Chapter 17

Unique Cenozoic Mammal Fossil Characteristics

Mammal fossils are almost exclusively found in the Cenozoic. There have been some mammals that have recently been discovered in the Mesozoic,[1] some fairly complex,[2] but these instances are still very small in number. The reason why not many Mesozoic mammals have been found is because evolutionary/uniformitarian scientists regularly date a layer with a mammal fossil as Cenozoic, adding an element of circular reasoning to the idea that mammals are predominantly found in the Cenozoic. Interestingly, mammals were found in what was considered a "late Mesozoic" formation in Chili and then "re-dated" as early to mid-Cenozoic, just because of the existence of mammal fossils.[3,4] But for sake of discussion, I will assume the Cenozoic mammal distribution of the geological column. When I do this, there are several conundrums that pop up; if one assumes that the Cenozoic is post-Flood. The situation is even worse for the Precambrian and Paleozoic Boundary Models in that they have to fit most of the geologic column into their post-Flood scheme

Where Are the Mammal Fossils If the Flood/Post-Flood Boundary Is at the K/T?

If the Flood/post-Flood boundary is at the Cretaceous/Tertiary (K/T) boundary, where are the pre-Flood mammals that died in the Flood? The lack of mammals makes no sense in a Flood that buried all land creatures that breathed air. The same situation also exists with birds, flowering plants, and man. Assuming the K/T boundary, Dr. Todd Wood and Megan Murray wrote:

> "Strangely missing from the Flood-deposited strata were most of the mammals, birds, and angiosperms [flowering plants], and all evidence of human life. … If mammals, birds, and humans lived together in an ecological zone, why were they not preserved like the other pre-Flood zones?"[5]

They suggest that all but the flowering plants would make poor candidates for fossilization, but this does not seem true.

A second reason, considered more likely, is the situation where the pre-Flood ecological zone that containing mammals, birds, flowing plants, and humans lived next to future subduction zones, and catastrophic plate tectonics annihilated them in the subduction zone. This option does not seem any more likely than the first option, since it would involve special pleading for an ecosystem that is always near future subduction zones.

A third option is the spring which fed the rivers of Eden might have been located at the future center of the fountains of the great deep and as a result was destroyed by the initial onslaught of the Flood. This option also seems requires very special conditions and assumes a low population before the Flood. Simple geometric progression says otherwise. Using conservative figures the

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[1] Oard, M.J., 2007. Jurassic mammals—more surprisingly diverse. *Journal of Creation* 21(2):10–11.
[2] Werner, C., 2008. *Evolution: The Grand Experiment vol. 2: Living Fossils*, New Leaf Press, Green Forest, AR, pp. 169–182.
[3] Flynn, J.J., Wyss, A.R., Charrier, R., and Swisher, C.C., 1995. An Early Miocene anthropoid skull from the Chilean Andes. *Nature* 373:603–607.
[4] Oard, M.J., 2013. The reinforcement syndrome ubiquitous in the earth sciences. *Journal of Creation* 27(3):13–16.
[5] Wood, T.C. and Murray, M.J., 2003. *Understanding the Pattern Of Life: Origins and Organization of the Species.* Broadman & Holman Publishers, Nashville, TN, p. 190.

population of the earth very likely was in the billions prior to the Flood. People, as well as mammals, birds, and certainly flowering plants would have lived well away from the Garden of Eden by the time of the Flood. It makes more sense that the mammals, birds, flowering plants, and possibly some human fossils from the Cenozoic are actually from the Flood, and the boundary is not at the K/T but in the Late Cenozoic.

In the K/T Boundary Model, Cenozoic mammal fossils found in the rocks would be a result of mammals spreading across the earth and multiplying after leaving the Ark. These mammals supposedly were buried in gigantic post-Flood catastrophes. Considering the many thick layers of Cenozoic strata, there must have been countless post-Flood catastrophes of moderate to high magnitudes. Multiple widespread catastrophes would make it exceedingly difficult for mankind and animals to spread over the earth, thrive, and multiply.

