

to deal with the questions that vex us and draw sceptical comment. That's the most appropriate challenge for all of us.

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## REFERENCES

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## THE BIBLICAL RECORD AND THE GEOLOGICAL RECORD

Dear Editor,

The fascinating debate in recent issues of the *CEN Technical Journal* on the Flood/post-Flood boundary in the geological record has shown the difficulties that the two creationist schools of thought, as well as the evolutionists, have with the geological column.

Resolving the debate will depend on three elements:

- (a) determining the reliability of the geological record;
- (b) interpreting that record; and
- (c) careful interpretation of the pertinent biblical record.

Ideally, (a) should be on grounds of internal consistency and the empirical evidence of the geological column, whereas (b) must rest substantially on (c).

Notwithstanding the detailed and sophisticated analysis undertaken in terms of (a) and (b), the underlying issue between the two creationist schools has been posed as a simple choice:

- (a) either the geological record was substantially laid down in the Flood period (Genesis 7-8), and

thus, there is a late boundary to material from the Flood in the record; or

- (b) some significant part of the record was laid down after the Flood (based on Genesis 10:25), and thus, there is an early boundary to material from the Flood in the record.

Yet, if we focus on (c), I suggest that the biblical record indicates at least two other possible episodes where significant elements of the geological column may have been laid down, subsequent to the creation *ex nihilo*. For both episodes (unlike Genesis 10:25), the Bible provides both an indication of the episode and of the cause, whilst the mechanism to put the episode into effect can be deduced from scientific knowledge.

The **first** possible episode is in Creation Week. It is indicated by the presence in the Garden of Eden of gold, onyx and, possibly, precious stones (Genesis 2:12; Ezekiel 28:13-14). Where did they come from?

Such items are found in igneous or metamorphic rock (gold would scarcely have time to gather in alluvial deposits). Thus, their presence speaks of a previous geological disturbance. The likely cause of such a disturbance is the creation of the heavenly bodies on the fourth day with their associated gravitational forces. Indeed, it would be surprising if there was not some disturbance from such a cause.

In Ezekiel 28:14, the Lord God says to Satan, 'You were on the holy mountain of God; You walked back and forth in the midst of the fiery stones.' If this refers to a location in or near the Garden of Eden, as the previous verse does (and a natural reading would suggest), the fiery status of the stones may refer to their recent volcanic origins and that they were literally hot.

Walker<sup>1</sup> argues that volcanic eruption in Creation Week would throw up dust which would be unlikely to '*clear in time ready for the creation of birds, animals and people within a few days*'. However, we do not know the atmospheric conditions of the time and

the Earth may not immediately have settled into a 24-hour rotation period in relation to the Sun. (This is not to try and introduce the day-age hypothesis.) Walker also argues that such disturbance would not be 'good' for the atmosphere etc., whilst God had labelled each step of His creation 'good'. However, human judgment as to what is 'good' often errs and we should not impose a sort of stasis on God: that which is good cannot be changed. Genesis 2:12 illustrates God's bounty towards us.

If volcanic and/or other geological disturbances did occur in consequence of the creation of the heavenly bodies on the fourth day of Creation Week, the results would likely be worldwide and could, conceivably, contain plant fossils, as plants were created on the Third Day. As death — a spiritual force — entered the world through sin (Roman 5:12), the possibility of plant destruction prior to the Fall depends on what is defined as death in the Bible. As the animals created on the Fifth and Sixth Days would be hungry and liable to eat the vegetation before the Fall — with attendant risks of plant destruction — it is possible that plants are not defined as subject to death in biblical terms.

The **second** possible episode follows the expulsion from the Garden of Eden:

'So He drove out the man; and He placed cherubim at the east of the garden of Eden and a flaming sword which turned every way, to guard the way to the tree of life.' (Genesis 3:24)

What is the flaming sword?

The flaming sword which turned every way to guard the way may have consisted materially of volcanic activity. The Bible provides instances of the Earth reacting physically against sin (Isaiah 24:20, Leviticus 8:25) and of God and His angels physically shaking etc. the Earth in consequence of sin (II Samuel 22:14-16; Isaiah 5:25; 13:13; 24:1; 29:6; Jeremiah 4:24-26). Does not Romans 8:19-22 tell us that creation was subject to futility, bondage and corruption because of

sin? In these terms, it would be surprising if the first appearance of sin did not lead to a considerable physical reaction on Earth.

