Megasequences and the floating forest hypothesis: part 2

Dr Timothy L. Clarey has been concerned for some time with megasequences and the floating forest. His latest article[1] could well be supplemented by a discussion of the link between these two. Such a discussion might run along the following lines.

Sloss's seminal article[2] defining megasequences on the cratonic interior of the North American continent contains a wealth of empirical data from all the previous stratigraphers who have worked on this problem. Rather incredibly he blatantly admits the failure of the fossil evidence in an evolutionary paradigm to be able to be used to correlate stratigraphic layers over regions. In particular he noted that such attempts applied over widely scattered localities on the North American continent have "resulted in complex and apparently inconsistent correlation charts" which "appear to bear no close relationship to one another in terms of the time-stratigraphic correlation of the strata involved. As a result, interregional relationships form an apparently chaotic pattern. The interpretations suggest an almost random distribution of unconformities in both space and time."[2] He threw out biostratigraphy and relied on a purely stratigraphic approach to define six megasequences related to what he surmised were ancient sea levels defining nearly continental unconformities revealing "no evidence of discontinuity in the rocks themselves either by nondeposition or erosion".[2] What he did not do was recognize that paraconformities are not erosional surfaces, but rather depositional ones.[3] Coupled with this, he retained the notion of eons of geologic time. It was his expectation that future workers would modify the number of his megasequences or at least some of their boundaries.

One logical way to reintroduce the fossil evidence into the concept of megasequences would be to start with the silvomarine hypothesis of Kuntze[4] and work outward, that is stratigraphically both upward and downward, from there. This would be from a catastrophic perspective which would properly account for the paraconformities and start on scientifically characterizing the complexities of sedimentation of a worldwide flood as evidenced on the North American continent.

Results from exercising Woolley's model[5] of a lycopod and a realization of the three-layered nature of its existence automatically take into account the whole extent of sediment of the coal measures, including all coal, sandstone, shale, limestone, and whatever little clay there may be. The lycopods have that much buoyancy. No vague appeal to other methods of sedimentation is necessary. It also allows for an extensive underpinning of marine organisms like crinoids. The violent shaking of the floating forest might explain the existence, nature, and complexity of the crinoid-rich Mississippian strata beneath the Pennsylvanian. It would also solve Sloss's difficulties with (and disagreements with other stratigraphers about) a supposed continent-wide unconformity at the base of the Mississippian. Furthermore, a quantitative estimate of basin spacing based on the nodes and antinodes of elastic vibration of the asthenosphere between orogenic discontinuities would explain their distribution and, more importantly, the absence of deposition between them without an appeal to restrictively parochial and ill-timed mechanisms.[6]

The recognition of the almost-always rootless nature of North American Devonian fossils points to a downward extension of the megasequence boundary to Sloss's Kaskaskia-Tippecanoe one. Likewise, the amphibian-rich fossil concentration of the Permian speaks of another aeolian or aquatic episode in Flood history that logically extends the megasequence boundary up to the prominent one shown by Sloss at the Permian-Triassic boundary. The distribution of the concentration of fossils from west to east hints at something like the momentum-conserving violent collapse of the earth's vapour envelope.[7] Many of these speculations need to be made more quantitative and need to be checked with field studies. Further emendations to Sloss's megasequences are outside the field of discussion of this letter.

It is surprising Clarey would think the excellent work done by Dr Steven A. Austin on the tree mat formed on Spirit Lake from the eruption of Mount St Helens in 1980 could somehow be used to invalidate or restrict the floating forest theory when over a century earlier Kuntze used a similar mat in a European lake as evidence for it. Whereas it is very disturbing Clarey ascribes the belief of completely hollow lycopod trunk and root structures "based primarily on speculation" to all supporters of the floating forest hypothesis who "do not take into account a number of [necessarily not referenced] key reports describing the non-hollow internal structure of lycopods",[8] when six

years earlier floating forest supporter Woolley recorded fossil evidence for the non-hollow interior of *Stigmaria* and used an estimate of the density of the in-filling in a quantitative model for the whole lycopod[5] in a paper later referenced by Clarey.[9]