Figure 17.1. Carnegie Hill, Agate Fossil Beds National Monument, an erosional remnant several hundred feet above the Niobrara River in which many hundreds of fossil mammals have been unearthed.

Since the Retreating Stage of the Flood is mainly an erosional event, it can be argued that the mammals were destroyed when the top layers of the continental sedimentary rocks (see Chapter 21) were eroded. I believe there is a lot of merit in this idea. I think this is the reason we find very few human fossils in the Cenozoic. But it does not work as an explanation for the missing mammals because the problem is not the erosion of the top of the sedimentary layers, but the strata left behind. Some of these strata have tens of thousands of mammal fossils, labeled

Cenozoic. It appears to me after massive erosion, the strata remaining on the continents would be from the Flood (see Chapter 21).

What about Cenozoic Mammal Graveyards?

If we assume the K/T Boundary Model, post-Flood catastrophes would have to explain large graveyards of mammal fossils. It would be difficult to concentrate mammals into large graveyards during these catastrophes. However, we do often find mammals concentrated into fossil graveyards of various sizes. A recent book on hundreds of bone beds, or fossil graveyards in the sedimentary rock lists 25% of them from the Cenozoic. This does not include those found in the Pleistocene.[6]

Figure 17.2. Museum display of mammal graveyard at Agate Fossil Beds National Monument Visitors Center, western Nebraska.

It probably would not be difficult to concentrate a *small* number of mammals into one graveyard in post-Flood catastrophes, but a large number in one location is another matter. Probably the Cenozoic graveyard with the most concentrated number of mammals is found in Agate Springs, western Nebraska. The fossil graveyard is called Agate Fossil Beds National

[6] Behrensmeyer, A.K., 2006. Bonebeds through time; in: Rogers, R.R., Eberth, D.A., and Fiorillo, A.R. (Eds.), *Bonebeds: Genesis, Analysis, and Paleobiological Significance*, The University of Chicago Press, Chicago, IL, p. 72.

Monument. It contains a wide variety of extinct Miocene mammals, mostly concentrated within University and Carnegie Hills (Figure 17.1). Figure 17.2 shows a sample of the concentrated bones from the visitors' center. It is estimated that over 9,000 animals are entombed here. The area is also world famous for its "Devil's Corkscrews," Daemonelix (Figure 17.3), which are spiral burrows of a beaver called palaeocastor. Occasionally its skeleton is found still in its spiral burrows. What would cause the animals to concentrate and be fossilized at Agate Springs, assuming the catastrophe happened after the Flood?

Figure 17.3. A Devil's corkscrew at Agate Fossils Beds National Monument.

The high concentration of mammals is found in two erosional remnants and indicates extensive erosion happened *after* the mammals were deposited. Remarkably, there is no erosional debris nearby (see Chapter 21). This is a likely Flood signature. It stretches the imagination to think of a post-Flood catastrophe where animals are killed, buried en-mass, the area eroded and the debris swept off the continent.

How is the Cenozoic Fossil Order Explained after the Flood?

According to the evolutionary/uniformitarian geological column, the Cenozoic has a specific order of mammals that evolved and went extinct over time. The following points can be made for other organisms in the Cenozoic, but this discussion will focus on mammals. If the Cenozoic is post-Flood, the mammal "order" found in the fossil record is a result of post-Flood catastrophism. The first appearance of a mammal in the fossil record would be attributed to the animals spreading out from the Ark, multiplying, diversifying, and dying at that particular location. Extinction is another matter, since they need to disappear *at the same time,* worldwide, after the Flood. Surely post-Flood catastrophes would not wipe out particular types of mammals everywhere across the earth.

It is commonly believed by uniformitarian scientists that the early Cenozoic was wet and warm, favoring certain types of mammals. Then, as the climate became cooler and drier in the late Cenozoic, it caused the extinction of the early Cenozoic mammals and favored the mammals that show up in the late Cenozoic. It is further claimed that the wet early Cenozoic favored animals with a browsing diet, and the drier late Cenozoic favored those that ate grass.[7] That supposedly explains why horses found in the Cenozoic evolved longer teeth and legs and the earlier ones were unable to survive, going extinct.

