stars. In their attempts to discredit the Bible of the English, the Jesuits had collected a huge volume of ancient literature which they used to redefine the sacred words, to secularize them, and, as we have documented in three articles, corrupt them. But others, knowing that man is degenerating instead of getting better and smarter, were able to “read between the lines” of the ancient documents and extrapolate back to the original stories. And that is what we’re reporting on with this series of articles on the witness of the stars.

In this issue we also have an article written by Prof. James Hanson about the Hebrew units of measure called a bath and a cubit. Professor Hanson focuses in on the royal cubit, the one used for sacred measurement. Prof. Hanson also argues that the dimensions of Noah's ark should be reckoned in royal cubits.

Many of our readers have also asked from time to time that we rebut the claims of Dr. Hugh Ross, a theistic evolutionist with the strong financial backing of many Evangelical organizations. Although Mr. Ross has a reputation for honesty and being a loving, respectful, caring individual, anyone who actually compares his statements made more than ten minutes apart will come to quite a different conclusion. Dr. Bolton Davidheiser, now ninety years old, has taken it upon himself these last years to confront and to repudiate the errors of Hugh Ross, both the man and his myth. Most of this issue is allotted to his article, a reprint from material found in several sources on the Internet.

When I asked Dr. Davidheiser for permission to reprint it, he expressed surprise that it existed on the Internet. He has been in the process of writing a book on the errors of Ross for about ten years. His first release, *Creation, Time, and Dr. Hugh Ross*, was published several years ago and his revised and enlarged edition is looking for a publisher. Hopefully, it has one now.

HEBREW UNITS OF MEASURE: THE MOLTEN SEA AND EZEKIEL'S MILLENNIUM TEMPLE

by
Prof. James N. Hanson

Abstract

The hand is found to be three (present-day) inches, hence the civil cubit is $6 \times 3 = 18$ inches and the Temple-cubit is $7 \times 3 = 21$ inches. From the description of the Molten Sea and knowing the size of the cubit, the modern-day size of the Bath and Ephah are determined. The Molten Sea is, furthermore, found to have maximum volume for a given amount of brass used in its casting.

The cubit is Scriptural

There are two types of cubit in Scripture; the plain (ordinary, civil) cubit of six hands and the temple-cubit of seven hands (Eze. 40:5; 41:8; 43:13). This distinction is made in the context of the Millennial Temple but seems to equally apply to the Temple of Solomon and its successor built in the time of Ezra and Nehemiah. Hence temple measurements and measurements of its appurtenances, such as the molten sea, are measured in temple cubits. And that this would also apply to Solomon's Temple, Nehemiah's Temple; Herod's construction, the Tribulational Temple and the Millennial Temple. And, moreover, to Noah's Ark (another enclosure of God) making it $(7/6)^3 = 1.59$ times larger than usually estimated. Several demonstrations will be provided to show that things are so.

The size of the cubit

Several proofs (verifications) that the temple cubit is 7 hands will be given. They are:

1. the observed size of the Temple Mount
2. Hezekiah's Tunnel, and
3. the north-south dimension of millennial Israel.

This last proof has not appeared in the literature or commentaries, to the best of my knowledge.

1) Leen and Kathleen Ritmeyer in their *Secrets of Jerusalem's Temple Mount* (Biblical Archaeological Society, Wash. D.C., 1998) have provided well-argued and compelling evidence for the locations of the Temple Mount wall and the Temple Mount. Specifically, they have found the 500 temple-cubit square temple mount mentioned in Eze. 45:2, and their measurement of 801 feet gives $(801 \times 12) / 500 = 20.66$ inches. A measurement of 807.5 feet would have resulted in a Temple cubit of 21 inches. This corresponds to a 7-foot under-measurement in locating the exact altar corner of where it was 3000 years ago in Solomon's time. Perhaps the mount wall had a 7-foot ledge or rim, or perhaps the Temple cubit is 20.66 inches, as the Ritmeyers suggest.

2) In their text the Ritmeyers compare ancient records regarding Hezekiah's (Siloam) to the present day measurements and find the cubit to be 20.67 inches (see their end notes on chapter 5).

3) In Eze. 47:16, 19 and Eze. 48:1, 28, the north-south extent of Millennial Israel is given. From Ezekiel chapters 47 and 48 we know that this extent is from Kadesh to Damascus which from the *MacMillan Bible Atlas*, for one, I estimate is a distance of 640 miles = $640 \times 5280 \times 12 = 40,550,400$ inches. We also know that Millennial Israel will be subdivided into thirteen east-west divisions (inheritances) each of 25,000 reeds across and that a reed is six temple-cubits. Therefore the total north-south extent is $13 \times 25,000 \times 6 = 1,950,000$ temple cubits. Hence the temple cubit is $40,550,400 / 1,950,000 = 20.80$ inches. Since the exact location of Kadesh is in doubt, one could adopt a 21-inch temple cubit.

We summarize:

1 cubit (ordinary)	= 6 hands = 18 inches
1 cubit (temple)	= 7 hands = 21 inches
1 hand	= 3 inches.

Additional evidence for 21 inches can be found in the *Encyclopedia Britannica*, 9th edition, 1888, under "Calendar" by Woolhouse (also see his *Measures and Weights of all Nations*) and in *The Holy Temple Revisited*, (Jason Aronson, NY 1990) by Reznick.

The molten sea

The molten sea is mentioned in Scripture in 1 Ki. 7:4, 23-26, 46-47; 2 Chr. 4:1-8, 15, 17; Jer. 52:17, 20; 2 Ki. 16:17; 25:13; and 1 Chr. 18:8. We learn that it was a giant single piece of brass, cast in the earth. Presumably, it was cast upside-down with its surface decorations

impressed into the clay of its outer surface so that they became bas-relief on the final product.

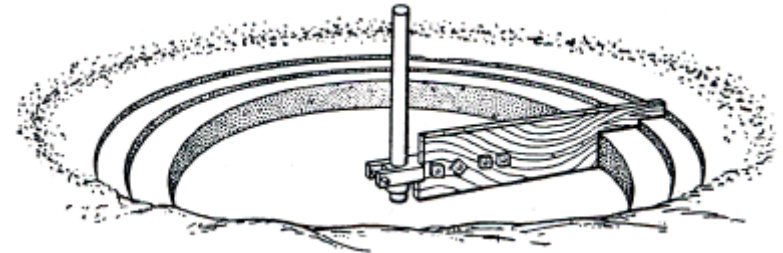


Fig. 1: Making the cast for the molten sea.

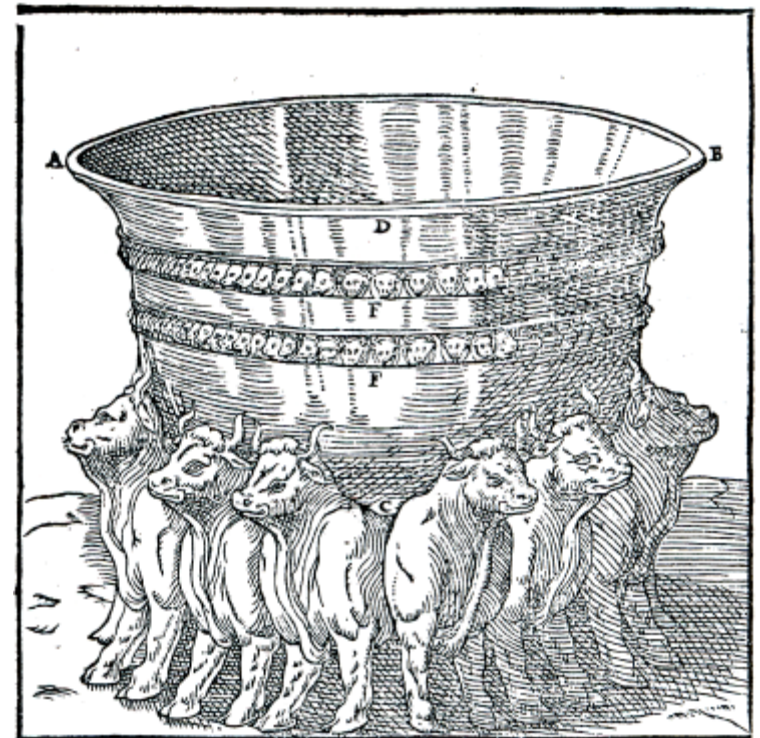


Fig. 2: The molten sea pictured in the Geneva Bible of 1560

The molten sea was so large that Nebuchadnezzar had it broken up for melting at the time of the destruction of the Temple. It must

have been an imposing structure, sitting in front of the Temple. It might have had two uses since two measures are given for its volume. The 2,000 baths, perhaps, was its water volume and the 3,000 baths its heaped-up grain volume. We will use the 2,000-bath figure as a construction detail, giving the volume enclosed by the given dimensions, whereas the 3,000-bath figure pertains to its sacred use. This is to be expected since the former number is given in Kings and the latter in Chronicles, the first expression man's views and the second God's views of the same events.

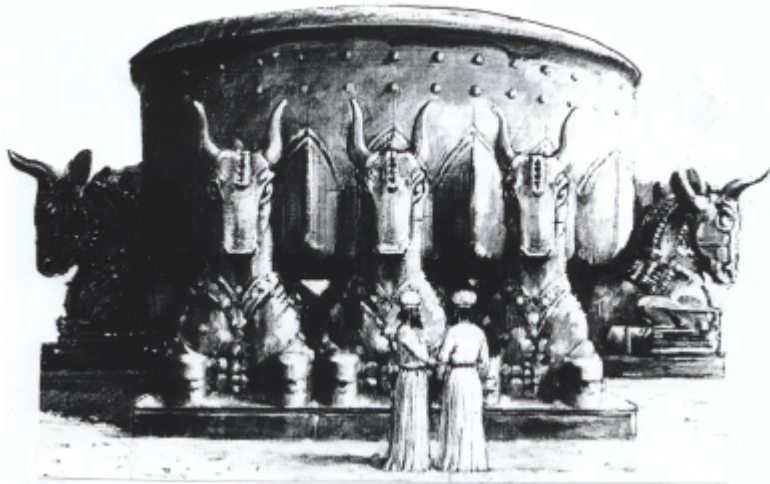


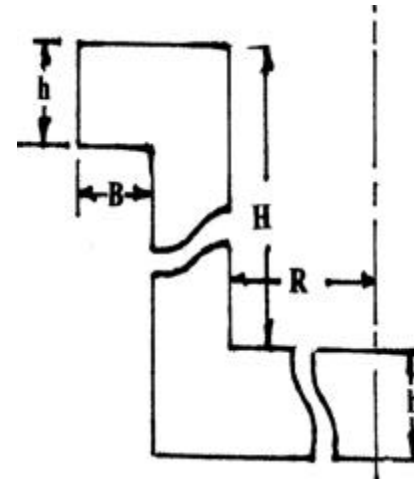
Fig. 3: The molten sea in perspective.