Barry Lee Woolley
Blanding, UT
UNITED STATES of AMERICA

References

1. Clarey, T.L., Floating forest hypothesis fails to explain later and larger coal beds, *J. Creation* **31**(3):12, 2017.
2. Sloss, L.L., Sequences in the cratonic interior of North America, *Bull. Geol. Soc. Amer.* **74**:93–114, 1963.
3. Roth, A.A., 'Flat gaps' in sedimentary rock layers challenge long geologic ages, *J. Creation* **23**(2):76, 2009.
4. Kuntze, O., *Phytogeogenesis: Die Vorweltliche Entwickelung der Erdkruste und der Pflanzen in Grundzugen*, P. Frohberg, Leipzig, Germany, 1884.
5. Woolley, J., The origin of the Carboniferous coal measures—part 3: a mathematical test of lycopod root structure, *J. Creation* **25**(3):78, footnote 5, 2011.
6. See, for example, Clarey, T., Fountains of the deep, *Acts and Facts* **43**(12):16, December 2014.
7. The vapour canopy theory has been criticized as not being practically viable. However, this was done by using results from the application of numerical techniques. These powerful methods have the drawback of being hypersensitive to boundary conditions and element shapes: in the author's industrial experience such revealing calculations were only accepted after an experimental test verified them. Real working scientists very infrequently 'abandon' a hypothesis, only assigning it a lower probability in their (unfortunately named) fuzzy logic scheme when difficulties might be thought to have surfaced.
8. Clarey, T. and Tomkins, J.P., Sinking the floating forest hypothesis, *Acts and Facts* **46**(8):10, August 2017.
9. Clarey, T.L., Examining the floating forest hypothesis: a geological perspective, *J. Creation* **29**(3):55, 2015.

» Timothy L. Clarey responds:

I appreciate the two letters to the editor concerning my recent paper about coal beds in Cenozoic rocks, although very little of either of the letters was about my paper. Instead, most of the criticism seemed to be addressed at my stratigraphic and megasequence research.

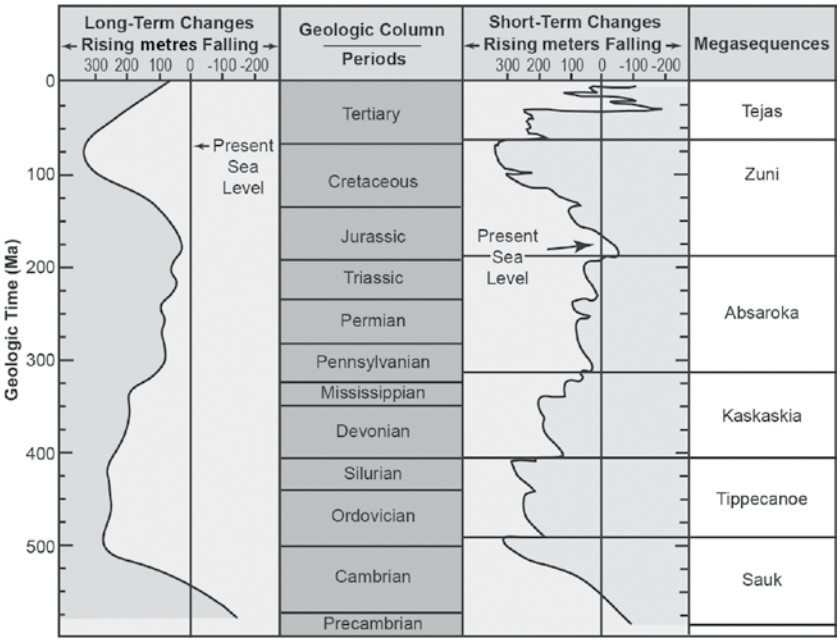

Figure 1. Original uncorrected secular megasequence/sea level chart used in many of my previous publications

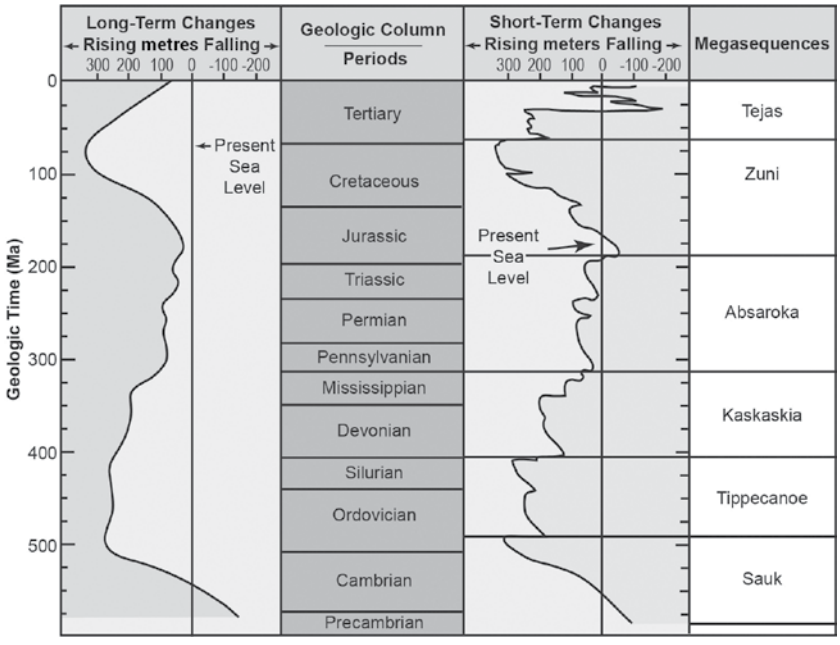

Figure 2. Corrected secular megasequence/sea level chart showing the proper stratigraphic position of the megasequence boundaries