Creationist discussions of the 'lost world' of Adam — post-Eden but pre-Flood — sometimes make it sound rather idyllic. Whilst conditions may have been less difficult than post-Flood, a great decline from Eden must have occurred. Genesis 3:17-19 tell us that the ground was cursed:

'In toil, you shall eat of it, All the days of your life. Both thorns and thistles it shall bring forth for you

This suggests climatic and soil changes. Volcanic activity could create such conditions.

Genesis 3:24 does not specify an end point for the guardianship of the cherubim and flaming sword. Given the decline in morality up to the time of the Flood, the flaming sword would surely need to continue to turn every way to block attempts to return to Eden until the Flood. This gives us 1,656 years of volcanic activity — or more, if the genealogy at Genesis 5 is incomplete. Such long lasting activity could create the processes — ticking time bombs — which in due time would cause the fountains of the deep to break open and the windows of heaven to open (Genesis 7:11).

Although not necessary to the case for volcanic activity fulfilling Genesis 3:24, it is interesting to look again at Ezekiel 28:11-19. This passage can be interpreted in various ways at various levels, but a simple reading suggests that Satan liked being in Eden and may literally have traded with human kingdoms, perhaps from Eden, until his base and material glory were destroyed. Thus, Ezekiel 28:11-19 may, conceivably, provide a parallel account of pre-Flood times to Genesis 6:2 and 4 (which may refer to angels cohabiting with women). Perhaps, when the Lord says to Satan in Ezekiel 28:18, 'I brought fire from your midst; It devoured you . . .', this refers to volcanic activity encroaching on Satan's base in Eden, or to a final fiery outburst at the onset of the Flood.

If a volcanic barrier was laid between Eden and Adam's new world, then there were possibly three distinct pre-Flood geological areas. Each would necessarily be of less than global extent, but could nonetheless be large — for example, the Lord may have set aside extensive lands in Eden for the generations.<sup>2</sup> All three areas would accumulate fossils, although most, if not all, human fossils would be in Adam's world area.

Note that the prevailing theme from the closure of Eden is fire, in contrast to the water theme of the Flood. This suggests that volcanic activity may predominantly have been pre-Flood, perhaps increasing toward the end, with the Flood serving to 'put the fires out'. Accordingly, the pre-Flood geological column may have partially survived the Flood, and the size of the Flood catastrophe becomes somewhat less overwhelming than that proposed by, for example, Robinson.<sup>3</sup> How otherwise could the Ark itself survive: think of the tsunamis, for example!

I appreciate the caution amongst creationists in looking at pre-Flood causes of parts of the geological column, as some such approaches have been associated with the gap and day-age hypotheses. However, it would be unfortunate if the development of creationist theory was to be driven primarily by the history of reactions against others. Based on the biblical record, it may be possible to construct creationist hypotheses, and thus to read the geological record in ways other than the Flood/post-Flood debate suggests. Thus, parts of the geological record may be explained by pre-Flood episodes and the Flood/post-Flood debate resolved, in part, by stepping outside of it, whilst remaining within the creation *ex nihilo* framework.

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Brisbane area, Australia: where do they fit in the creation model? **CEN Tech. J.**, 10(2):241-257(p. 246).

2. Translations of Genesis 2:10 tend to give a picture of a quite limited Eden; thus: 'Now a river *went out of* Eden to water the garden and *from there* it parted and became four overheads.' (NKJ; italics added.) However, on the basis of **Strong's Exhaustive Concordance**, the verse could also be translated as 'Now a river *arose in* Eden to water the garden and *therein* it parted to become four riverheads.'
3. Robinson, S. J., 1996. Can Flood geology explain the fossil record? **CEN Tech. J.**, 10(1):32-69.

## ROCK COLOURATION

Dear Editor,

I had not been able to locate any articles on one of the most beautiful aspects of geology — rock colouration. Recently, however, I did find one from the rare **Bulletin of Creation, the Deluge and Related Science**.<sup>1</sup> The authors explain that

*'rock coloration can be best accounted for on the basis of a brief period of universal wet conditions.'*<sup>2</sup>

They continue,

*'Under present conditions, with negligible amounts of wet sediments and nearly all hard rock or dry fragile shale, etc., the even coloration and even change of color could not be possible, as the water carrying the mineral colors cannot now penetrate the rock except in cracks. Neither could coloring minerals be brought near the surface and evenly distributed in great masses of sediments under present conditions. This all apparently had to be done during the necessarily brief mud stage. Heat from below also at that period, (and from chemically formed heat within the mass itself), could also only have been of brief duration. These processes coincided, a fact that is very pertinent.'*<sup>1</sup>