The dimensions of the molten sea

An idealized central cross section of the molten sea has a brim B , a uniform thickness h , and inner height H and an inner radius R . We are given that the thickness $h = 1$ hand = 3 inches and that the outer height $h+H = 5$ temple cubits. Hence $H = 5-h = 5-(1/7)$ temple cubits = 102 in. The circumference under the brim is 30 temple cubits, i.e., $2\pi(R+h) = 30$. And the outer brim radius is given as five temple cubits, i.e., $R+h+B = 5$. Hence $R = 4.6318$ temple cubits = 97.2676 in. and $B = 0.22535$ temple cubits = 4.7324 in.

The sea is a volume of revolution and hence the volume of brass used is

$$V_B = 2\pi h(B(R+h + \frac{1}{2}B) + H(R + \frac{1}{2}h) + \frac{1}{2}R^2)$$



and the content volume of the sea, or liquid volume, is $V_L = \pi R^2 H$. This gives $V_B = 31.1218$ cubic temple cubits = 1754.4488 cubic feet = 64.9796 cubic yards. The density of brass is about 540 lb/ft³, thus the molten sea weight about 90,000 lb. It must have been an engineering task of major cunning and proportions to have produced such a large single casting and then moving such an enormous weight from the plain of Jordan to Jerusalem.

Fig. 4: Cross-section of the molten sea.

The optimality of the molten sea

We next ask if the dimensions of the sea in some sense are optimal. Specifically, we wish to determine the dimensions R and H so that a maximum liquid volume, V_L , results for a given amount of brass, V_B . If the expression for V_B is solved for H and then used to eliminate H from V_L we get:

$$V_L = \pi R^2 (R + \frac{1}{2}h)^{-1} (V_B (2\pi h)^{-1} - B(R + h + \frac{1}{2}B) - \frac{1}{2}R^2).$$

The resulting optimal dimensions are displayed along with the Biblically derived dimensions.

	R	H	V_L
Bible	4.6318	4.8571	327.36
Optimal	4.6795	4.7594	327.41

It is apparent that they are very close, and in fact the brim might have a profile such that the Bible and optimal dimensions are the same. We might take this numerical agreement as a verification of our derivation of the Biblical dimensions.

The size of the bath

We will take the value of 327.4 as the liquid volume of the sea, which is the same as 2,000 baths. Hence the number of cubic temple cubits in a bath is $327.4/2000 = 0.16370 = 0.87735 \text{ ft}^3/\text{bath}$. This would be a cubic box 0.95731 ft. on a side. The homer, ephah, and omer follow from

$$\begin{aligned} 10 \text{ baths} &= 1 \text{ homer (Eze. 45:14)} \\ 1 \text{ ephah} &= 1/10^{\text{th}} \text{ homer (Eze. 45:11)} \\ 1 \text{ omer} &= 1/10^{\text{th}} \text{ ephah (Ex. 16:36),} \end{aligned}$$

i.e., one bath = $1/10^{\text{th}}$ homer = 1 ephah = 10 omer, and

$$\begin{aligned} 1 \text{ homer} &= 1.6370 \text{ cubic temple cubits} \\ &= 8.7733 \text{ cubic feet} \\ 1 \text{ ephah} &= 0.16370 \text{ cubic temple cubits} \\ &= 0.87733 \text{ cubic feet} = 1 \text{ bath} \\ 1 \text{ omer} &= 0.01037 \text{ cubic temple cubits} \\ &= 0.08733 \text{ cubic feet.} \end{aligned}$$

It would seem in Zec. 5:5-11 that the exiled Israelites in captivity exported their immoral usury and other corrupt mercantile dealings into the Babylonian empire, and that the box (or cylinder) having a 1-ephah (1 bath) volume was their standard conveyance container.

The Sea's measure of 3,000 baths if represented by a conical heap would have an apex angle of θ (angle of repose = $90^\circ - \theta$) and would hold a volume of grain (meal for sacrifice?) of $V_G = 3,000$ baths =

$$V_G = \pi R^2(R/\tan \theta) + \pi R^2 H.$$

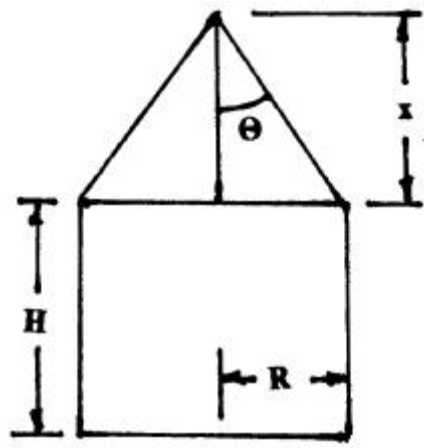


Fig. 5: Dry measure

The heap has a volume of $3,000 - 2,000 = 1,000$ baths, hence the proportion:

$$\frac{1000}{2000} = \frac{\pi R^2 x}{\pi R H}$$

Gives $x = 1.5H = 7.2857$ temple cubits and $q = \tan^{-1}(R/x) = 32^\circ.44$. Since this pile would be very steep, in fact steeper than most materials pile, the heap could have been shaped and supported by an insert wall. Another possibility is that the 3,000 baths are civil baths based on the civil cubit and hence would take up the space of $3,000 (18/21)^3 = 1889$ cubic temple cubits which would fit into the sea.

Related topics

The Bible is consistently ridiculed by scientists, historians and by Bible commentators as being prescientific (whatever that means) and thereby a collection of ignorant myths, and especially regarding the molten sea in that they perfunctorily read the Bible and decide that $\pi = 3$. This they obtain by dividing the circumference 30 by a diameter 10. But they can't be bothered by the fact that the circumference 30 is not generated by the diameter 10. They ignore the brim. However, figures whose circumference to diameter ratio is 3 have been used for convenience, such as ovals or overlapping circular sectors. The best research regarding π and the Bible that I have found is by R. C. Gupta, *On the Values of Pi From the Bible*, (Indian Society for the History of Mathematics, vol. 10, pp. 51-58, 1988). Unfortunately, Gupta can't read the Bible either, but this dissertation is still worth reading. Also, I would recommend John Bunyan's *The Temple Spiritualized*, written in 1688 and available in several recent reprints, in which the author comments on the use of the molten sea.

QUOTE

Thus failure to observe different speeds of light at different times of year suggested that the earth must be "at rest" ... It was therefore the "preferred" frame for measuring absolute motion in space.

—Adolf Baker, *Modern Physics and Applications*,
(Addison-Wesley)

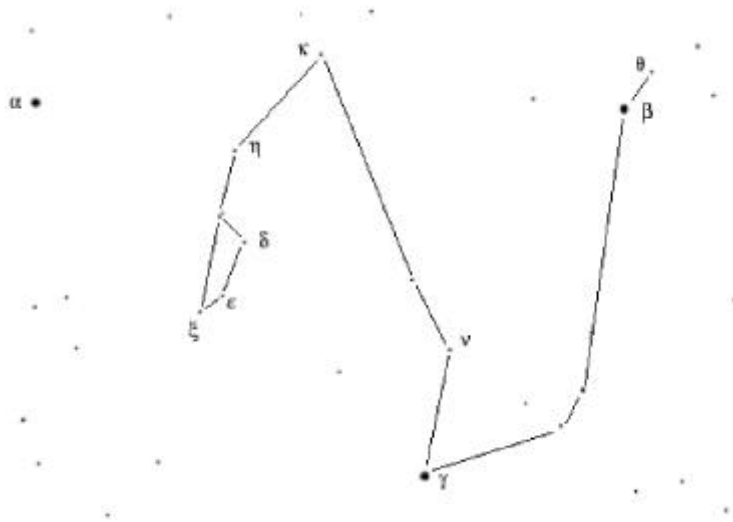
HYDRA THE SERPENT

Gerardus D. Bouw, Ph.D.

In the previous issue of the *Biblical Astronomer*, we started examining the celestial testimony of the gospel of our Lord Jesus Christ. We discovered that the constellations, in their most ancient form, do attest to what is commonly known as “the gospel in the stars,” or “the witness of the stars.” In this article, we continue our examination of the draconic constellations: Draco, Serpens, Hydra, and Hydrus, having covered Draco last time.¹

Hydrus and the chambers of the south

Two constellations bear the name Hydra. Commonly thought of as water snakes, the southern, smaller one is called *Hydrus*, the northern one *Hydra*. Hydrus was introduced in the star charts of the German astronomer Johann Bayer (1572-1625), and the constellation is thus attributed to him. Prior to that time, the constellation of Hydra was occasionally called Hydrus (the Latin masculine form of Hydra), but today, doing so causes confusion.



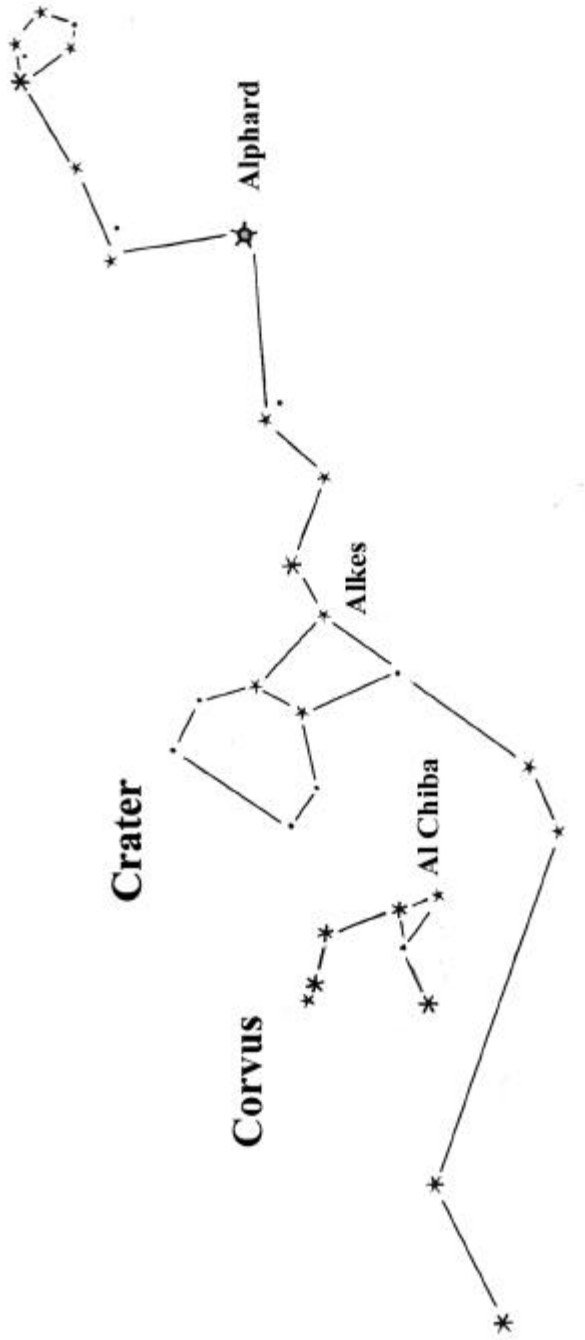
¹ Bouw, G. D., 2002. “Draco the Dragon,” *B.A.* 12(99):51.

