

DISCUSSION 9

THE GREAT TIME QUESTIONS

Part 3: Data Favoring a Recent Creation

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OUTLINE

1. The other side
2. Data favoring a recent creation
 - a. Rates of erosion too fast
 - b. Oceans should be full of sediments
 - c. Old flat surfaces should be gone
 - d. Flat gaps in the rock layers (Paraconformities)
 - e. Ancient carbon-14
 - f. Soft tissue in “ancient” dinosaurs should not be there
 - g. Humanity’s growth rate is too fast
 - h. The impressive evidence for human activity is recent
 - i. Mutations too frequent for humanity to have survived long ages
3. Lots of time does not solve evolution’s problems
4. Conclusions
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1. THE OTHER SIDE!

1. THE OTHER SIDE!

In Part 2 of the discussion about THE GREAT TIME QUESTIONS, we considered some factors often presented to favor the model of long geologic ages of billions of years for life on earth. Here we consider data that supports the alternate model of a recent creation a few thousand years ago as indicated in the Bible.

1. THE OTHER SIDE!

The scientific literature which tries to explain most everything within the now dominant secular evolutionary paradigm, reflects a strong bias for the long geologic ages. In general, **conclusions** favoring a recent creation are not published in scientific journals and textbooks. No doubt, part of that bias is because evolution needs all the time it can find to favor highly improbable, or essentially impossible, events.

Nevertheless one can find a significant body of scientific **data** that **favors a recent creation**. Nine examples follow. Some of these will be discussed more extensively in Discussion 16, about the evidence for the Genesis Flood.

2. DATA FAVORING A RECENT CREATION

a. RATES OF EROSION ARE WAY TOO FAST

2. DATA FAVORING A RECENT CREATION

a. RATES OF EROSION ARE WAY TOO FAST FOR THE LONG GEOLOGIC TIME SCALE

- **Our continents are constantly being washed into the oceans** as erosion persists over the years. One can calculate how fast this is occurring by measuring the quantity of sediment carried by rivers to the ocean.
- Calculations indicate that at our present rate of erosion of **61 mm in 1000** years, our continents would be eroded away in a mere **10 million** years.

2. DATA FAVORING A RECENT CREATION

- a. **RATES OF EROSION ARE WAY TOO FAST FOR THE LONG GEOLOGIC TIME SCALE**
- How come our continents are still here since they are considered to be several billion years old? In that long period of time they should have been eroded away a long time ago and they could have been eroded away **many times**. Of course, you can only erode them away once because after that there is nothing left to erode.
 - Correcting for the results of agriculture that increases erosion, one can estimate that before agriculture, our present continents could have been **eroded more than 100 times** during their assumed age of billions of years. Yet they are still here.
 - The next slide is a quotation from two geologists delineating the problem.

Dott, R H, Batten, RL. 1971. Evolution of the Earth, p. 136.

“North America is being denuded at a rate that could level it in a mere 10 million years, or, to put it another way, at the same rate, ten North Americas could have been eroded since middle Cretaceous time 100 m.y. ago.”

2. DATA FAVORING A RECENT CREATION

a. RATES OF EROSION ARE WAY TOO FAST FOR THE GEOLOGIC TIME SCALE

- Geologists try to explain this incongruity by suggesting that the continents, including the mountains, have been renewed from below as the higher layers are eroded away.
- This is not an adequate explanation, because many of the old to younger layers are still with us. Much of the **geologic column**, which is the arrangement of the geologic layers from young to old, is still there. **We have not yet gone through even one complete cycle of erosion of the geologic column on the continents.** If the continents have been renewed from below, the geologic column should have been replaced many times long ago, yet it is still here.

