Fossil snakes and the Flood boundary in North America

The placement of the Flood/post-Flood boundary in sedimentary rocks, assuming the geological column for sake of discussion, is important for creationists. If we misplace this boundary, our view of the Flood and the post-Flood world will be skewed. We need to spend much time analyzing the placement of this boundary, if we are to develop an accurate and sophisticated Flood model. With that in mind, I have a few comments on the perspective article by Chad Arment.[1]

Arment believes that if one finds two extant genera from the same kind at a fossil site, then that layer containing the fossil must be post-Flood. He applied this analysis to fossil snakes, but I imagine the argument can be made for other organisms as well. Moreover, the other extinct genera found with that particular extant genus must be post-Flood also, meaning this can be used to determine other post-Flood sites. The reason for this assumption is based on the following belief:

> "This is because the distinctive suite of anatomical characteristics that define a genus are unlikely to develop from ancestral stock in exactly the same way twice."[2]

It seems to me that Arment is assuming an accurate classification system with accurate definitions of

species, genus, family, and kind for fossils and living vertebrates. He also seems to assume that a genus would not have much variability and that the correct identification of the fossil has been made. I believe the main principle that we should not find two extant genera from the same fossil site, if from the Flood, needs to be developed more rigorously.

Fossils would be one criterion for attempting to find the Flood/post-Flood boundary, if we can figure out all the nuances of fossils and biostratigraphy. I think there is a better way for determining the boundary and that is to apply *multiple* criteria, since only one by itself, such as fossils, may be equivocal.

I have provided 32 criteria that can be applied for determining the Flood/post-Flood boundary.[3] When I apply these criteria to the western United States, where I live, I often find the boundary is in the early to mid Pleistocene, for instance in the Wind River Basin and the southern and central High Plains.[4] But I grant that because of uniformitarian dating and taxonomy problems, and many assumptions in their model, the boundary can be anywhere in the 'late Cenozoic', defined as the Miocene, Pliocene, or Pleistocene. Each area needs to be examined on its own merits, and 'Pleistocene' does not automatically mean the time of the Ice Age. Ice Age deposits are primarily found in the Late Pleistocene.

One criterion is the existence of coal at the surface. Coal is compressed plant matter that has been heated up and transformed. It takes a lot of rock above the coal to reach high enough temperatures for the transformation, and for coal found at the surface, this can give us a crude measure of late Flood erosion. We would not expect coal to form after the Flood, especially in view of the purity and thickness of many coal layers. How could hundreds of feet of trees and plants be gathered together in one place over hundreds of square miles, buried by a few thousand metres of sediments, and then re-eroded down to the level of the coal? Surface coal is an obvious Flood signature and not the result of post-Flood activity. There is plenty of 'Miocene' coal, the Miocene being the very early late Cenozoic. However, much strata had to cover this coal and then be re-eroded during the Recessive Stage of the Flood,[5] which would place the Flood/post-Blood boundary up into the Pliocene to mid Pleistocene at those locations.

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References

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3. Oard, M.J., *The Flood/Post-Flood Boundary Is in the Late Cenozoic with Little Post-Flood* Catastrophism, 2014, michael.oards.net/PostFloodBoundary.htm.
4. Oard, M.J., Relating the Lava Creek ash to the post-Flood boundary, *J. Creation* **28**(1): 104–113, 2014.
5. Walker, T., A Biblical geological model; in: Walsh, R.E. (Ed.), *Proceedings of the Third International Conference on Creationism*, technical symposium sessions, Creation Science Fellowship, Pittsburgh, PA, pp. 581–592, 1994.

» Chad Arment replies:

As my article was directly instigated by an online discussion with Michael Oard, I expected a response, but hoped that he would finally grapple with the argument itself. Unfortunately, he has only expressed his token opposition. Oard's call for rigorous development lacks conviction. He simply would like to be able to place the Flood boundary wherever he likes without having to worry about finding, say, both mastodons and mammoths on either side. I strongly doubt that creation scientists who are actually paleontologists or zoologists consider fossil anatomical evidence as 'equivocal' as Oard does.

In the case of North American snake fossils, there is good evidence to lay one of Oard's concerns immediately to rest. Oard states, "He also seems to assume that a genus would not have much variability." Oard's idea is that pre-Flood fauna was so variable in morphology that some Flood-destroyed genera and species would be close enough matches to fauna developing from post-Flood diversification in Ark-rescued genera as to be anatomically indistinguishable. For this to be true we should see a great diversity of species and genera within a pre-Flood kind (or at least a good number of potentially related genera, as hybridization data would be lacking). It would be silly to argue that 'much variability' would only result in a handful of look-alike species being found in the fossil record. So where is this great diversity in North American snake fossils?

As has been well explained in creationist literature, *Pantherophis*, *Lampropeltis*, and *Pituophis* are all in the same extant kind. If, as Oard implies, some fossil *Pantherophis*, *Lampropeltis*, and *Pituophis* could simply be fossil 'mimics' from pre-Flood populations, there should be a large number of other colubrids in the same fossil layers which share some characteristics (being in the same kind) but are different enough to be characterized as other species or genera. Holman's *Fossil Snakes of North America* only notes a few additional extinct *Elaphe* (*Pantherophis*) distinctive enough to separate into species (*E. buisi, E. kansensis, E. pliocenica*), one additional extinct *Lampropeltis* (*L. similis*), and no additional species of *Pituophis*.[1] Among the Colubrinae, the only fossil genera not attributable to extant taxa are *Ameiseophis* (a single small species known), *Pseudocemophora* (which may be related to *Lampropeltis* and *Cemophora*, bringing the latter into the *Pantherophis* kind), *Miocoluber*, *Paracoluber* (both morphologically similar to the extant racers of the genus *Coluber*), *Dakotaophis* (a very small snake with one recognized species), *Nebraskophis* (a distinctive genus without extant relatives), *Paraoxybelis* (based on poor material, and may be

synonymous to an extant genus like *Oxybelis*), *Pollackophis* (one small species with traits unique to all known Colubrinae), *Proptychophis* (a distinctively different rear-fanged colubrid), and *Texasophis* (small snakes, three North American and two European species noted). Most of these have very little in common with *Pantherophis*, and several (*Ameiseophis*, *Nebraskophis*, *Pollackophis*) may represent populations that went extinct with the Flood. There is no evidence of a wide diversity of large ratsnake-, kingsnake-, or bullsnake-like serpents unattributable to extant taxa in the fossil record. Therefore, there is no evidence that fossil specimens of *Pantherophis*, *Lampropeltis*, or *Pituophis* in North America would require separation into either post-Flood extant species or pre-Flood doppelgängers.

Regarding Oard's hand waving with Miocene coal, I can only reiterate that the method I am proposing applies to specific fossil beds and may not be suitable for broad stratigraphic brush strokes. So unless Oard finds a coal seam with an imbedded *Lampropeltis* fossil, I don't see the problem.

The Flood boundary problem is an interesting puzzle, but Oard seems to have forgotten the first rule of putting puzzles together—start with the corners first. Not all criteria are equal, and some starting assumptions are stronger than others. When the Bible says that only one pair of any terrestrial unclean kind was rescued on the Ark, that is a powerful starting point, and one that shouldn't be dismissed in favour of weaker arguments.

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References

1. Holman, J.A., *Fossil Snakes of North America*, Indiana University Press, Bloomington, IN, 2000.