Within the scope of the witness of the stars, the recently-invented southern constellations would not be considered, but Hydrus is a special case because it was known to the Chinese. Perhaps this is why Bayer introduced it. The Chinese divided Hydrus into four asterisms: **e** and **z** denoting *Shay Show*, the serpent's head; *Shay Fuh* the serpent's belly; and *Shay We* the serpent's tail. The fourth part was called *Foo Pih*, the meaning of which is lost but which was marked by the star **g**. So there is evidence attesting to the antiquity of this constellation. The figure on the previous page is based on the Chinese asterism.

The brightest star of a constellation is called its *lucida*. For Hydrus the lucida is the star labeled **b**, in the tail. **b**, at magnitude 2.7, is the nearest conspicuous star to the celestial south pole, although it is 12° from the pole. The unnamed star is slightly (half a magnitude) fainter than Polaris, the North Star.

There is no clear-cut reference in Scripture to any particular southern constellation. By southern is here meant any constellations that in have not been above the horizon of the mid-East since the Noachic flood. There is a possible indirect reference to them in Job 9:9, "Which maketh Arcturus, Orion, and Pleiades, and the chambers of the south." The "chambers of the south," have long puzzled commentators. Over time, there has developed a consensus that the chambers refer to constellations. Though weak, there is no other explanation other than that it might be high or low-pressure cells (Job 37:9, "south"), but if it were, why is the same idiom not applied to the north in that same verse. That leaves the southern constellations as the only viable interpretation.

Some may ask why we do not study the constellations of the Australian Aborigines, but doing so may lead us into the same trap we encountered in our study of Draco. There, in the course of time the pronunciation of the Arab name of the constellation "Dib" (dragon, serpent) had been changed to "Dih" (jackal) among the nomadic tribes. The altered pronunciation was deemed by the revisers of the Bible to be more authoritative than the overwhelming testimony of ancient Egyptians, Babylonians, Greeks, Armenians, etc. Thus the jackals entered the modern versions and the Dragon (Satan) was relegated to mythology, or, at least, to allegory. For a study of a discipline to be Biblical or scriptural, it must not contradict or strive with the Bible. Thus, the ancient testimony of the mid-East, whence man spread over all the face of the earth, must be the starting point for our study of the witness of the stars. The children of Ham (Egyptians, Canaanites, etc.) are the least reliable sources of history because their propensity for ancestor worship tends to pervert history to the glory of those ancestral gods. The Aborigines' constellations, as those of the nomadic Arabs, were mostly local.



Hydra

Hydra the water snake

Originally, the constellations Hydra, Corvus, and Crater were one. Their separation into three constellations happened in the 18th century, when for a time they were divided into four, viz. *Hydra*, *Hydra et Crater*, *Hydra et Corvus*, and *Continuatio Hydrae*. The Hebrew name Hydra appears related to the Hebrew *darak*, (Strong's H1869), to tread upon, to shoot, from which stems the word *drakon*, dragon. From it comes *Derek*, (Strong's H1870) meaning a road or, figuratively, a course of life or mode of action. The English word "direct" derives from it. In the constellation, it is a false way, of course. Eventually because of the similarity in sound between hydro and hydra, the serpent was associated with water and thus became a water snake. The Arabians called it *Al Hayyah*, another of their words for snake.

The lucida of the constellation is named *Alphard*, which in Arabic means the solitary one, it being the only bright star in the region. The name also means the separated one, as one cut off from life, that is, from God. The star *σ*, at the nose of the serpent, is called *Minchir al Sugia*, casting down of the deceiver. The stars *d*, *e*, *z*, *h*, *r*, and *s*, forming the head of Hydra, were collectively known as *Min al Azal*, the reserved place. It lies directly in the path that Leo the lion is heading, as if the Lion of Judah is en route to bruise the head of the serpent (Gen. 3:15²).

Hydra is pictured on a stone constellation map from the Euphrates. Dating from about 1200 B.C., the serpent is there identified with the source of the fountains of the great deep, and is one of the several sky symbols of Tiamat, the great dragon.

Crater the cup

On or over the back of the serpent is the constellation of Crater, the cup. The early Greeks called it the goblet of Apollo, but generally it was called *Krathr*, which is its current name transliterated. The Jews called it *Cos*, a cup. Allen reports that: "A small ancient vase in the Warwick collection [bears] an inscription thus translated:

Wise ancients knew when Crater rose to sight,
Nile's fertile deluge had attained its height;

² And I will put enmity between thee and the woman, and between thy seed and her seed; it shall bruise thy head, and thou shalt bruise his heel.

Although Egyptian remains thus far show no allusion to the constellation.” That may still be true, but those who know the history of the British Isles, know that regular trade with Egypt existed back to the time of Moses. Irish history relates that one of the kings of Ireland even married one of Pharaoh’s daughters. It thus seems reasonable to suppose that the vase reflects a truth stemming back to Egypt.

Caesius (1571-1638), a Dutch globe maker, said that Crater represented the cup of Joseph found in Benjamin’s sack (Gen. 44), or one of the waterpots of the wedding at Cana (John 2), or the cup of Christ’s passion (Mat. 26:39). Others called it the Wine Cup of Noah (Gen. 9:20 v.f.). But those are all sixteenth and seventeenth century speculations, products of a zeal to Christianize all disciplines.

The only named star is Alkes, which is another form for “the cup.”

Corvus the crow

Now called a crow, originally it was seen as a raven. Usually “crow” is reserved for the North American variety of the raven. The main distinguishing feature is that crows have a raucous call whereas ravens have a croaking cry. Crows’ cries are *ca*, *car*, *caw*, *kahr*, or *cah*. Their calls are easily imitated. A raven’s cry sounds like *kraak*, *cr-r-ruck*, or *prruk*, or a metallic *tok*. The constellation was a raven to the Romans, Greeks, and Hebrews. It has also been associated with Noah’s Raven (Gen. 8:7), flying over the flood waters and alighting on Hydra in the absence of any dry land. It has also been associated with the ravens who fed Elijah (1 Ki. 17:4-6). Again, these are sixteenth or seventeenth century designations and today there is no evidence that they are any older than that.

The star which was once the lucida is called *Al Chiba* or *Al Chibar*, meaning joined together. It is at the beak of the raven, as reflected in its other name, *Minchir al Gorab*, which, in Arabic, means the piercing (beak) of the Raven. The brightest star is β called *Gienah*, the cursed. The star δ is called *Al Gorab*, the raven.

The complete picture

Unquestionably, the serpent is a type of Satan. Even as Christ identifies himself with his Church (see Acts 9:5,³ for example), so those who take the mark of the beast are identified with the serpent, the old

³ And he said, Who art thou, Lord? And the Lord said, I am Jesus whom thou persecutest: *it is hard for thee to kick against the pricks.*

dragon. Thus Revelation 14:10 says of them “The same shall drink of the wine of the wrath of God, which is poured out without mixture into the cup of his indignation....” To this agree Jer. 25:15; Isa. 51:22; Psa. 75:8; and Rev. 16:19. Isaiah 51:17 says:

Awake, awake, stand up, O Jerusalem, which hast drunk at the hand of the LORD the cup of his fury; thou hast drunken the dregs of the cup of trembling, *and* wrung *them* out.

The cup is poised over the serpent, and the raven is ready to feed on him. We see here the call of Ezekiel 39:17 namely,

And, thou son of man, thus saith the Lord GOD; Speak unto every feathered fowl, and to every beast of the field, Assemble yourselves, and come; gather yourselves on every side to my sacrifice that I do sacrifice for you, *even* a great sacrifice upon the mountains of Israel, that ye may eat flesh, and drink blood.

Also, in the surrounding constellations, we see the Lion charging to bruise the head of the serpent.

A STATEMENT CONCERNING THE MINISTRY OF DR. HUGH ROSS

Bolton Davidheiser, Ph.D.

Editor's introduction

For years some people have been after me to comment on the astronomy and “science” of Dr. Hugh Ross. His influence is far reaching as many major ministries have endorsed in part or in whole Ross' views on science and the Bible. Among those deluded by Ross are:

- John Ankerberg – The John Ankerberg Show
- Jim Barney – InterVarsity Christian Fellowship of Canada
- Bill Bright – Campus Crusade for Christ
- Norman Geisler – Southern Evangelical Seminary
- Walter Kaiser – Gordon-Conwell Theological Seminary and editor of *Christianity Today*
- Harold Lindsell – former editor of *Christianity Today*
- Ted Martin – International School of Theology, Campus Crusade for Christ
- Stan Oakes – Christian Leadership Ministries, Campus Crusade for Christ
- Earl Radmacher – former president of Western Conservative Baptist Seminary
- Don Richardson – author of *Peace Child* and *Eternity in Their Heart*
- R.C. Sproul – Ligonier Ministries
- Ralph D. Winter – U. S. Center for World Mission

The fact that so many Christians have been taken in by Dr. Ross's obviously unscriptural teachings is a sad indicator of how the evolution propaganda of the last 200 years has infiltrated modern Christianity. To refute the many doctrinal errors of Dr. Ross in detail would require a huge book, and the author of the current article, Dr. Bolton Davidheiser has written one. His first edition, entitled *Creation, Time, & Dr. Hugh Ross* is one of my most prized possessions. He is currently seeking a publisher for his expanded edition of his critique of Hugh Ross. Dr. Davidheiser, now ninety years old, has a Ph.D. in zoology and taught at BIOLA until that school went liberal in the American Scien-

tific Affiliation sense. Here, then, is Dr. Davidheiser's paper, now about five years old, which is reprinted with his permission.

Dr. Davidhesier's text

When writing or speaking in defense of the Bible, several things should be kept in mind. Honesty is imperative, and gives us the advantage, for as John the disciple said, "Thy word is truth" (John 17:17). False information or inaccurate statements may impress the naive, but sooner or later someone will recognize them for what they are. The main damage in this is that it will further antagonize knowledgeable unbelievers and it becomes more difficult to reach them. Presentations should be well researched to eliminate error, but all of us are fallible, and when we make a mistake we should be ready to admit it.

Dr. Hugh Ross has a worldwide ministry. His stated mission is to affirm the scientific accuracy of the Bible. He has a large following of enthusiastic believers who are impressed with his personal testimony and his scientific information.

He is a "Big Bang" enthusiast. In fact, he is so strongly attached to this theory that if it is ever replaced by another, such as the plasma theory presently accepted by a minority of scientists, it will be embarrassing to his ministry. To those who do not know what the Big Bang is, it is the theory that at some time in the past, now generally believed to have been about fifteen to twenty billion years ago, all the matter in the universe was concentrated into a single mass, which exploded with a "big bang."

