

if Cenozoic rocks are Flood rocks, they clearly did.

In their efforts to maintain the credibility of Genesis, Woodmorappe *et al.* seem intent on making a virtue of incredibility. Of all possible positions, that which dates the Flood to c. 2500 BC is the most extreme. It is totally irreconcilable with historical and archaeological data (an Old Kingdom pharaoh, preceded by a long history of cultural and political development, was on the throne of Egypt in 2500 BC) and totally irreconcilable with the geological data, of which the track evidence is one instance. A scenario which has hosts of dinosaurs, reptiles and mammals during the Flood swimming around, making tracks, laying eggs and digging burrows, above kilometres of volcanics, carbonates and clastics deposited earlier in the Flood while they were somewhere else, would be difficult to believe in, whatever arguments were advanced in its favour. Our point, however, is that it is not only unnecessary but geologically and Scripturally untenable.

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References

1. Woodmorappe, J. and Oard, M., Reply to: Dinosaur footprints, fish traces and the Flood, *TJ* 17(1):57–59, 2003.
2. Tyler, D.J. and Garner, P., The uniformitarian column and flood geology: a reply to Froede and Reed, *CRSQ* 37:60–61, 2000.
3. Robinson, S.J., The then world with water having been deluged perished, *Origins* 29:15–24, 2000.
4. Holt, R.D., Evidence for a Late Cainozoic Flood/post-Flood boundary, *TJ* 10(1):128–167, 1996.
5. De Smet, J., van den Berg, A.P. and Vlaar, N.J., Early formation and long-term stability of continents resulting from decompression melting in a convecting mantle, *Tectonophysics* 322: 19–33, 2000.
6. Woodmorappe, J., *Noah's Ark: A Feasibility Study*, Institute for Creation Research, El Cajon, pp. 5–7, 1996.
7. Snelling, A.A., Creationist geology: where do the 'Precambrian' strata fit? *TJ* 5(2):154–175, 1991.
8. Robinson, S.J., Genealogy is not chronology, *Origins* 26:15–21, 1999.

Editorial comment:

Answers in Genesis believes that the genealogies as presented in Genesis are divinely inspired in their original autographs and are meant to be read as straight chronologies with no gaps.¹ Consistent with our understanding in other areas of creationist research, we do not accept reinterpreting the plain, and internally well-supported, reading of the Bible based on man's fallible thinking. We believe that the cause of the conflict between geology, the Egyptian chronologies and the biblical chronologies, will not be found by errors in the latter. We encourage all to continue research in these areas to resolve these issues.

References

1. Sarfati, J. Biblical chronogenealogies, *TJ*(17)3: 14–18, 2003

Shedding light

I feel that Humphreys' response to my last letter¹ fails to address some central issues.

1. *Expansion of the universe*—Humphreys says he does not find my argument compelling, but he fails to give a reason. The Genesis account gives no indication that there were two episodes of expansion. This may or may not have happened.

Humphreys cites 2 Kings 15:12 and asks: 'Was that the only time in all history afterward that such a dynasty ever ended? Probably not.' But *this IS the only time in all history that Jehu's direct descendants would sit on the throne for four generations*, which was what the prophecy was about.

Humphreys argues that the use of the participle in many of the references to God stretching out the heavens leaves open the possibility of continuous stretching. However, in biblical Hebrew, the participle has no distinct time reference.² When it is used as a verbal adjective, it describes

a state of affairs rather than a bare fact.³ In other words, these references indicate that God has stretched out the heavens (in the past) and they remain stretched (in the present). *This is why the present tense is used to translate 'natah' (stretch)*. Compare this with the use of the participle in Genesis 2:10: 'A river watering the garden *flowed* [or *was flowing*] from Eden'. When one takes into account references such as Isaiah 45:12, and Jeremiah 10:12 and 51:15, which employ the perfect form, and which clearly refer to day two of creation, there is no room for any possibility of continuous stretching.

Humphreys' claim that 2 Samuel 22:10, which is a direct quotation of Psalm 18:9 (18:10 in the Hebrew text), refers to an episode of expansion after Day 2 and 'most likely to the time of the Genesis Flood' is incorrect. Firstly, Psalm 18 was written by David when God rescued him from the hand of his enemies. Indeed, this is explicitly stated in the preface to the Psalm (verse 1a in the Hebrew text): 'For the music director; by the LORD's servant David, who sang to the LORD the words of this song when the LORD rescued him from the power of all his enemies, including Saul' (New English Translation). It has nothing at all to do with the Genesis Flood!