The above scenario is simplistic from a climate point of view because it is a generalization of climate with many exceptions. In a warm, wet climate, there would always be cool and/or dry areas and vice versa. So, this mechanism should cause few, if any, mammals to go extinct. Janis *et al.* stated in respect to supposed horse evolution (Figure 17.4), which is used to date sedimentary layers to this day:

> The story of evolutionary progression to the present-day genus *Equus* also overlooks the fact that, in addition to the mid Miocene radiation [spreading out] of the hypsodont Equinae [horses with long teeth], there was also a radiation of more specialized horses within the subfamily Anchitheriinae. These equids were obviously committed browsers (very low-crowned cheek teeth), with stocky limb proportions suggestive of a preference for closed habitats such as woodland.[8]

So, you can see that there were browsers during the dry late Cenozoic.

Post-Flood catastrophists must find a realistic mechanism to explain the order of extinctions of a huge number of mammals in the Cenozoic fossil record. They must also explain how all of them went extinct in several hundred years following the Flood all over the globe.

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[7] Janis, C.M., Damuth, J., and Theodor, J.M., 2002. The origins and evolution of the North American grassland biome: the story from the hoofed mammals. *Palaeogeography, Palaeoclimatology, Palaeoecology* 177:183–198.
[8] Janis *et al.*, Ref. 7, pp. 184–185.

Figure 17.4. Part of a Cenozoic horse evolution display at the Field Museum of Natural History in Chicago.

Questions in Mammal Biogeography

There are many unanswered questions associated with the present day location of mammals as well as the location of Ice Age mammals.[9] One of the most perplexing is the presence of marsupials, mammals with pouches on their stomachs, in Australia. A few other continents also have their own unique animals and plants. Why do lions, zebras, giraffes, and hippopotami only live in the wilds of Africa? Why didn't these animals migrate elsewhere? How can similar plants and animals be found on different continents, separated by an ocean? Some islands have unique flora and fauna mostly found nowhere else, such as the southwest Pacific Islands and Madagascar. Why are iguanas found only on the Fiji Islands and in New World islands like the Galapagos?[10,11] There are numerous frogs of similar species in central and northern South

[9] Oard, M.J., 2014. *The Genesis Flood and Floating Log Mats: Solving Geological Riddles*, Creation Ministries International ebook, Powder Springs, GA.

[10] De Queiroz, A., The resurrection of oceanic dispersal in historical biogeography, *Trends in Ecology and Evolution* **20**(2):68–73, 2005.

[11] Keogh, J.S., Edwards, D.L., Risher R.N. and Harlow, P.S., Molecular and morphological analysis of the critically endangered Fijian iguanas reveals cryptic diversity and a complex biogeographic history, *Philosophical Transactions of the Royal Society B* **363**:3,413–3,426, 2008.

America and on Caribbean islands.[12] The Hawaiian archipelago is among the most isolated set of islands in the world, but they have an incredible diversity of organisms, including spiders, land snails, crickets, fruit flies, mollusks, and various birds. [13] In fact, just to explain the land snails on the Hawaiian Islands, some scientists have proposed 29 *separate* colonizations![14]

These are not only problems for Flood geologists, but also for evolutionists, who are hard pressed to account for this biodiversity. In fact, evolutionists thought plate tectonics would resolve most of their dilemmas. They assumed plants and animals had evolved on a supercontinent, and as the supercontinent broke up and spread, the animals and plants rode the plates to their present locations. Further evolution would then explain differences. This is called the *vicariance hypothesis* because the animals were vicariously or passively transported on the diverging plates. This theory is now essentially dead.[15,16] Molecular (mainly DNA) and morphological (shape) comparisons have proven an unwelcome obstacle for the vicariance hypothesis.[17,18] These studies show that many plants and animals did not arrive on the separated continents or oceanic islands until *well after* the break-up of the supercontinent.[10,19] So, both evolutionists and creationists are mainly left with some kind of rafting hypothesis over oceans and seas.[9,20,21]