2. DATA FAVORING A RECENT CREATION

a. RATES OF EROSION ARE WAY TOO FAST FOR THE GEOLOGIC TIME SCALE

Rates of erosion are way too fast for reconciliation with the long ages proposed for the geologic column. Other geologic rates, such as the **uplift of mountains**, that is way too fast, and the rate of **production of volcanic material**, that is also way too fast, all indicate that at present, geologic changes are much too rapid to fit into the long ages proposed for the standard geologic time scale. (See Chapter 15 in **Roth AA. 1998. Origins: Linking Science and Scripture. Review and Herald.**)

2. DATA FAVORING A RECENT CREATION

a. RATES OF EROSION ARE WAY TOO FAST FOR THE GEOLOGIC TIME SCALE

The next slide illustrates some “old” Mesozoic rocks in eastern France that are assumed to be in the 100 million year age range. They simply illustrates a part of the geologic column that should have been eroded away a long time ago if they are as old as purported, but they are still here. Their contorted folding is also interesting; they slid from right to left and folded in the process to form an S shaped fold seen in the middle of the picture. Such sliding can easily be associated with the catastrophic Genesis Flood.



Folded Mesozoic layers in eastern France

2. DATA FAVORING A RECENT CREATION

**b. THE OCEANS SHOULD BE FULL
OF SEDIMENTS**

2. DATA FAVORING A RECENT CREATION

b. THE OCEANS SHOULD BE FULL OF SEDIMENTS

The two geologists we quoted above (Dott RH, Batten RL. 1971. *Evolution of the Earth*, p. 136), who were talking about how fast the continents would be eroded, further state:

“If we next assume the present rate of erosion and exposed continental volumes to have been constant over, say, the past 1 billion years, then we would expect a staggering 30,000-meter-thick layer of sediments to cover the sea floors today. Apparently we have erred badly in making our assumptions.”

When we look at the ocean floor we find at best only 1% of that expected 30,000 meters of sediment, and the oceans are considered to have been there much longer than 1 billion years.

2. DATA FAVORING A RECENT CREATION

b. THE OCEANS SHOULD BE FULL OF SEDIMENTS

However, those who believe in long geologic ages can easily suggest that there is little sediment in the ocean because it has been **subducted** (drawn down) into the earth at the oceanic trenches, according to the plate tectonics model of a moving crust. That is not an adequate answer because not that much sediment is subducted into these trenches. It is estimated that at present only 10-20% of the volume of sediments carried into the oceans by the rivers is subducted into the trenches, and river sediments seem to be still accumulating near the mouths of the rivers. All this indicates that there may not have been a large widespread transport to the trenches in the past.

2. DATA FAVORING A RECENT CREATION

b. THE OCEANS SHOULD BE FULL OF SEDIMENTS

One must keep in mind that the volume of the continents above sea level averages only 623 meters, while the oceans average 3800 meters in depth, and the oceans cover nearly $\frac{3}{4}$ of the earth's surface. So our present continents do not have enough material above sea level to fill the oceans. However, in the evolutionary model, the suggestion that the continents are constantly renewed from below in a great rock cycle, could alleviate that incongruity. Recall, as pointed out above, that suggestion seems untenable because lots of the younger to older rock layers are still there on the continents and have not been cycled even once.

2. DATA FAVORING A RECENT CREATION

b. THE OCEANS SHOULD BE FULL OF SEDIMENTS

Assuming that agriculture has doubled the rate of erosion (it is likely less) and that the continents are less than 3 billion years old, one can still suggest that the oceans should have been filed up many times over.

Conservatively one can estimate at least **7 times.**

2. DATA FAVORING A RECENT CREATION

b. THE OCEANS SHOULD BE FULL OF SEDIMENTS

In a biblical Flood context it can be proposed that a lot of sediments were deposited on the continents during the Flood and then were partially eroded as the rapidly receding Flood waters carried sediments to the oceans. Since then, rates of erosion are slower, but are still so fast that they challenge the long geologic ages.

2. DATA FAVORING A RECENT CREATION

c. OLD FLAT SURFACES SHOULD BE ERODED AWAY

2. DATA FAVORING A RECENT CREATION

c. OLD FLAT SURFACES SHOULD BE ERODED AWAY

There are some places on the earth that are quite flat yet are assumed to be very old. However erosion tends to be highly irregular. How could these flat surfaces remain so flat for the millions of years they are assumed to have been in existence. Wear and tear of these surfaces by weathering, along with wind and water transport over the ages should leave deep scars. They should not only be irregular, but because normal erosion is so fast, one can calculate that over the long geologic ages proposed, they should all be gone!