The idea began with a Belgian astronomer, Georges Edward Lemaître. According to Isaac Asimov, Lemaître conceived this mass to be "no more than a few light-years in diameter."⁴ At the very least, that would be two light-years or about twelve trillion miles. By 1965 that figure was reduced to 275 million miles, by 1972 to 71 million miles, by 1974 to 54 thousand miles, by 1983 to "a trillionth the diameter of a proton," and now, to nothing at all! A singularity! It exploded, producing hydrogen and helium and perhaps some lithium. Time became the hero and multiple billions of years, later it had produced everything in the universe, including Lewis Carroll's famous "shoes and ships and sealing wax and cabbages and kings."

Two aspects of this theory have made it attractive to some religious leaders and their followers. First, it resembles the Bible in having matter come into existence at a certain definite time instead of existing eternally in the past. Second, it proposes matter coming into existence from nothing. However, the multiple billions of years involved are not

⁴ Asimov, Isaac. *The Universe*, 2nd ed. Walker. 1971. p. 211.

in accord with Biblical chronology and the manner of development of galaxies, stars, planets, etc., is through natural forces instead of by divine fiat.

Young earth vs. old earth

Dr. Ross published a statement which sounds very good, “We affirm that Genesis 1-11 is factual, as is the rest of the book. We deny that the teachings of Genesis 1-11 are mythical and that scientific hypotheses about earth history or the origin of humanity may be invoked to overthrow what Scripture teaches about creation.”⁵ But there is an inconsistency between a multiple billion year old earth and a Biblically recorded time of only 1656 years from the creation of Adam, the first man, to the flood. Anyone can figure out this interval of time in a few minutes from Genesis 5 and 7:6. The record is presented as a straightforward father-to-son genealogy with no gaps, but even if there were gaps the calculation would remain valid because time is given from the birth of one person to the birth of the next one mentioned.

Dr. Ross told me the solution is that some scholars interpret Hebrew cardinal numbers differently than other scholars do. I asked what Hebrew scholar I might consult for confirmation of this. He named one, a Hebrew scholar whom he quotes in his book *The Fingerprint of God* to uphold the idea that the days of creation were longer than twenty-four hours. I wrote to him about the matter, enclosing return postage, but received no reply. However, a difference of opinion about the interpretation of these numbers should not be so great as to make a significant difference between Biblical chronology and the much greater scientific time.

As a Big Bang enthusiast, Dr. Ross needs lots of time for the formation of the world and its contents. Naturally, he considers the days of creation to be long ages. As is to be expected, and as is common practice among those who espouse long ages of cosmic and geologic time, he brings up the matter of the Hebrew word *yom*, used for “day” in the creation account of the opening chapter of Genesis. As in our language, this word can refer to a day of twenty-four hours or it may represent a long period of time, as “In the day of Charles Darwin.” The question is: What does it mean in the account of creation? A common procedure in such cases is to refer to authorities for an answer.

Dr. John R. Howitt, a personal friend of mine, now deceased, wrote a pocket-sized booklet of nearly a hundred pages with 230 references to works of science, which he titled *Evolution, “Science Falsely*

⁵ Ross, Hugh. *Facts and Faith*. 1:1:3. Spring/Summer, 1987. p. 3.

So-Called”.⁶ He wrote anonymously because he believed he would lose his job if it became known that he was the author. Dr. Howitt wrote to appropriate professors in nine leading universities, asking, “Do you consider that the Hebrew word *yom* (day), as used in Genesis 1, accompanied by a numeral should properly be translated as (a) a day as commonly understood, (b) an age, (c) either a day or an age without preference?” Oxford and Cambridge did not reply but the professors at Harvard, Yale, Columbia, Toronto, London, McGill, and Manitoba replied unanimously that it should be translated as a day as commonly understood. Professor Robert H. Pfeiffer of Harvard added, “of twenty-four hours” to his reply.⁷

Dr. Ross also supplies a list and his authorities interpret the creation days as long periods of time. In his book he writes, “Many of the early church fathers and other biblical scholars interpret the creation days of Genesis 1 as long periods of time. The list includes the Jewish historian Josephus (1st century); Irenaeus, bishop of Lyons, apologist and martyr (2nd century); Origen, who rebutted heathen attacks on Christian doctrine (3rd century); Basil (4th century); Augustine (5th century); and, later, Aquinas (13th century), to name a few. The significance of this list lies not only in the prominence of these individuals as biblical scholars, defenders of the faith, and pillars of the early church (except Josephus), but also in that their scriptural views cannot be said to have been shaped to accommodate secular opinion. Astronomical, paleontological, and geological evidences for the antiquity of the universe, of the earth, and of life did not come forth until the nineteenth century.”⁸

However, Flavius Josephus, famous Jewish historian of the first century, wrote about creation in the first chapter of Book One of his *Antiquities of the Jews*, “...God commanded that there should be light: and when that was made, he considered the whole mass, and separated the light and the darkness; and the name he gave to one was Night, and the other he called Day; and he made the beginning of light and the time of rest the Evening and the Morning; and this was the first day....” There seems to be nothing comparable to the length of a geological age here or for the other days of creation as he described them.

Josephus also said, “On the fourth day he adorned the heaven with the sun, moon, and other stars.” Rather clearly he put the creation of the sun on the fourth day and did not have it formed at the start of

⁶ Anonymous. (John R. Howitt). *Evolution*, “*Science Falsely So-called*.” 20th ed. International Christian Crusade. 1981.

⁷ Howitt, John R. Letter to the Editor, *Journal of the American scientific Affiliation*, 15(2):66. June, 1962.

⁸ Ross, Hugh. *The Fingerprint of God*. 2nd ed. Promise. 1991. p. 141.

creation, as does Dr. Ross and also Dr. Scofield in his famous Bible notes, to become visible on the fourth day due to the removal of a cloud. Furthermore, Dr. Ross says the seventh day, the day of rest, following the six days of creation, “is not closed out,” and continues to the present time.

Thus he says that all the time of recorded history, including our own time, is included in the seventh day of rest. Contrary to this, Josephus wrote about acts of God going on in time “after the seventh day was over.” Furthermore, the Bible tells that God did work after the seventh day of rest. Referring to miracles, Jesus said, “My Father worketh hitherto and I work” John 5:17). Also it is to be noted that there were special acts of creation after the completion of the six days. During a famine, a widow at Zarephath had left only a handful of meal in a barrel and a little oil in a cruse. But because she befriended the prophet Elijah, the meal and the oil were replenished as used and the barrel and cruse did not become empty during the remainder of the famine (I Kings 17:8-16). There were two occasions when the Lord fed multitudes by multiplying a few loaves and fishes (Matthew 16:8-10, etc.). At a wedding in Cana He turned water into wine instantly John 2:1-10). After referring to Josephus, Dr. Ross cites examples of heroic “early church fathers” who believed in long periods of time for the days of creation.

Origen held so many erroneous views that what he thought of the length of the days of creation may be dismissed as of little if any value. He spiritualized Biblical statements, seeking hidden meanings instead of accepting literally what the Bible says, including the resurrection of Christ from the tomb.

He contended that the literal sense is not that for which the Holy Spirit gave the Scriptures to Christians and said, “The Scriptures are of little use to those who understand them as they are written.” He believed the task of commentators is to penetrate alleged allegories of Scripture in order to find the true meaning. This method opens the way for private erroneous interpretations, as is characteristic of the cults.

Origen believed that rational beings were created as spirits and as they became negligent in their adoration of God they fell varying amounts into different categories, some becoming angels, some human beings, and some demons. Jesus Christ, the Logos, was the exception. He did not fall at all. But still this makes Him subordinate to the Father, being at first on the same level as created beings. For this Jerome, among others, considered Origen to be the precursor to the Arian heresy, which in our day is expressed in the theology of the Unitarians and the Jehovah’s Witness cult.

Denying hell, Origen reasoned that humans, demons, and even Satan can, and in the end will, be reconciled to God, anticipating the Universalist heresy. He said there is to be “a purging baptism of fire,” and thus he anticipated the idea of purgatory, which became a doctrine of the Catholic Church at the First Council of Lyons in A.D. 838, and affirmed at subsequent councils.⁹

Then there was Augustine. Professor Paul Amos Moody of the University of Vermont, in his college textbook, *Introduction to Evolution*, third edition, wrote, “Wise churchmen like St. Augustine and St. Thomas Aquinas [another on the list of Dr. Ross] early recognized that these chapters [Genesis 1 and 2], while expressing important religious truths concerning the Creator, should not be considered as literal history.”¹⁰

In another college textbook, *Principles of Organic Evolution*, Arthur Ward Lindsey of Dennison University, wrote, “...several of the church fathers expressed ideas of organic evolution even though the trend of ecclesiastical thought led more readily into other lines of reasoning.”¹¹ He said that Gregory of Nyssa, Basil, Augustine, and Thomas Aquinas (all on Dr. Ross’ list), “expressed belief in the symbolic nature of the Biblical story of creation and in their comments made statements clearly related to the concept of evolution.” This being the case, it is only natural that they would have to accept long periods of time for evolution to proceed.

The famous evolutionist Henry Fairfield Osborn of Columbia University and the American Museum of Natural History wrote that Augustine “sought a naturalistic interpretation of the Mosaic record...and taught that in the institution of nature we should not look for miracles but for the laws of nature.”¹²

Eldon J. Gardner of Utah State University wrote, “St. Augustine...favored an allegorical interpretation of the book of Genesis in the Bible and openly promoted an evolutionary concept as opposed to special creation.”¹³

W. R. Thompson, Ph.D., Catholic creationist, professor and director of the Commonwealth Institute of Biological Control at Ottawa, Canada, is probably most well known for his challenging fourteen-page introduction to a 1955 edition of Darwin’s *Origin of Species*. He wrote

⁹ Actually, Origen was declared a heretic at Council of Nicaea in 325, and 15 of his propositions were again declared heretical in 544. Only in the past 150 years has Origen’s credibility been revived. —*Ed.*

¹⁰ Moody, Paul Amos. *Introduction to Evolution*, 2nd. ed. Harper & Bros. 1952. p. 21.

¹¹ Lindsey, Arthur W. *Principles of Organic Evolution*. C.V. Mosby. 1952. p. 21.

¹² Osborn, Henry Fairfield. *From the Greeks to Darwin*, 2nd ed. Charles Scribner’s Sons. 1929. p. 11.

¹³ Gardner, Eldon J. *History of Life Science*. Burgess. 1960. p. 93.

a paper (date not known) in which he said, “As early as 1921, Canon H. de Dolodot in *La Darwinisme*, issued under the auspices of the University of Louvain, cites St. Augustine as holding as certain the theory of absolute natural evolution of living beings to the human body itself.” He is saying that Augustine accepted the evolution of living things up to and including the bodies of human beings.

The point of all this is that liberals and evolutionists are expected to advocate long periods of time for the origin of the world and its contents. They have to. Large amounts of time are necessary in evolutionary theory.

