Examining the floating forest hypothesis: a geological perspective

In reference to Dr Timothy L. Clarey's difficulties with a floating forest being responsible for Carboniferous coal deposits,[1] perhaps his understanding of it is at fault. He does not reference Dr Otto Kuntze, who discovered it and has written many times more on it than all other researchers combined. He suggests going back to the "floating log mat model put forth by Austin", not crediting Kuntze's more extensive observations done a century before him or realizing such observations were what helped create the model in the first place. His list of considered alternatives just does not have any field evidence to suggest it.

The one quantitative calculation in his article is irrelevant when considering such things as the impermeable layers in coal measures observed by Joanna Woolley, who is referenced by him. Lycopod bark barriers are just one of many explanations as to how perched water tables could conceivably have existed in the pre-Deluvian floating forest. Furthermore, when Kuntze observed a contemporary floating forest analogue floating down a South American river in the 19th century, he made no mention of peat or homogeneity, the assumed characteristics used by Clarey.

If one were to use the observed circular spread of the lycopod root system, then it would be reasonable to assume circles representing a layer of lycopods had been as densely packed as mathematically possible. If this were the case, then there are spaces where trunks from lycopods in a lower identical layer could have penetrated the first layer. In fact, there are exactly three, and only three, identical but offset layers that could be in a combination where all the lower trunks could penetrate all the spaces. This might argue for a three-layered floating forest.

Clarey uncritically accepts such geological concepts as the existence of cyclothems. In a most interesting and well-reasoned article, several authors have mathematically proven that the supposed repetitive sequences dubbed cyclothems do not exist. These authors examined the nearest thing to a type locality site for cyclothems

and showed that Markov analysis would not exclude the null hypothesis regarding the existence of repetitive layers. As they state: "Although we may hope to derive some more 'meaningful' interpretation of these lithofacies successions, at cyclothemic scales of consideration, there simply is no story to tell."[2]

Using Kuntze's silvomarine theory, the lack of statistical evidence for cyclothems can be explained. The explanation lays in the existence of clustered groups of *thin* coal beds, always *three* in number. They skewed the analysis. Properly treating them allows cyclothems to exist under rigorous mathematical inquiry. It also confirms the expected triple-layer nature of the floating forest. However it does more than that.

The existence of thicker beds argues for floating forest layers that were not yet broken up. (The not uncommon occurrence of splitting coal seams argues for floating forest layers in the process of being split up.) These negate a good part of Clarey's conjectured qualitative objections to the silvomarine hypothesis.

Catastrophic, or fast plate, tectonics has as its weakest point the treatment of continental sedimentation. If we are considering a global Flood on a spinning earth, then we should expect non-linear physical phenomena to appear.[3] I do not yet see that level of modelling sophistication in any effort concerning plate tectonics, and I suspect there will be unexplained phenomena requiring modifications or the complete scrapping of some aspects of current fast plate tectonic work. The 'fast' aspect of such models implies elastic wave phenomenon. We might have evidence of this.

The shape of a coal basin on the western flank of the Appalachian Mountains (eastern USA) has been modelled.[4] Despite difficulties, the modellers were on to something. The physical implications of using a plate equation of *motion* for the asthenosphere to model a coal basin are obvious. At one point the asthenosphere must have been propagating an elastic wave.

Using a plate equation of motion appropriate for the known physical properties and thickness of the asthenosphere,[5] there is no need to fudge the data line for modelling the coal basin shapes or their spacings on the entire North American continent east of the Rocky Mountains. Agreement is obtained: it appears there was a resonance of the asthenosphere between the two probable free ends of the Appalachian and Rocky Mountains. (One end could possibly be a forced end.)

This resonance would explain the coal basins in New England having multiple turbidites, maceral plumes, unusual anthracite coal chemical composition, and fragmentary lycopod fossils. The pieces of the floating forest were being periodically spilled over the top of the Appalachian Mountains (the eastern end of the continental resonant basin). A criticism of the catastrophic tectonic plate work would be that these and other geographically extensive and in-depth observations have not yet been incorporated into it or derived from it. I cannot conceive of the runaway subduction of any plate not coupling with an adjacent non-subducted one, perhaps with the adjacent plate reacting in a repetitively rebounding fashion.

Finally, I fully agree with Clarey about his floating forest being a 'phony forest'. Any continent-fringing, terrestriality-exhibiting, peat-laden, single-layer, easily dissociated floating Carboniferous forest is thoroughly phony in regards to the aggregate whole of the preceding list of characteristics or any of its components. Just how does this relate to the silvomarine hypothesis of Kuntze, Scheven, and Woolley?

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References

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