2. DATA FAVORING A RECENT CREATION

c. OLD FLAT SURFACES SHOULD BE ERODED AWAY

The next slide from Dead Horse Point in Utah illustrates how irregular erosion tends to be. There is an old peneplain cycle concept (widespread flat erosion to sea level) that was used to explain assumed eroded flat geological surfaces, but the model is no longer considered valid because of the lack of any widespread present examples on the continents and other problems.



COLORADO RIVER in eastern Utah. Note the irregular erosion

2. DATA FAVORING A RECENT CREATION

c. OLD FLAT SURFACES SHOULD BE ERODED AWAY

The next picture shows a small portion of Kangaroo Island on the south side of Australia. The island is around 50 by 150 kilometers in size. The surface is designated by the red arrow. Most all of the island is very **flat** and its surface is considered to be around 160 million years old as determined by both fossil and radiometric dating evidence. In 160 million years, you would expect on an average, at least 5 kilometers of erosion down from the surface. Maybe Kangaroo Island is not that old!

The slide after the picture of Kangaroo Island provides a quotation from a geologist who endorses long geologic ages and who wonders about Kangaroo Island. I then add a final comment.



160 Ma →

KANGAROO ISLAND, AUSTRALIA

Note the very flat surface (arrow) assumed to be 160 million years old.

Twidale CR. 1976. On the Survival of Paleoforms. American Journal of Science 276:77-95

“The survival of these paleoforms [their topography] is in some degree an embarrassment to all of the commonly accepted models of landscape development.”

COMMENT:

However, if you accept the biblical model of a recent creation, there is no embarrassment whatsoever, because there has been little time for erosion.

2. DATA FAVORING A RECENT CREATION

**d. FLAT GAPS:
PARACONFORMITIES**

2. DATA FAVORING A RECENT CREATION

d. FLAT GAPS: PARACONFORMITIES

- **Paraconformities** are **gaps** found between the sedimentary layers of the earth that are assumed, according to the standard geologic time scale to represent a considerable amount of time. Furthermore at a paraconformity, the layers just above and below the gap are **flat and parallel**. Hence these can be called **flat gaps**. You can tell that you have a paraconformity because in other regions of the earth, you can find the missing parts (layers) of the geologic column with their special fossils. These missing layers are **assumed to have taken a long time** to be deposited and their fossils are assumed to have taken a long time to evolve, and **that long time determines the amount of time at the gap** where the layers are missing.