Irenaeus is left among the people listed by Dr. Ross as advocates of long periods of time for origins. How his name got on the list is not dear, for in the writings of Irenaeus I have not been able to find anything indicating that he believed in long intervals of time for creation. It seems he was an outright creationist. Here are some quotations from his writings:

“God is supreme ruler over all things, for they are His own creation; with His Word (the Son) and His Wisdom (the Holy Spirit) He made all things.” “His own Word is both suitable and sufficient for the formation of all things, even as John, the disciple of the Lord, declares regarding Him: ‘All things were made by Him and without Him was nothing made’ John 1:3). Now among ‘all things’ our world must be embraced. It too, therefore, was made by His Word, as Scripture tells us in the book of Genesis that He made all things connected with our world by His Word.”¹⁴

“David also expresses the same truth [when he said], ‘For He spoke, and they were made; He commanded, and they were created’ (Psalms 33:9, 148:5).”¹⁵

“God is a Spirit, and so fashioned everything by His Spirit.”¹⁶

“But man He fashioned in His own hands.”¹⁷

“But God Himself brought a trance upon Adam and put him to sleep.... And God took one of Adam’s ribs, and filled up the flesh for it, and built up the rib which He took into a woman, and brought her in this wise to Adam.”¹⁸

¹⁴ St. Irenaeus. Proof of Apostolic Preaching. Translated by Joseph P. Smith Sr. Newman Press. 1952. p. 16.

¹⁵ Ante-Nicene Christian Library. Translations of Writings of the Fathers. Alexander Roberts,

James Donaldson, eds. T&T Clark. 1868. p. 123.

¹⁶ Ibid. p. 50.

¹⁷ Ibid. p. 54.

¹⁸ Ibid. p. 55.

The order of events in creation

The first chapter of Genesis records the chronological order of events as they occurred during the creation week. Dr. Ross lists thirteen creation events and says the probability that Moses could have put all of them in the correct order, if he arranged them by chance and not by inspiration, is only one chance in six trillion ($13! = 6,227,020,800$, or about six billion). But he says Moses did arrange them in the correct order. Except by faith, how is there any way of knowing whether Moses recorded the events in the right order or not? The only other basis for standardizing seems to be by comparing them with the order offered by "science," that is, using as a standard the order given by evolutionary scientists in their textbooks. Actually, this is putting the authority of the evolutionary scientists above the authority of the Bible.

In the first place, the general reader of the Bible would conclude that the original light upon the earth did not come from the sun because the sun was not created until the fourth day. But the science textbooks say the sun was formed before the earth, and thus light upon the earth first came from the sun. Therefore the general reader would conclude, based upon modern science, that this was the first mistake of Moses in recording the order of events in creation. To accommodate Genesis with science, Dr. Ross, and before him Dr. Scofield in his famous Bible notes, teach that the sun really was created at the start but did not appear until a dense cloud was removed on the fourth day. But without this explanation, the general reader, following the scientific view, would believe that Moses had erred.

On the first day, when God said, "Let there be light," it was not necessary that the light be sunlight. In fact, if it had been sunlight there would have been no occasion for God to separate the light from the darkness, as the opacity of the earth would have done it. In the New Jerusalem, in the future eternity, there will be no need for the sun, for the glory of the Lord will illuminate it (Revelation 21:23. See also Isaiah 60:19, 20). As there will be no need for the sun then, there was no need for the sun in the beginning, before the fourth day. Eventually the sun will burn out if the Lord does not intervene, as the Bible says He will.

Green plants were created on the third day. For the general Bible reader, not influenced by Dr. Ross or Dr. Scofield, this would be before the creation of the sun on the fourth day. If the days were long periods of time, plants could not survive without light for photosynthesis. As an explanation, Dr. Ross postulates two clarifications of the atmosphere, a partial clarification before the third day to make the cloud translucent so photosynthesis could function and a complete clarification on the

fourth day, when the sun, moon, and stars became visible. The general Bible reader would not know about these explanations and if accepting long “days” in the creation account, would consider this the second mistake made by Moses.

Created on day five were fish, birds, and whales, followed on the next day by “creeping things” and mammals, including man. The Hebrew word here translated “whale” is not specific and can refer to an indefinite large sea creature. But the general reader would understand the reference to mean whales. As to the “creeping things” created on the sixth day, Gesenius’ *Hebrew-Chaldee Lexicon to the Old Testament* says for Genesis 1:25, “*Remesm* [masculine] a reptile, collect[ively] reptiles.” According to science, “creeping things,” meaning reptiles, and even if thought also to include insects, came before birds and whales and not after. This would be considered Moses’ third mistake.

Earth’s early atmosphere

On a tape Dr. Ross says, “Science and the Bible totally agree concerning the initial condition of planet earth, that the earth began with an atmosphere dominated by ammonia and methane.” Where does the Bible say that?

He also says that the darkness which was “upon the face of the deep” (Genesis 1:27) was caused by the ammonia and methane in the atmosphere. Actually, since the early 1980s the Oparin-Haldane-Urey-Miller concept of an early atmosphere dominated by ammonia and methane is being replaced by a theory that the earth’s early atmosphere was dominated by nitrogen and carbon dioxide, formed by outgassing from the earth’s interior through volcanic action. Dr. Joel Levine, of NASA, found by computer analysis that an ammonia-methane atmosphere at the earth’s distance from the sun would be chemically unstable and last only a very short time. For a popular presentation of this, see *Science Digest* 91:5:42, May, 1983. Oxidized iron in what are considered ancient rocks leads some to think the early atmosphere had considerable oxygen.

The very latest on this may be seen in the August 1993, issue of *Scientific American*. It is reported that Dr. William Schopf of the University of California at Los Angeles found supporting evidence for the formation of the modern atmosphere about three and a half billion years ago. Scientists can change their minds but Dr. Ross said the Bible agrees that the earth’s early atmosphere was dominated by ammonia and methane.

Dr. Ross further said the difficult problem was to remove the ammonia and methane from the atmosphere and into space so light

could get through to the earth and still retain the water vapor in the atmosphere. To accomplish this was a delicate operation, he said, requiring considerable precision because the molecular weights of methane, ammonia, and water are so close, being respectively 16, 17, and 18.

Concerning the possibility of gases being lost into space from the atmosphere, he mentions-five factors.

1. The greater the mass of a planet, the stronger the gravitational attraction, and thus the greater the difficulty for gases to escape the atmosphere.
2. The smaller the size of a planet (for the same mass), the more difficult the loss would be.
3. The temperature of each layer of the atmosphere.
4. The temperature of the sun.
5. The kinds and amounts of materials between the earth and the sun.

Furthermore, he says that all of these five factors would need to be held within a variation of not more than one or two percent for billions of years, and that the probability of this, putting it conservatively, would be something like one chance in a billion.

What phenomenon, under these highly improbable conditions, could have brought about the separation of ammonia and methane from the atmosphere, with the retention of water vapor? He says it was the separation of the moon from the earth in the early days of their formation! "When the moon was cast off [from the earth] its mass was sufficient to bring about some changes. The sun became gradually a little warmer because of the advancement of its position along its evolutionary track. The changed parameters caused the atoms [of the atmosphere] to lose enough temperature and pressure to allow it [the atmosphere] to become transparent." (As already mentioned, he says that for the sake of plants needing sunlight to carry on photosynthesis, the atmosphere already had become translucent previous to this.)

Concerning the moon

George Darwin, son of the famous Charles Darwin, was the first to consider mathematically the relationship between the moon and the tides. He believed that at one time the moon was a part of the earth. Presently the moon is slowly receding from the earth, and knowing the rate at which it is doing this, it might seem to be an easy matter to calculate backward in time to find when the moon was here as a part of the earth. But it is not that simple. For example, knowing the rate at which

people are leaving California because of taxes and earthquakes, one can figure when no one will be left in the state, but that won't happen.

Although the moon at present is slowly receding from the earth, it does not necessarily follow that at one time it was here as a part of the earth. Of current astronomical books consulted, six favored the theory that the moon developed at the same time as the earth from similar nebular material, six mentioned a separation-from-the-earth theory and said it had to be abandoned, and one said Darwin's theory "cannot be excluded." The general opinion is that at this time there is no satisfactory theory for the origin of the moon. How then can Dr. Ross dogmatically say to his audience, "We know for certain that the moon came from the earth"?

According to Darwin's theory, the earth was spinning at a terrific rate and was still soft at the time the moon separated from it, and so there was no problem as it passed through the Roche limit, which would break up a solid body the size of the moon because of the differences in gravitational attractions on the side toward the earth and the side away from the earth. But Dr. Ross does have this problem, because he assumes that the moon was split from the earth as a solid and so would be shattered as it passed through the Roche limit. He gives evidence, altogether unnecessary, that gravitation was working at that time and so he concludes the only way out of the dilemma, that the moon did not shatter, is to believe its passage through the Roche limit must have been a miracle!

Furthermore, if the moon had been expelled from the earth as a solid entity and if somehow it had gotten through the Roche limit intact, either it would have fallen back to earth again or would have gone off into space. It would not have gone into orbit around the earth. In order to get artificial satellites to orbit the earth, the rockets that carry them must be directed to change course after liftoff. If the moon somehow could have come from the earth, in accordance with Darwin's theory and gone into orbit, it would be expected to follow the earth's equator, which it does not. However, it is reported that an attempt is being made to revive the Darwinian explanation.¹⁹

Dr. Ross says that the bed of the Pacific Ocean is the scar left upon the earth that shows where the moon was removed. (The volume of the moon is more than thirty times the present volume of the Pacific Ocean.) However, he also explains it another way. He says, "The Bible tells us that God somehow allowed or created an indentation in the earth..." Where does the Bible say that? He continues, "and since water flows downhill, all the ocean water flowed into that hole and dry land appeared on the other side, and that's how come we have both oceans

¹⁹ Van Flandern, Thomas. "Breakaway Moon," *Science Digest*, 90(4):82. April, 1982.

and continents.” He tells that this landmass broke into continents and “the continents are moving to fill in the Pacific Ocean...We know there is a hole in the Pacific Ocean and the continents are moving to fill it in. The Atlantic Ocean is getting bigger and the Pacific Ocean is getting smaller.”

The most picturesque evidence of the separation of continents by continental drift is the jigsaw pattern of the South America-Africa complex. These continents appear as though they fitted together. Geophysicists say South America is moving toward the Pacific Ocean at the rate of about four-fifths of an inch per year because of the rising and spreading of matter at the mid-Atlantic ridge and not because of a Pacific Ocean sink that is drawing these continents apart. The evolutionary authors of an article in *Scientific American*, April 1992, say the Atlantic Ocean is nearing its maximum width, in contrast to the continued Westward Ho! of South America envisioned by Dr. Ross.²⁰ They consider it a repeat performance, with a single supercontinent forming and breaking up every five hundred million years or so.

In all the books I have seen which discuss continental drift, India is pictured as an island near Antarctica, but instead of drifting toward the Pacific Ocean, it went north and bumped into Asia, raising up the Himalayan Mountains.