Secondly, the synonymous parallelism between the two parts of the verse also indicates that the stretching of the heavens in the sense that Humphreys understands it is not a possibility. The second part of the verse paints a picture of God standing just beyond the dark rain clouds overhead. Therefore, the 'heavens' in the first part of the verse merely refer to the visible sky from the perspective of someone standing on the earth, not to the sum-total of interstellar space. In this instance, *natah* has the nuance of 'bend down' or 'bow down'.⁴ Therefore, this verse paints a picture of God's imminence where He bends the heavens down in order to impose on the enemies of His people. This is why the NIV renders it as: 'He parted the heavens and came down; dark clouds were under his feet.' The New English

Translation (NET) renders it as: ‘He made the sky sink as he descended; a thick cloud was under his feet.’

2. *Euclidean Zone*—Humphreys suggests that a Euclidean zone could have resulted on Day 4 if God created additional matter when he ‘made the stars’. This is an interesting idea and one that has some merit. Perhaps if this could be fleshed out a bit more in the future, it would go a long way to legitimizing the whole concept.

5. *Reality of expansion*—Humphreys suggests that I am equating space-time expansion with the Friedmann–Lemaître (F–L) metric, which, he says, is the basis of the big bang theory. His theory, however, is based on the Klein metric. This is why he states that ‘the capability for expansion of space is a basic feature of general relativity itself, not fundamentally tied to one cosmology or another’. But this is wrong. Schwarzschild’s 1916 solution to the Einstein field equations was for a static, spherically symmetric mass distribution. In 1917, Einstein and de Sitter each published solutions of the field equations that allowed for static universes, in which the space-time of the universe did not change with time. Humphreys even refers to Einstein’s solution, so therefore he cannot claim that space-time expansion is inherent to general relativity and not tied to any particular theory. Again, my (actually, Gentry’s) criticisms are aimed at space-time expansion, not General Relativity itself.

Furthermore, Humphreys implies that Einstein’s solution which employed a constant was a deliberate attempt to avoid the obvious implication of an expanding universe, which Einstein did not want. This is incorrect. The reason why Einstein employed a constant in his solution was to solve the problem of a *collapsing universe*. By finely tuning this constant to cancel the effect of gravity, Einstein was able to produce a static universe, which is what everyone at that time believed about the universe, and there was no evidence to the contrary. The constant was not some fudge factor inserted by Einstein. The field equations are differential

equations, and the general solution of a differential equation contains a constant. So Einstein did not prevent expansion ‘in a very artificial way’.

There appears to be some confusion about what the various space-time metrics described. Humphreys claims that the F–L metric is the basis of the big bang theory, whereas the Klein metric is the basis of his theory. However, both these metrics describe a universe with space-time expansion. Secondly, Humphreys had previously stated that the Robertson–Walker metric was the basis of the big bang!⁵ Thirdly, he also acknowledges that these different metrics describe the same, or near enough the same, space-time but from different coordinate systems. The only difference is the Euclidean zone revealed by the Klein metric. The concept of space-time expansion remains an integral part of both metrics.⁶

In reality, the F–L solution laid the ground work for all cosmologies which involve space-time expansion. Both the Robertson–Walker and Klein metric are derived from the F–L solution.

Regarding the alleged disproof of space-time expansion by the GPS, I will defer to Robert Gentry, since this is actually his argument. I was merely pointing it out, since the disproof of space-time expansion would invalidate his cosmology as well as the big bang. The same goes for the argument based on the implied breakdown of the law of conservation of energy due to expansion.

Contra Humphreys, nowhere in my letters did I ever claim that general relativity appears to be demonstrably false. What appears to be demonstrably false is the notion of F–L space-time expansion, which is an integral part of the big bang cosmology, the Robertson–Walker metric, the Klein metric and Humphreys’ cosmology.

Also, the objections to space-time expansion originate with physicist Robert Gentry, who is more than qualified to make such criticisms. My purpose in writing those letters was to highlight the existence of these papers

and their implications for Humphreys’ cosmology, as well as to raise some biblical concerns.

Finally, regarding Gentry’s papers as only being ‘non-peer-reviewed Internet papers’, Humphreys himself acknowledges that many creationists do not bother submitting papers to peer-reviewed journals because they automatically get rejected if they present anything that goes against the currently accepted paradigm.

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References

1. Kulikovsky, A.S., Letter to the Editor, Filling the details in Humphreys’ cosmology, *TJ* 17(1):59–60, 2003.
2. Waltke and O’Connor, *Introduction to Biblical Hebrew Syntax*, Eisenbrauns, Winona Lake, p. 624, 1990.
3. Waltke and O’Connor, Ref. 2, p. 614.
4. See Holladay, W., *A Concise Hebrew and Aramaic Lexicon of the Old Testament*, Eerdmans, 1988.
5. Humphreys, D.R., New vistas of space-time rebut the critics, *TJ* 12(2):195–212, 1998; p. 196.
6. Humphreys, Ref. 5, pp. 202–203.