2. DATA FAVORING A RECENT CREATION

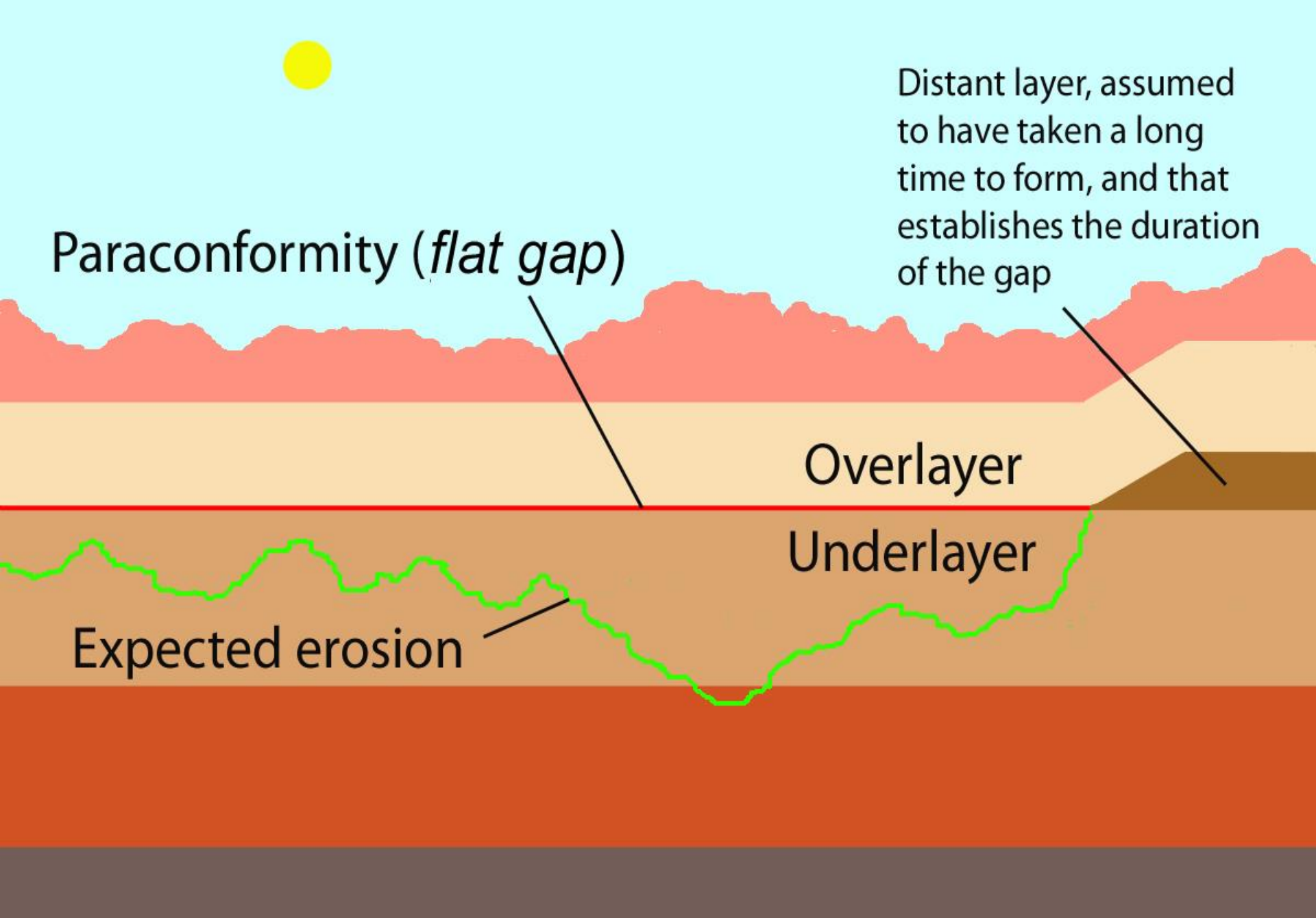
d. FLAT GAPS, PARACONFORMITIES

- At these flat gaps (paraconformities) **you would expect a great deal of irregular erosion over the millions of years of assumed time for the gaps, yet the contacts are usually very flat with little evidence of erosion of the underlayer of the paraconformity contact. Over the long ages, these surfaces are assumed to have been elevated, hence no deposition, but they should be eroded. This lack of erosion indicates that the long time proposed for the gap (paraconformity), and consequently the geologic ages, never occurred.**

2. DATA FAVORING A RECENT CREATION

d. FLAT GAPS, PARACONFORMITIES

- **The next slide illustrates a paraconformity (flat gap). It is the red line between the underlayer and the overlayer. The brown layer at the right is between part of the layers, and the time suggested for its deposition determines the time between the underlayer and the overlayer, i.e. where the brown layer is missing. For instance, if the brown layer is assumed to have taken 10 million years to be deposited, then the gap is assumed to have lasted for 10 million years. The green line suggests the erosion expected if there was a lot of time at the gap.**



CROSS SECTION THROUGH GEOLOGIC LAYERS SHOWING A PARACONFORMITY

2. DATA FAVORING A RECENT CREATION

d. FLAT GAPS, PARACONFORMITIES

- One can estimate how much erosion one might expect at these gaps based on average rates of erosion for the earth. It is considerable. Yet the contacts are usually flat, and sometimes difficult to identify, indicating that little time has elapsed.
- Paraconformities suggest that there has been little or no time for the deposition of the geologic layers, as would be expected for the catastrophic Genesis Flood.