Origin of the solar system

Dr. Ross says astounding predictions can be made from the time future planets still circulated as nebulous rings around a central mass, which became the sun. He said, “As a matter of fact, this not only predicts the distance of each planet from the sun, it predicts the size of that planet, also predicts the constitution of each planet, what atmosphere it begins with, the initial condition of that planet, how many moons that planet will have, how big those moons will be, how far away they will be, and precise all the way down the line....”²¹ An astronomer assures me this is equivalent to hogwash. Dr. Ross continues this sentence, “not only for our solar system but for the six solar systems we can see

²⁰ Murphy, J. Brandon and R. Damian Nance. “Mountain Building and the Supercontinent Cycle.” *Scientific American*, **266**(4):84, April, 1992, pp. 86-87.

²¹ Formally, this is called the “Titus-Bode Law.” The formula relates the distance, D , from the sun to the n^{th} planet, in astronomical units (earth-sun distance = 1), by:

$$D = 0.4 + 0.3 \times 2^{(n-2)}.$$

Bode’s law led to the discovery of the asteroids at 2.8 a.u., but it is not even close for Neptune and Pluto. The Titus-Bode law does not predict the size of a planet, contrary to what Ross implies. —Ed.

besides our own.” There is no other solar system that we can see, much less six!

Dr. Ross says the prediction for the earth’s moon was that it would be about ten miles in diameter, and he says it was! But during the catastrophic splitting off of our current moon from the earth and its miraculous passing through the Roche limit, our original ten-mile moon was destroyed.

Then he tells about a planet between Mars and Jupiter. (Remember Bode’s Law?) He says that as our moon was being pulled out of the earth, leaving the bed of the Pacific Ocean as a witnessing scar to confirm the event, the planet between Mars and Jupiter got too close to Jupiter- within its Roche limit and was broken up, and that is the source of the asteroids. For emphasis he repeats this several times, not as a theory but as a fact. Checking astronomical books in libraries, I found the following: Seven authors hold that the asteroids came about because the gravitational field of Jupiter prevented hunks of matter in the original nebula from coalescing into a planet. Three say it was unlikely that a planet broke up. Two say that maybe a planet broke up, admitting the possibility of what Dr. Ross says. One agrees with Dr. Ross and one says the idea that the asteroids resulted from a broken up planet must be abandoned. How, then, can Dr. Ross speak so dogmatically as though he is stating a fact, when this idea is outvoted by modern astronomers?

Gravity

He tells that the chance of the law of gravity not working is one chance in 10^{200} . Newton’s law of gravitation, no doubt, is the most inclusive generalization ever made: every object in the universe attracts every other object in the universe with a force proportional to its mass and inversely to the square of the distance between them.

What would cause this not to work? Gravity may appear not to work when a magnet lifts a paperclip from the top of a desk, but it is working. Gravity might even appear not to be working when a ball is thrown upward, but of course it is. Also gravity might appear not to work if a predominance of the randomly moving molecules in an object happened by chance to be moving upward in synchrony and the object levitates for a brief moment. But gravity still would be working. Furthermore, the probability of this happening would not be a definite number but would depend upon the size and weight of the object. It would not be the same for a grain of dust as for a freight locomotive.

Thermodynamics

The second law of thermodynamics is one of the basic laws of science. It states that in a closed system, that is, without an outside source of energy, randomness tends to increase. (Actually, in nature there is no closed system available for observation except the universe as a whole.²²) A hurricane going through a lumberyard and a hardware store can randomize things but it will never construct a house.

When liquids of different temperatures are mixed, randomization may not seem as obvious but the molecules will become randomized and the mixture will be warmer than the cooler component and cooler than the warmer one. Equilibrium will be established when the temperature equals that of the environment.

Here is what Dr. Ross tells his audience about the second law of thermodynamics. “Let me tell you about the second law of thermodynamics. If it doesn’t work, then the water that you’re drinking could cause your blood to boil or freeze. The second law describes how heat flows and we depend upon that heat flow with our lives. If I was concerned about the second law of thermodynamics, I’d be very much afraid of my blood boiling or freezing. But I’ll tell you something. I don’t lose any sleep over it.” (Laughter from the audience.) He says that the probability of the second law not working is one chance in 10^{80} . He does not say how he arrived at this but it would not be a fixed number. It would not be the same for water at room temperature rising one degree above room temperature as it would be for the same water causing blood to boil when ingested. But both would violate the second law.

In the taped talk Dr. Ross tells the audience that the probability of thirteen Biblical prophecies, selected out of thirty-five hundred, coming true strictly by chance, is one chance in 10^{138} . He does not explain on the tape how he arrived at this number, but it is by attributing very large odds against each one of these prophecies coming true, and the total number of prophecies from which the sample was selected is irrelevant.²³ If the probability for each one of these thirteen prophecies coming true is taken as one chance in a million, the chance that all of them will happen is one chance in 10^{78} . If the probability for each happening is reduced to one chance in a billion, the probability for all of them coming to pass is one chance in 10^{117} . This is still short of his 10^{138} figure by a factor of 1,000,000,000,000,000,000,000. With his figure of

²² About 25 years ago, the late editor of the *Creation Research Society Quarterly*, Harold Armstrong, showed that entropy increases even in an open system. —Ed.

²³ Actually, 13 fulfillments out of a possible 3500 prophecies is an extremely poor performance!

10^{138} he concludes that this “means that the Bible, based on these thirteen predictions alone, is proved to be 10^{58} times more reliable than the second law of thermodynamics” ($10^{138}/10^{80} = 10^{58}$). Flaunting figures like this impresses the naive, especially when the figures are used to uphold the Bible.

DNA and RNA

To an audience Dr. Ross said, “Now by protein molecules I mean those twisted double helices called DNA and RNA.... Without these protein molecules, DNA and RNA, life would be impossible.” DNA and RNA are not proteins. They have a quite different chemical composition and structure. In fact, some of the evolutionary scientists who discuss the origin of life argue over the question which came first, protein or nucleic acid. According to Sidney Fox, prominent origin-of-life scientist, the protein-firsters have won because, he says, “amino acids contain their own instructions for their own sequences,” in forming proteinoids. “It is through particular proteins that the genes of heredity—portions of the DNA molecules—are able to carry on their functions.”²⁴ DNA and proteins depend upon each other. How could either have come first?

Apparent age

This brings us to the matter of “Apparent age at creation.” Dr. Ross considers this under the heading “Gosse’s ‘appearance of age’ theory.”²⁵ In a nineteenth century book, Philip Gosse proposed such extreme views as that the earth’s strata were created with the fossils already embedded and the first trees were created with deceptive rings of annual growth. Although Gosse always seems to be brought into discussions of apparent age at creation, no present spokesman for creation considers his views as significant. But Dr. Ross says, “Of late, however, Gosse’s ‘appearance of age’ idea has seen a revival.”²⁶ He refers to the Institute for Creation Research and to the book *The Early Earth*, by Dr. John C. Whitcomb Jr.²⁷ Dr. Whitcomb, of course, repudiates Gosse and mentions that if “appearance of age” be denied, New Testament miracles also must be denied. For example, when Jesus turned water into wine at Cana, the people assumed it had been pro-

²⁴ Fox, Sidney. “From Inanimate Matter to Living Systems,” *American Biology Teacher*, **63**(3):127. March, 1981, p. 133.

²⁵ Ross, 1991, p. 142.

²⁶ *Ibid.* p. 143.

²⁷ Whitcomb, John C. Jr. *The Early Earth*. Baker Book House. 1972, p. 30.

duced from grapes that had grown slowly on vines, which in turn had matured during growing seasons in a vineyard. It had just been produced miraculously from water but it had the appearance of age.

In his leaflet #P8906, *Glossary of Science and Theology Terms*, Dr. Ross has for the entry Appearance of Age, “The hypothesis that God created the universe, the earth, and life with (false) indicators of a nonexistent past. If this hypothesis were true, scientific measurements of great age conceivably could be reconciled with a recent creation interpretation of certain Biblical passages.” Instead of accusing God of giving false indicators of a nonexistent past, creationists question certain assumptions evolutionists make in their measurements of time.

Actually, how could anything be created without appearance of age? Even if trees had been created as seeds, the seeds would have the appearance of age. If the first birds were created as eggs, the eggs would have the appearance of age. It would seem impossible for anything to be created without the appearance of age. The appearance of age is irrelevant to concepts of the time of creation.

In the same glossary he describes Ussher’s chronology as a hypothesized calendar of Biblical events based on the assumption that no generations were omitted from the genealogies and that the numbered days of the Genesis creation account were consecutive 24-hour periods.” Suppose fifty or a hundred generations were omitted from the Biblical chronologies (and it is not so), there still would be no significant change in the difference between Biblical chronology and the vast expanse of time required by the Big Bang scientists.

The teaching of evolution in public schools

Dr. Ross says he knows evolution is still being taught in the schools. This may be the understatement of the decade. He says this is so “in spite of the fact that biochemists, physical scientists, and astrophysicists have long abandoned this theory as totally unworkable.” (Now it seems that creationists have support from an unexpected source!) He shows the audience a high school textbook which he says pushes Darwinian evolution, but says he does not wish to criticize the book too strongly. He says that Darwinian natural selection and evolution are not the same, and indeed they are not. For nearly a century evolutionists have been saying the same thing, but also they have been saying just the opposite, whichever suits their purpose at the moment. A number of times and for various reasons evolutionists have been saying they might give up Darwinian natural selection as the mechanism of evolution, but nothing better can be found than neo-Darwinism- natural selection plus mutations and a few other things.

However, when the evolutionists spoke of giving up their faith in Darwinian natural selection as the mechanism of evolution they did not wish the public to think they were giving up their belief in evolution itself, so they tried to make clear the difference between natural selection as a theory and evolution as a fact.

According to Stephen J. Gould, natural selection triumphed in the 1940s as the important mechanism of evolution.²⁸ But now evolutionists are engaged in a highly emotional conflict, even with name-calling, in reference to Darwinian natural selection versus the “neutral” theory, in the finer details of evolution at the molecular level.

To show that natural selection is not evolution, Dr. Ross (correctly) uses the very same example that evolutionists use (incorrectly) to tell the public that natural selection is evolution. This is the highly touted case of the light and dark peppered moths (*Biston betularia*) in England.

Before the industrial revolution the moths were all essentially the light variety. As they rested on the trunks of trees in the daytime, they blended with the background and predatory birds had difficulty seeing them. The dark variety contrasted with the background and thus these moths were easily seen and captured by birds. Hence the population consisted almost entirely of light moths.

However, with the industrial revolution, contaminants darkened the trunks of trees and the situation with the moths reversed. Now the light moths were more easily seen and captured by birds. As would be expected, it did not take long until the population of moths in the industrialized areas consisted almost entirely of the dark variety.

This is an example of natural selection but it is not an example of evolution (though the evolutionists use it as an example to convince the public that it is evolution and that therefore they must believe in evolution). The light and dark moths are merely varieties of the same species and they are not evolving into anything else. Actually, color varieties among butterflies and moths of the same species is not uncommon. But a scientific journal hailed this as “The most striking evolutionary change ever witnessed by man.”²⁹

Evolutionists use the case of these moths and similar examples to convince the public that evolution is a fact. Having done this, they switch definitions and tell the public that since these moths prove evolution to be a fact, they now must be consistent and believe that phenomena that really would be evolution also are factual. Here is their logic: birds catch more dark moths from a light background and more

²⁸ Gould, Stephen Jay. *Ever Since Darwin*, W.W. Norton. 1977, p. 45.