First, the author refers to several errors in the megasequence/sea level chart used in many of my publications and implies I drew it freehand myself (figure 1). I did not. This megasequence chart was used first by Dr Andrew Snelling in many of his publications, going back at least a decade.[1] Furthermore, he obtained the chart from a secular publication where they, not him, had simplified the sea level fluctuations.[2]

I readily admit the chart is slightly off on some of the megasequence

boundaries, whether by accident or oversight. I did correct the Tejas megasequence boundary but never adjusted the levels of some of the other boundaries. For example, the accepted boundary for the bottom of the Absaroka megasequence should be at the base of the Pennsylvanian System and not in the middle of it. And to my knowledge, there is no accepted megasequence boundary at the Permian-Triassic boundary as the author claims. The Absaroka begins at the base of the Pennsylvanian and ends in the Lower Jurassic. Figure 2 shows the corrected version of the secular megasequence/sea level chart with the megasequence boundaries in the correct stratigraphic positions.

Remember, the sea level curve is a smoothed curve, and is not meant to show every minor fluctuation in sea level. It was never implied there were only six tsunami waves. Megasequences represent major advances of water across the continents and include numerous minor fluctuations not shown by the simplified diagram.

Also, in the first letter, the author uses an older reference of mine[3] that shows all six megasequences thinning across the Transcontinental Arch/Midcontinent Rift, east to west in Minnesota. In my subsequent research I have shown that indeed, the Absaroka and the Zuni megasequences did blanket most of the southern part of this uplift.[4]

Moreover, the author never provided a reference for his unsubstantiated statement of "over 230 [coal] layers" in the Moscow and Michigan Basins. I grew up in Michigan and saw some of the exposed coals firsthand. I have never heard of, or observed anywhere, 230 separate coal seams in the Michigan Basin. The limited coal beds present are only a few centimetres to a few metres thick and are all in the Pennsylvanian System or Upper Carboniferous (Absaroka).

Furthermore, in the second letter, the author implies that I used Steve Austin's Spirit Lake research to invalidate the floating forest hypothesis. To the contrary, the Mount St Helens floating log debris mat is merely the model I use to explain coal beds. I fully support the allochthonous origin of coal as Austin described at Spirit Lake. These findings were never used to reject the floating forest hypothesis. They were used to point out that a highly speculative pre-Flood floating forest biome is unnecessary to explain the origin of coal.

Finally, my *CRSQ* article, co-authored with Dr Jeff Tomkins, explains that lycopod trees were not hollow as some creationists have asserted based on the secular literature and an analysis of stigmarian root fossils.[5] Many lycopod trees had the soft parenchymatous tissue between the central vascular stele and the outer periderm decomposed and the space filled with sediment either during transport or *in situ* (e.g. Fossil Grove, Scotland).[5]

My first paper in *J. Creation* criticizing the floating forest hypothesis identified several geological problems that have yet to be addressed by advocates of the floating forest.[6] These two letters are no exception. My geologic criticisms have been completely ignored. Some of these problems include:

1. the lack of a sustainable freshwater lens capable of supporting the biome,
2. the lack of explanation for the timing of the lycopod coal beds, as most occur only in Upper Carboniferous or Pennsylvanian layers,
3. the lack of an explanation for the deposition of three complete megasequences (over 3 km thick) in North America prior to the deposition of lycopod coal beds, and
4. the lack of any evidence of a floating-forest biome in strata deposited prior to the complete closing of the proto-Atlantic Ocean.[6]

And the entire point of my most recent *J. Creation* article concerns the vastness of Cenozoic coal beds that are thicker and more extensive globally than the lycopod coals (Pennsylvanian System).[7] Cenozoic coals are not composed of lycopod trees. The floating forest model cannot explain them. As I concluded in my article:

> "To make matters worse, the advocates of the floating forest hypothesis have made no attempt to account for the thickest and most extensive coals in the world. Coals found in Cretaceous and Paleogene rocks globally have been largely ignored. Creation scientists should not dogmatically hold on to a hypothesis that cannot adequately explain even the smallest subset of coal deposits, let alone later and thicker coal beds. An acceptable Flood-based coal model should provide an explanation for *all* coals."[7]

Timothy L. Clarey
Dallas, TX
UNITED STATES of AMERICA

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1. Snelling, A.A. *Earth's Catastrophic Past: Geology, Creation and the Flood*, Institute for Creation Research, Dallas, TX, p. 448, 2009.
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5. Clarey, T.L. and Tomkins, J.P., An investigation into an *in situ* lycopod forest site and structural anatomy invalidates the floating-forest hypothesis, *CRSQ* **53**(2):110–122, 2016.
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7. Clarey, T.L., Floating forest hypothesis fails to explain later and larger coal beds, *J. Creation* **31**(3):12–14, 2017.