

## Geologic column

John Woodmorappe (The geologic column: does it exist? *CEN Tech. J.* 13(2):77–82) argues that the absence of Phanerozoic systems is not evidence for the validity of the geologic column. He gives neat diagrams showing field evidences for periods of erosion and non-deposition. But he has left out what I would have thought were obvious signs of erosion: ‘fossilised’ gullies and sand dunes. The absence of these would help to prove his point.

It is my understanding that these features are very seldom apparent between rock layers. This observation would support Deluge-based geologic models in that almost all deposition in those models would have taken place entirely underwater. The only gully-like formations expected would be shallow, irregular and overlaid by turbidites and the like. Dunes would be formed as much from clay and other substances as from sand.

I would also expect that in Deluge conditions, land would sometimes be exposed during periods of significant hydraulic activity (such as awesomely large waves). So the presence of occasional gullies in a set of layers would fit Deluge models. It might prove fruitful to look for signs that these gullies formed either rapidly or in a few discrete continuous episodes of erosion.

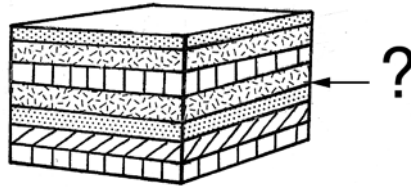
My reasoning for this is based on ‘lenses’ of leaf matter I observed in my youth buried in dry creek beds in Northwest Australia. I would expect ‘lenses’ of more transportable material such as organic debris to form in the lee of firmer geologic features, and perhaps be trapped there when a sand or silt-laden surge passed over the area.

We should therefore look for some correlation between the structures around the many ‘geologic column’ stack sites and the structures around isolated ‘lenses’ full of fossils. If such were found the creation case would have the beginnings of a model for the formation of those stacks, and a reason

for the many places where the stacks are in the ‘wrong’ order.

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Courtesy John Woodmorappe



*The paraconformity where no discordance of bedding is noticeable. Paraconformities are proposed between strata for the sole reason that appropriate index fossils are absent from the intervening geologic system. Paraconformities usually show no evidence of subaerial exposure or the supposed millions of years of erosion between strata.*

### John Woodmorappe replies:

The writer makes some good points. Inferred periods of erosion, euphemistically called paraconformities, often or usually show NO independent evidence of erosion at the contact. This has been known in creationist studies for a long time. For example, see the discussion on paraconformities in ‘*The Genesis Flood*’<sup>1</sup> along with the citations on this topic.

The writer correctly notes that there are erosional gullies all over the stratigraphic record. For example, in my book, ‘*Studies in Flood Geology*’,<sup>2</sup> I document the erosional gullies within coal-bearing strata.

Overall, the erosional gullies tend to be local and regional phenomena. Therefore I doubt if they could be made to infer large-scale Flood-related patterns on an intercontinental or continental scale.

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## References

1. Whitcomb, J.C. and Morris, H.M., *The Genesis Flood*, The Presbyterian and Reformed Publishing Company, Phillipsburg, 1961.
2. Woodmorappe, J., *Studies in Flood Geology*, 2nd Edition, Institute for Creation Research, El Cajon, 1999.

## Humphreys’ cosmology

After reading the latest volleys in the ongoing debate over Dr Humphreys’ ‘white hole cosmology’ in *CEN Tech. J.* 13(1), I have a few comments that might be of use to the Christian community.

First, whatever the merits of his work, one ought to remember that the conceptual door to the use of relativistic physics in constructing young earth models is now open, as Dr Ross has noted. This development should cheer Christians of all positions. Other models than Dr Humphreys’ might be conceived.

Second, I suggest that young-earth models would be more promising if they decoupled Earth’s history from that of the bulk of the universe until some time in day 4, while admitting the standard homogenous Friedmann-Robertson-Walker-type behavior for the rest of the universe. Earth would do its own thing for the first few days, not aging much in comparison to the rest of the universe, until, say, it passed through a wormhole, or a change of topology occurred in a trousers-like space-time, and Earth joined the rest of the universe. (I mention these examples to illustrate the proposal, not to assert that they are technically viable.)

This special treatment for Earth along with standard behavior for the rest of the universe contrasts with the white hole cosmology, in which cosmic-scale differences from the standard model exist (at least as Dr Humphreys intends it). Thus, given

this proposal, no need would arise to reconsider the many pieces that already fit the standard model quite well.