²⁹ Ketdewll, H. B. D., “Darwin’s Missing Evidence,” *Scientific American*, **200**(3):48, March, 1959.

light moths from a dark background, therefore fish evolved into amphibians, amphibians evolved into reptiles, and reptiles evolved into birds and mammals, including man.

By the way, when environmentalists cleaned up the contamination and the tree trunks became light again, the population of dark moths soon was replaced once more with light moths. Is this then evolution in reverse?

In his discussion of the peppered moths, Dr. Ross tells his audience they are butterflies, which they are not. He says they originally were green, which they were not. (Apparently he thinks they were protected by blending with green leaves.) Then he says that as the green ones disappeared, both the light and dark ones were protected. How could both contrasting types be protected? By spending a short time in any public library he could have gotten the facts straight.

Dr. Ross says to an audience, "The average eyesight in this room is about three times more precise than it was in the time of Christ." How could this be known? Concerning the improvement in human eyesight, he says, "That was simply brought about by natural selection. It had nothing to do with the changing of our genes or chromosomes." Natural selection is based almost entirely on mutations of genes and chromosomes. To what else could it be attributed? Hybridization and polyploidy may have a minor role in natural selection but from an evolutionary point of view they are dead ends. The difference between the light and dark moths is due to a single mutation.

Explaining natural selection and eyesight he says, "It's simply a fact that those with poor eyesight had a greater chance of being killed in battle...that's all." It may be pointed out that anyone with such poor eyesight that he could not discern a man on a horse coming at him with a spear or a combatant attacking him with a sword, would be left at home and not be in the battle in the first place. Thus natural selection would be expected to preserve at least from death in battle, those in the population with very poor eyesight.

Concerning the evolution of the horse, long the showcase example of evolution through the evidence of the fossil record, he says the inaccuracy of the textbooks is that the gaps in the diagrams are attributed to missing links. He says instead that the gaps represent extinctions instead of missing fossils in a continuous series. As to the alleged extinctions he says that for years astronomers have been trying to tell biologists that about once every twenty million years or so a star explodes so close to the earth that it showers the earth with gamma rays, killing all advanced forms of life. (Modern evolutionists generally attribute large extinctions to catastrophic hits upon the earth by asteroids or large meteorites.)

Dr. Ross explains that in this manner our planet is regularly cleansed of advanced life. “This is true of every advanced form of life, whether it be the pig, the horse, the sheep, or whatever,” he says. According to him, what is considered the earliest horse did not evolve into a higher form. Little *Eohippus*, the “dawn horse,” now called *Hyracotherium*, was a “beast that looks like a hyrax,” the coney of the Bible (Proverbs 30:26), and was wiped out and replaced by the next form. Thus he seems to be saying that *Eohippus* (*Hyracotherium*) was made extinct and after its extinction was replaced by *Orohippus*, which after its extinction was replaced by *Mesohippus*, which in turn was replaced by *Merychippus* and then by *Plihippus* and finally by *Equus*, the modern horse.

This would be a lot of extinctions and replacements during a long sixth day of creation. If each genus lived about twenty million years, the time between explosions of nearby stars, and at its extinction was immediately replaced by the next genus, that would come to about one hundred twenty million years, beginning well within the age of the dinosaurs and long before the expansion of mammalian species from rodent-sized creatures.

Man

About man he says (Leaflet #8909), “Starting about 2 to 4 million years ago, God began to create man-like mammals or ‘hominids.’ These creatures stood on two feet, had large brains, and used tools. Some even buried their dead and painted on cave walls. However, they were very different from us. They had no spirit. They did not have a conscience like we do. They did not worship God or establish religious practices. In time, all these man-like creatures went extinct. Then about 10 or 25 thousand years ago, God replaced them with Adam and Eve.”

As to the Neanderthals (spelling commonly modernized to Neandertals), here are some excerpts from my book *Evolution and Christian Faith*.³⁰ In 1956 a symposium was held in commemoration of the one hundredth anniversary of the discovery of the Neanderthals. In preparation for this symposium William J. Straus Jr., eminent anthropologist of the Johns Hopkins University, and A.J.E. Cave of the Department of Anatomy at St. Bartholomew’s College in London, were permitted to examine the remains from which Marcellin Boule had made the original description.

³⁰ Davidheiser, Bolton. *Evolution and Christian Faith*, Presbyterian and Reformed. 1969, p. 331 et seq.

This was the basis for the subsequent descriptions of the Neanderthals as inferior beings with bent knees and head thrust forward, widely circulated in textbooks ever since. Straus and Cave, of course, were familiar with the literature on the subject and they knew that the specimen was pathological, but they said they “were somewhat unprepared for the fragmentary nature of the skeleton itself and for the consequent extent of restoration required.”³¹ After a thorough investigation of the skeleton they concluded, “He cannot, in view of his manifest pathology, be used to provide us with a reliable picture of a normal, healthy Neanderthalian. Notwithstanding, if he could be reincarnated and placed in a New York subway—provided he were bathed, shaved and dressed in modern clothing—it is doubtful whether he would attract any more attention than some of its other denizens.”³²

They conclude that “There is no valid reason for the assumption that the posture of Neanderthal man...differed significantly from that of present day men...there is nothing in the total morphological pattern to justify the common assumption that Neanderthal man was other than a fully erect biped when standing and walking.”³³

Two other anthropologists, C. Arambourg and E. Pattie, independently published their views at about the same time as Straus and Cave. They came to essentially the same conclusions, opposing the former view that Neanderthal man walked with knees bent and head thrust forward.³⁴

Another contributor to the symposium, Clark Howell, reported that in bones other than the skull, differences between the Neanderthals and modern populations are “much less marked than some writers in the past have been led to believe.” He concluded that the skeletons of Neanderthals are basically modern and former views to the contrary are untenable.³⁵

Well-known anthropologist M.F. Ashley Montague wrote, “Neanderthal man walked as erect as any modern man, he did not have a bull neck, and he was not knock-kneed. And it has long been proved by many independent scientific investigations that the form of the brow or of the head has nothing whatever to do with intelligence. As a matter of fact, we have very good reasons to believe that Neanderthal man

³¹ Straus, William L. Jr., and A. J. E. Cave. “Paleontology and the Posture of Neanderthal Man,” *Quarterly Review of Biology*, 32(4):348, December, 1957, p. 351.

³² *Ibid.* p. 359.

³³ *Ibid.* p. 358.

³⁴ *Ibid.* p. 362.

³⁵ Howell, Clark. “The Evolutionary significance of variation and varieties of ‘Neanderthal Man,’” *Quarterly Review of Biology* 32(4):330, pp. 334-335.

was every bit as intelligent as we are today.”³⁶

Bringing the matter up to date, in a highly acclaimed book published in 1993, Erik Trinkaus, Professor of Anthropology at the University of New Mexico and author of more than a hundred articles on the Neanderthals, states, “Anatomically, the Neandertals are quite similar to ourselves, having a skeletal arrangement identical to ours, brains as large as ours, and, to the best of our knowledge, the capability to perform any act normally within the ability of a modern human.”³⁷

The Neanderthal brain capacity on the average was larger than ours. They apparently buried their dead and left food and offerings and flowers with the bodies. Formerly classified as *Homo neanderthalensis*, the Neanderthals have been graduated to the same species as us, *Homo sapiens*.

The cave-painting Cro-Magnons, referred to by Dr. Ross, were very good *Homo sapiens*, that is, modern man.

Has Dr. Ross authority to say that the Neanderthals and Cro-Magnons did not have a conscience or that they did not establish religious practices? Even savages today have their religions, though they generally appease demons instead of worshipping the Creator until instructed by missionaries. Apparently Dr. Ross means that God replaced the Neanderthals and Cro-Magnons with Adam and Eve as He allegedly replaced *Eohippus* (*Hyracotherium*) with *Orohippus*.

Theistic evolution or progressive creationism?

Theistic evolutionists accept evolution with its great lengths of time but believe it came about through acts of God instead of through natural processes.

Progressive creationists claim to be creationists. They believe God created certain basic types of animals and plants which then varied naturally as much as possible and when they could vary no further, God created more and higher types. Two important questions are: How much can living things vary in nature and how much time is acceptable?

Progressive creationists accept the time of the evolutionists. Belief in the extent of possible variation among plants and animals varies with progressive creationists. It seems most commonly to be accepted within the taxonomic category called the “order.” For example, a weasel and a walrus belong to the same order. A giraffe and a hippopotamus belong to the same order. This implies that a weasel and a walrus

³⁶ Ashley Montague, M. F. *Man: His First Million Years*, 2nd edition. Signet Science Library, 1962, p. 58.

³⁷ Trinkaus, Erik., and Pat Shipman. *The Neandertals*. Alfred A. Knopf. 1993, p. 412.

could have been produced, in time, from the same ancestry, and this would be defended as creation. Similarly for a giraffe and a hippopotamus.

The American Scientific Affiliation was founded by a group of Christian men of science to defend the Bible against the writings of materialistic scientists, but it soon strayed. For example, a regular columnist for its journal accepted the “phylum” as the range within which natural variation can act. The phylum is the most inclusive taxonomic category under “kingdom.” The phylum *Chordata* includes all creatures that have bones, including man, and some that do not. According to that columnist, fish eventually could have produced men and apparently, he would not have called that evolution. But, according to him, an ancestor of each of the invertebrate phyla would have been created. He said there is a problem because one would have to accept some creation! That is, one would have to accept at least as many acts of creation as there are phyla instead of accepting outright evolution!

In a public broadcast Dr. Ross appeared with an erudite evolutionist, a physical anthropologist. The tape of this broadcast is in contrast to taped sessions with naive and enthusiastic followers. Regarding a popular definition of evolution as “descent with modification,” he said, “As long as the modification is understood in very broad terms, I’d be comfortable with that.” In other words, if “descent with modification” (evolution) is understood to be broad enough to include processes which are not strictly natural but may include acts of God (theistic evolution) it is OK.

In this tape he says, “I would differ from, say, a theistic evolutionist [then he abruptly changes the subject and does not say how he would differ from a theistic evolutionist] and I don’t put all the miracles of God at the beginning of the Big Bang. I see what takes place following the Big Bang as natural processes [evolution], of course controlled by God [theistic evolution], since He’s responsible for the laws of physics. But that’s what science is all about, studying these processes.” In spite of his denial, this is an expression of theistic evolution.

Here the evolutionist interjects an approving, “Right!”

The dialogue continues.

Dr. Ross. “Just because the ICR [Institute for Creation Research] says certain things about the Bible as literal doesn’t mean it [what the ICR says] has the approval of Hebrew scholars.”