Those who believe the K/T Boundary Model must also postulate the spreading of many more mammals across the earth on log mats than just those living at present and during the Ice Age. This task is not insurmountable, but it does present numerous challenges. For example Wood and Murray state, with the exception of opossums, marsupials are only found in Australia. This is the case today as well as in Australia's Cenozoic fossils. (The problem marsupials present when they are found in Cenozoic strata in Australia for a late Cenozoic Flood/post-Flood boundary will be discussed in Chapter 35.) Marsupial's exclusive domain is of course a problem for creationists as well, but the log mat model can potentially solve it. Interestingly, marsupials are common fossils in the Cenozoic on *all* continents, especially South America and Australia. This poses the question of why they went extinct on every continent except Australia. Wood and Murray explain:

> After the Flood [during the Cenozoic], various marsupial baramins [kinds] appear everywhere, including Africa, Asia, Europe, and even Antarctica. Their widespread occurrence testifies to their successful rafting ability, but their modern absence from the

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[12] Heinicke, M.P., Duellman W.E. and Hedges, S.B., Major Caribbean and Central American frog faunas originated by ancient ocean dispersal, *Proceedings of the national Academy of Science* **104**:10,092–10,097, 2007.
[13] Gillespie, R.G., Croom H.B. and Palumbi, S.R., Multiple origins of a spider radiation in Hawaii, *Proceedings of the National Academy of Science* **91**:2,290–2,294, 1994.
[14] Cowie, R.H. and Holland, B.S., Dispersal is fundamental to biogeography and the evolution of biodiversity on oceanic islands, *Journal of Biogeography* **33**:193–198, 2006.
[15] Statham, D., Plants and animals around the world: why are they found where they are? *Creation* **32**(4):45-47, 2010; http://creation.com/plants-animals-biogeography.
[16] Johnson, B., Biogeography: a creationist perspective, *Creation Research society Quarterly* **48**(3):212–223, 2012.
[17] Statham, D., Biogeography, *Journal of Creation* **24**(1):82–87, 2010; http://creation.com/biogeography.
[18] Snelling, A.A., *Earth's Catastrophic Past: Geology, Creation & the Flood*, Institute for Creation Research, Dallas, TX, pp. 163–182, 2009.
[19] Winkworth, R.C., Wagstaff, S.J., Glenny D. and Lockhart, P.J., Plant dispersal N.E.W.S. from New Zealand, *Trends in Ecology & Evolution* **17**(11):514–520, 2002.
[20] Wood and Murray, Ref. 5, pp. 187–203.
[21] Wise, K.P. and Croxton, M., Rafting: a post-Flood biogeographic dispersal mechanism; in: Ivey, Jr., R.L. (Ed.), *Proceedings of the Fifth International Conference on Creationism*, technical symposium sessions, Creation Science Fellowship, Pittsburgh, PA, pp. 465–477, 2003.

same regions indicates that they were unable to establish themselves as the dominant animals in their ecosystems.[22]

So, Wood and Murray invented ingenious explanations that do not seem plausible, such as the marsupials of South America went extinct because they arrived on South America, a large island, first by rafting. The marsupials spread out more quickly than placental mammals. Then after the connection between North and South America was established at the Isthmus of Panama, placental mammals spread into South America causing the South American marsupials to go extinct. Presumably, something similar occurred on the other continents. But the problem is how exactly could marsupials spread more quickly than placental animals and how would the placental mammals cause the marsupials to go extinct?

Summary

The Cenozoic mammal characteristics bring up several problems for the K/T Boundary Model, as well as boundaries in the Paleozoic and Precambrian. Table 17.1 summarizes these issues.

1) Lack of mammal fossils buried in the Flood
2) Mammal graveyards difficult to explain
3) The order of the Cenozoic mammal fossil record needs explaining after the Flood
4) The problem of the extinction of a large number of mammals
5) The special problem of the extinction of marsupials on all continents except Australia

Table 17.1 Five problems associated with Cenozoic mammal fossils for the K/T Boundary Model.

[22] Wood and Murray, Ref. 5, p. 197.