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## Response to Faulkner's 'biblically-based cratering theory'

Danny Faulkner is an individual I respect very much, and I would agree with his point of view on many aspects of astronomy. I am very encouraged to see him address the issue of cratering and acknowledge a cratering event at the time of the Flood.<sup>1</sup>

However, I have some concerns about what he has proposed in the previous issue of this journal. My papers from the *Proceedings of the Fourth International Conference on Creationism* argue for an impact bombardment event surrounding the Flood that began with the onset of the Flood and continued for some time, trailing off into the post-Flood period.<sup>2,3</sup>

First, Dr Faulkner seems to believe the planets and moons accreted from matter created on the fourth day. I don't think this can work in a young-age time frame, except possibly for small objects such as asteroids. Accreted objects are not differentiated but are just random jumbles of material, yet it seems that all but the small objects, such as asteroids, are layered objects. For jumbled objects to differentiate, they have to be melted. Then they have to cool and Earth would have to cool in this way before life could exist on it.

In the evolutionary view of the origin of the solar system, the planets would have been melted after accretion by radioactive decay and by impacts.<sup>4</sup> From a biblical perspective, there is not sufficient time for the layered

structures to form or for the heat to dissipate naturally in a short time scale of several thousand years. One would apparently have to propose miraculous divine intervention in the formation of the planets. I would consider this a legitimate possibility, but I am not sure this is what Danny intends.

He seems to suggest the early impacts were smaller and the larger ones were later. But what about the Aitken impact? It does not fit his scenario too well unless it is just viewed as an exception. Unlike the maria, it is on the far side of the moon, near its South pole, and it is the largest impact in the solar system and may be one of the most ancient.<sup>5</sup>

One really large impact could wipe out human life very easily, at the time of the Fall, for instance. An impact like Aitken on Earth would produce a crater four or five times the size of the largest craters known on Earth to date. In Danny's scenario, one would probably simply have to say that God did not allow a really large impact on Earth of the magnitude of Aitken.

The effects of a bombardment around the time of Creation or the Fall must be taken seriously. The effects of such an event would be very severe and much of Earth's life would die, though not necessarily all of it. I don't think this fits in with biblical history well, except at the time of the Flood. Scripture really does not give any indication of any catastrophic events at the time of the Fall, though there apparently was a subtle change of some kind in living things and possibly in thermodynamics.

Do we really have evidence of there being two events? How could we have evidence of this unless we had a reliable absolute chronology of the craters on the moon? I don't think we have that from radiometric dates of moon rocks. Danny's paper seems to give no convincing argument of there being two separate events. The differing crater densities on different areas of the lunar surface mentioned in his paper do not necessarily imply two events. They could imply one longer event in which the number of impacts

drastically dropped off over time. Or, they could indicate two populations of objects.

Danny treats the issue as if the moon is very different from all other bodies in the solar system regarding cratering, and that the cratering event was a very focused kind of thing that only affected Earth and the moon. I don't see this as realistic, judging from what we know about cratering in the solar system. There are examples that I could cite from moons of the outer planets that Danny would probably interpret as two cratering events for those objects as well.<sup>6,7</sup> But his comet approach cannot explain cratering patterns elsewhere in the solar system being like the moon.

The event at the time of the Flood as Danny suggests would be of very short duration, less than a month certainly. But I see no way of reconciling the astroblemes on Earth with such a short-lived event, since impacts are found on Earth in strata of all types, all through the Geologic Column, unless all these strata are Flood deposits.

In Danny's scenario, the early bombardment event (at the Fall, for instance) would leave very little evidence on the earth to the present. Erosion and sedimentation would have been very limited in the pre-Flood earth, presumably, and the Flood would tend to destroy these early craters. Thus, almost all or perhaps all of the craters we find today would have to be from the time of the Flood. Craters throughout Earth's geologic column point to an event that was spread out over a period of months to years. Some impacts occurred during the Flood (such as the Sudbury structure, Canada<sup>2</sup>), while others occurred after the Flood,<sup>8</sup> and there is clear geological evidence of this from specific crater sites.

Dr Faulkner and I are addressing the issue of solar system cratering in two different ways. I have proposed that there was one event that affected much of the solar system in a relatively short time. That event, whatever it was, produced craters with a size distribution different from craters produced after the catastrophic bombardment event.