Evolutionist. “Exactly, and similarly, I think that the very strict young-earth creationism, which is to my mind scientifically so unreasonable, has given conservative Christians a bad name.”

Dr. Ross. “Yes, because I would take the position that it is impossible to take the Bible literally and come to the conclusion that the days are only twenty-four hours.”

Evolutionist. “Yes. “

Dr. Ross. “They must be long periods of time.”

Evolutionist. “Yes. “

Thus Dr. Ross accommodates himself both to enthusiastic fundamentalists and to gracious evolutionists.

Basic Christian doctrine from nature?

Most important is the question, where does a theology which includes the Big Bang theory and long ages for the days of creation tend to lead doctrinally? Dr. Ross appears to be a theistic evolutionist or progressive creationist and espouses a theology by which a doctrine of salvation is obtainable from the observation of nature. In support of this he says that Job, “Without the aid of scriptures and in opposition to the religion of his peers, discerned all the elements of ‘the gospel,’ the good news of how man can find eternal life in God.”³⁸ How could Job have done that?

Job and others who lived before the final atonement for sin was made by our Lord at Calvary, who worshipped the true God and observed His statutes, went to paradise, also referred to as “Abraham’s bosom.” An example is give in the case of a beggar named Lazarus, who when he died was carried away by angels to Abraham’s bosom (Luke 16:19-31). No doubt Job was there also.

Dr. Ross cites the first chapter of Romans. The heathen are without excuse for their idolatry because the evidences of creation are so dearly revealed in nature. But freedom from idolatry through recognizing that there must be a God of creation is a different matter from understanding salvation by grace and receiving Christ as personal Savior through accepting His atonement for sin. How can anyone know this through nature? We know there are heathen that have not heard the gospel of salvation through the atonement made by the Lord Jesus Christ upon the cross at Calvary and we know there are those in our own country at the present time who have not heard, even among many who go to church regularly. God is the righteous Judge. It is not for us to judge but to minister the gospel wherever we can.

³⁸ Ross, Hugh. 1991. Loc. cit. p. 181.

Credentials

In his publication *Facts & Faith*, Spring, 1993, there is a personal letter by Dr. Ross concerning those who criticize his ministry, in which he says, “Men with little or no formal training in the sciences or theology dogmatically contradict the science and theology of someone [himself] who has done postdoctoral research (in astronomy) at Caltech and has served for many years on the pastoral staff of a well-established evangelical church. Why do my attackers never check with people who know me personally?”

As to the implication that opposition is only from the unqualified, he must be aware of critical articles by qualified scientists at the Institute for Creation Research at El Cajon, California,³⁹ as well as others. As for myself, I have a Ph.D. in Zoology, taught at the college level for more than twenty years, have written extensively on the creation evolution issue including a book that went through thirteen printings, spoken in churches, schools, and conferences coast to coast in the U.S. and Canada, and been repeatedly on the radio and TV. But errors may be pointed out by anyone knowledgeable enough to defect them, whether professional scientist or housewife.

He told me his blunders are a thing of the past so I tried to obtain recent tapes, hoping to be able to substantiate this. But he informed me he discussed this with his staff and it was decided I should be denied access to the tapes of his latest graduate course for Simon Greenleaf University. Their opinion was that my “reason for wanting the tapes is not to learn more about the latest discoveries proving the existence of the God of the Bible and the accuracy of the words of the Bible, but rather to discover new errors and mistakes [he] might have made while speaking.” They added “they are ready and willing to change their decision given some evidence of change of attitude on [my] part.”

If it were merely a matter of many scientific blunders, there would be little value in writing an article to point them out. But when associated with the Bible and a theology of salvation through observing nature, as well as promoting theistic evolution or progressive creationism, these things need to be told.

An especially competent scientist who is a creationist tells me this article is too long. He says the naive followers of Dr. Ross will forgive him readily for his scientific mistakes and there is no need to mention so many of them, for “his errors are innumerable, and you could spend the rest of your life recounting them.”

³⁹ *Impact*, Numbers 217, 218. Institute for Creation Research, Box 2667, El Cajon CA 92021.

Another Christian critic makes the following evaluation. “Part of his benevolent image is that he remains cool under fire, a gentleman to the death, so to speak, one who is always kind to his sharpest critics as to his closest friends. He’s magnificent at this. I’ve seen him and been totally impressed by his gracious good manners and kind concern for those who oppose him. In other words, he understands the psychology of argument, and that’s why he scores big on the logic of argument. He appears to be logical, and to many people this appearance passes for logic itself.” In my experience with him by correspondence, on the phone, and meeting him personally, I have always found him courteous and calm and never excited or angry about anything.

Conclusion

Evolutionary theory is in conflict with basic Christian doctrine. If evolution is true, we are improved animals instead of fallen sinners in need of redemption. If evolution is true, we have no need of the Savior; there is no occasion for the Redeemer.

Quotes

The story of Christianity tells of a plan of salvation centering upon a particular people and a particular man. As long as someone is thinking of a geocentric universe the story has a certain plausibility. As soon as astronomy changes theories, however, the whole Christian history loses the only setting within which it would make sense. With the solar system no longer at the center of anything, imagining that what happens here forms the center of a universal drama becomes simply silly.

–A. J. Burgess, *Earth Chauvinism*

The Copernican construction could not predict or describe so accurately as the Ptolemaic system. Scientific observation was definitely more favourable to the old than the new. But science is not all observation. Copernicus rejected Ptolemy on aesthetic grounds and not because of any failure to account for the observed facts, yet, when he arrived at his own conclusions he took the position that at last the truth had been found.

–Gordon H. Clark, *Thales to Dewey* (Trinity Foundation), 1989

READERS' FORUM

I. C. R.'s parrot

I am a 42-year-old layperson who simply likes to grab the bull by the horns whenever the bull is wrong. And I do believe our heliocentric bull is VERY WRONG.

Being brand new to geocentricity (2002 convert), the one horn I didn't count on, however, was the disdain with which ICR seems to regard both you and this subject. I had only just been introduced to geocentricity by a new acquaintance, and had not yet even heard of yourself, when the good people of ICR condescendingly informed me (in part) "not to rely on Gerardus Bouw's views on a rotating universe," after I had submitted the geocentricity matter to them. They also added, "May we agree on the thought that geocentricity and creationism are two really separate issues?" (in blue highlight).

Not knowing who this Gerardus Bouw was, whom I was to have parroted, but being largely convinced of geocentricity anyway, I promptly wrote my ICR contact back (a Mr. John Arend in customer service, who himself had parroted ICR Drs. Danny Faulkner and Gerald Aardsma), that, no, I could not agree geocentricity and creationism were two separate issues. I didn't see how God could make the sun, moon, and stars FOR THE EARTH (for signs, seasons, days, years, and to give light upon the Earth) and then send the Earth hurtling pointlessly through the very heavens THAT WERE MADE FOR IT. How could special creation have taken place on an un-special rock? I asked him.

I have received the ICR publication *Acts and Facts* for years and have applauded them many times. I never thought I would feel ICR were the bad guys. But here I do.

It's unfair for the earth to be in a special position in the universe

This question arose during an e-mail exchange. On 5/10/02 12:48 PM, K. J. S. wrote: "The alternative is: you are still and the world spins. But if that were the case, then you would have the very personal distinction of being situated right on the central axis of cosmological spin—and that can't be, because it unjustly excludes other spinning bodies from sharing the distinction. There are too many other clues as well."

To this, Martin Selbrede replied:

By definition, if there WERE a central axis of cosmological spin, objects not on that axis are excluded, and this is not a matter of injustice. This sudden injection of philosophical bias, colored by anthropomorphic indignation, utterly discredits the writer as an objective commentator on the matter. He is simply repeating, uncritically, the argument advanced by so many others: if there is a central axis of rotation, IT IS ANYWHERE BUT HERE! And this, by philosophical / metaphysical necessity, masquerading as empirical science. The objection to geocentricity remains philosophical, not physical, and no amount of chit-chat about relativity before and after the above paragraph will raise its claims above that of pure, metaphysical bias; a bias that, in fact, contradicts the very relativity theory the writer is otherwise discoursing on. (His subsequent chat about angular momentum vectors, using the bicycle tire analogy, is irrelevant.) The writer assumes the central cosmological axis will move with the Earth around the sun to generate resistive forces, whereas geocentrists keep the Earth and the cosmological axis fixed. The Sun then participates in the diurnal rotation of the cosmos, with the planets (other than the Earth) being its satellites. The geocentric hierarchy is thus misrepresented.

Geocentricity is a hoax!

Via e-mail from M. Y. -- Dear Dr. Bouw, I would just like to say that the whole Geocentric thing is a hoax. It is an old Catholic dogma, and Galileo was sent to prison when he proved it was not true.

My reply: Galileo was given a villa, a lavish pension, but he was not allowed to say that Copernicanism was "proven" for the simple fact that it was not then, nor is it now, proven. I should be so persecuted!

[Regarding meteor showers: earth] has to move through these meteor belts in order to have the falling stars. If the Earth did not move around the Sun, we would not be able to do this. But we are able to do this, so it is proof the Earth moves. So God **has** to speak in terms of what people see.

Prove to me that these meteor belts don't stream past the earth. So, God does not speak "true truth," as the late Francis Schaeffer called it. For our sake he speaks untrue truth, and poor deluded fools like I, who think he writes what he means and means what he writes and needs no one to interpret for him, well, we're just a cosmic joke to smart guys like you who know when to believe him, when not to believe him, and can interpret for him. Right?

CREDO

The Biblical Astronomer was founded in 1971 as the Tychonian Society. It is based on the premise that the only absolutely trustworthy information about the origin and purpose of all that exists and happens is given by God, our Creator and Redeemer, in his infallible, preserved word, the Holy Bible commonly called the King James Bible. All scientific endeavor which does not accept this revelation from on high without any reservations, literary, philosophical or whatever, we reject as already condemned in its unfounded first assumptions.

We believe that the creation was completed in six twenty-four hour days and that the world is not older than about six thousand years. We maintain that the Bible teaches us of an earth that neither rotates daily nor revolves yearly about the sun; that it is at rest with respect to the throne of him who called it into existence; and that hence it is absolutely at rest in the universe.

We affirm that no man is righteous and so all are in need of salvation, which is the free gift of God, given by the grace of God, and not to be obtained through any merit or works of our own. We affirm that salvation is available only through faith in the shed blood and finished work of our risen LORD and saviour, Jesus Christ.

Lastly, the reason why we deem a return to a geocentric astronomy a first apologetic necessity is that its rejection at the beginning of our Modern Age constitutes one very important, if not the most important, cause of the historical development of Bible criticism, now resulting in an increasingly anti-Christian world in which atheistic existentialism preaches a life that is really meaningless.

If you agree with the above, please consider becoming a member. Membership dues are \$25 per year. Members receive a 15% discount on all items offered for sale by the *Biblical Astronomer*.

To the law and to the testimony: if they speak not according to this word, it is because there is no light in them.

– Isaiah 8:20

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