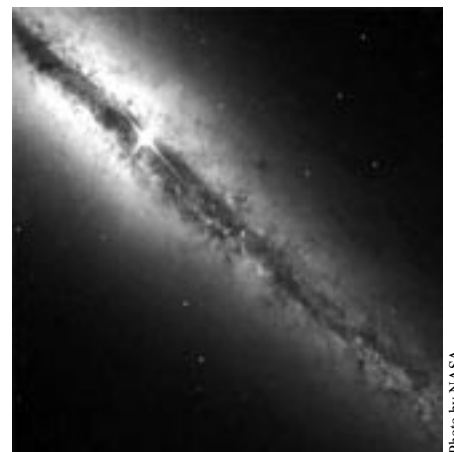


Photo by NASA.

Rejoinder from Humphreys:

Andrew Kulikovsky’s letter, above, makes me realize that in my previous reply¹ to him, particularly the first half of the last paragraph, I overstepped the bounds of courtesy I should have

shown to a brother in Christ and fellow creationist. For that, I apologize to him and the readers of *TJ*. As for the rest of his letter, I don't feel that further reply from me on this issue would serve any good purpose. However, I would like to take this opportunity to recommend to the readers a clear and irenic creationist critique² of the internet articles by Robert Gentry on cosmology that Kulikovsky mentions. You can view it in PDF format on the Creation Research Society website (address below).

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References

1. Humphreys, D.R., Humphreys clarifies cosmology again, *TJ* 17(1):60–61, 2003.
2. Repp, A.S., The nature of redshifts and an argument by Gentry, *CRSQ* 39(4):269–274, <www.creationresearch.org/crsq/articles/39/39_4/Redshifts.pdf>, March 2003.

The landing place: response to letter by Jonathan Clerke

I am writing in response to Jonathan Clerke's letter in *TJ* 17(2), 2003, asking about a fragment from Julius Africanus, the third-century Christian chronographer who said that the Ark landed on the mountains of Ararat, either in Parthia or Phrygia. Jonathan wanted to know if either of these locations could be near the Cudi Dagh in south-east Turkey (see map).

Julius Africanus seems much more certain about Parthia than Phrygia. He says, '... the ark settled on the mountains of Ararat, which we know to be in Parthia'. Then he says, 'some say they are at Celaenae of Phrygia' as if it's somebody else's view and he is not sure whether to believe it.¹ So let's have a look at these two places.

Parthia was once a great empire,



The Roman (dark grey) & Parthian (light grey) empires (and the Roman vassal state of Armenia—white) overlaid on a modern day political map.

but it fell into decline when the Roman Empire reached its height.² During the reign of Mithradates II (c.123–88 BC), Parthia extended from modern-day Afghanistan, through Iran, Iraq and south-east Turkey almost as far as the Black Sea. It included most of ancient Armenia, otherwise known as the region of Ararat, and it certainly included the Cudi Dagh. As the Roman Empire expanded during the first century AD, Armenia became a Roman vassal kingdom, but conflict continued, and from the time of Nero onwards they had a compromise solution, so that the Parthians would nominate one of their own princes to be king of Armenia, and he would be crowned in Rome. This arrangement worked well as long as the Romans and Parthians agreed on the choice of king, but sometimes they didn't, and further conflict led to the decline of the Parthian Empire.

In AD 224 there was a rebellion from Ardeshir, the Persian vassal king who ruled in his own region of Parthia, and in AD 226 he captured Ctesiphon, the residence of the Parthian kings near Baghdad. This meant the end of Parthia and the beginning of the Second Persian Empire.

Julius Africanus (AD 160–240) wit-

nessed the latter years of the Parthian Empire and finished his five-volume *Chronology* in AD 221, just five years before Parthia came to an end. In that case, when he wrote about the mountains of Ararat being in Parthia, he was probably referring to a historic or geographic location, regardless of the current political situation.

We also have to take into account that Armenia continued to have an Arcasid (Parthian) king long after Parthia itself had fallen, and this tradition continued until the fifth century. The Arcasids were the ruling dynasty of Parthia, dating back to the earliest days of the Empire.

Now we turn to the suggestion that the mountains of Ararat might have been in Phrygia. This is a less likely possibility because Phrygia is in western Turkey, a long way from the place which is normally known as the mountains of Ararat. Celaenae was a city in the hills, close to the sources of the river Maeander (now known as Menderes). Jacob Bryant³ says that this was just one of many places, far from Armenia, where Noah was held in high esteem by the ancient world and his memory was celebrated. It seems that some people at Celaenae