2. DATA FAVORING A RECENT CREATION

d. FLAT GAPS, PARACONFORMITIES

- In the following slide of the Grand Canyon in Arizona, the top arrow points to an assumed gap of **6 million years** (6 Ma). There we would expect an average of some **200 meters** (600 feet) of erosion over that time, but the contact between the underlayer and overlayer (arrow) is very flat. The next arrow points to a gap of **14 million years** with an expected average erosion of **500 meters** (1500 feet). At the lowest arrow, the Ordovician and Silurian geologic periods are missing, representing a **100 million year gap**, and an expected **3000 meters** (9000 feet) of erosion, which is twice the depth of the Grand Canyon itself! Yet the contacts are essentially flat, showing very little erosion and time.



6 Ma

14 Ma

100 Ma

2. DATA FAVORING A RECENT CREATION

d. FLAT GAPS, PARACONFORMITIES

The difficulty with these extended “flat time gaps” for the long geologic ages is that you **cannot have deposition** of sediments, or there would be no gap; and if you had erosion over the long times postulated the **contacts would be highly irregular**, sometimes resulting in erosion even deeper than the Grand Canyon itself! However, the contacts of the layers are nearly flat as if they had been laid down rapidly.

- In the context of long geological ages the **scarcity of erosion at the paraconformities is astonishing**. Over the long times postulated you not only would expect a lot of irregular erosion of the underlayers, but in terms of the average rates of erosion we now observe, we would expect **the whole sedimentary record to have been eroded away many times**.

2. DATA FAVORING A RECENT CREATION

d. FLAT GAPS, PARACONFORMITIES

Paraconformities are **found over the Earth**, and are common enough in various parts of the geologic column that they challenge its whole time framework. For questions and discussions see: **Roth AA. 2009. "Flat Gaps" in sedimentary rock layers challenge long geologic ages. Journal of Creation 23(2):76-81.**

- This is the kind of data that is **hard to explain unless you believe** that the major part of the geologic column was deposited rapidly as would occur during the Genesis Flood described in the Bible. More details about paraconformities and erosion is considered in Discussion 16, that deals with evidence for the astonishing Genesis Flood.

2. DATA FAVORING A RECENT CREATION

e. ANCIENT CARBON-14

2. DATA FAVORING A RECENT CREATION

e. ANCIENT CARBON-14

The half life of carbon-14 is **5730 years**. Carbon-14 is rare and after a number of half lives have passed, you reach the point where there should be virtually no carbon-14 atoms left because they have all changed to nitrogen-14. Calculations indicate that by the time you get back to 300,000 years there should be less than one atom of carbon-14 left per gram of carbon.

The problem for the evolutionary long ages is that many of **some 100 very old samples** tested, that are in the assumed **100 thousand to 550 million year** range (or even longer) of the geological time scale, give **carbon-14 dates in the 40,000 to 80,000 year range!** Carbon-14 has been found even in diamonds thought to be extremely old. This suggests that the geological column and its billions of years is not at all as old as usually claimed!

2. DATA FAVORING A RECENT CREATION

e. ANCIENT CARBON-14

Contamination after deposition from external carbon-14 has been suggested to explain this, but studies indicate that for at least some of these, this is not the case. Comments from one of these studies follows.

Marie-José Nadeau et al. 2001. Carbonate ^{14}C background: Does it have multiple personalities? Radiocarbon 43:169-176. “It was not possible to reach lower ^{14}C levels through cleaning, indicating **the contamination to be intrinsic to the sample. ... So far, no theory explaining the results has survived all the tests.**”

COMMENT:

The biblical model of a recent creation would explain the data because the samples are not so old. However, that interpretation is not acceptable within the current limited secular ethos of science.

2. DATA FAVORING A RECENT CREATION

e. ANCIENT CARBON-14

The coal seams in the next illustration (red arrows) are from the Blackhawk Formation in Utah. They are assumed to be some 70,000,000 years old. However, carbon-14 that has a half life of only 5,730 years is found in Blackhawk coal with a concentration that would date it around only 50,000 years.



BLACKHAWK COAL SEAMS
Castle Gate, Utah

2. DATA FAVORING A RECENT CREATION

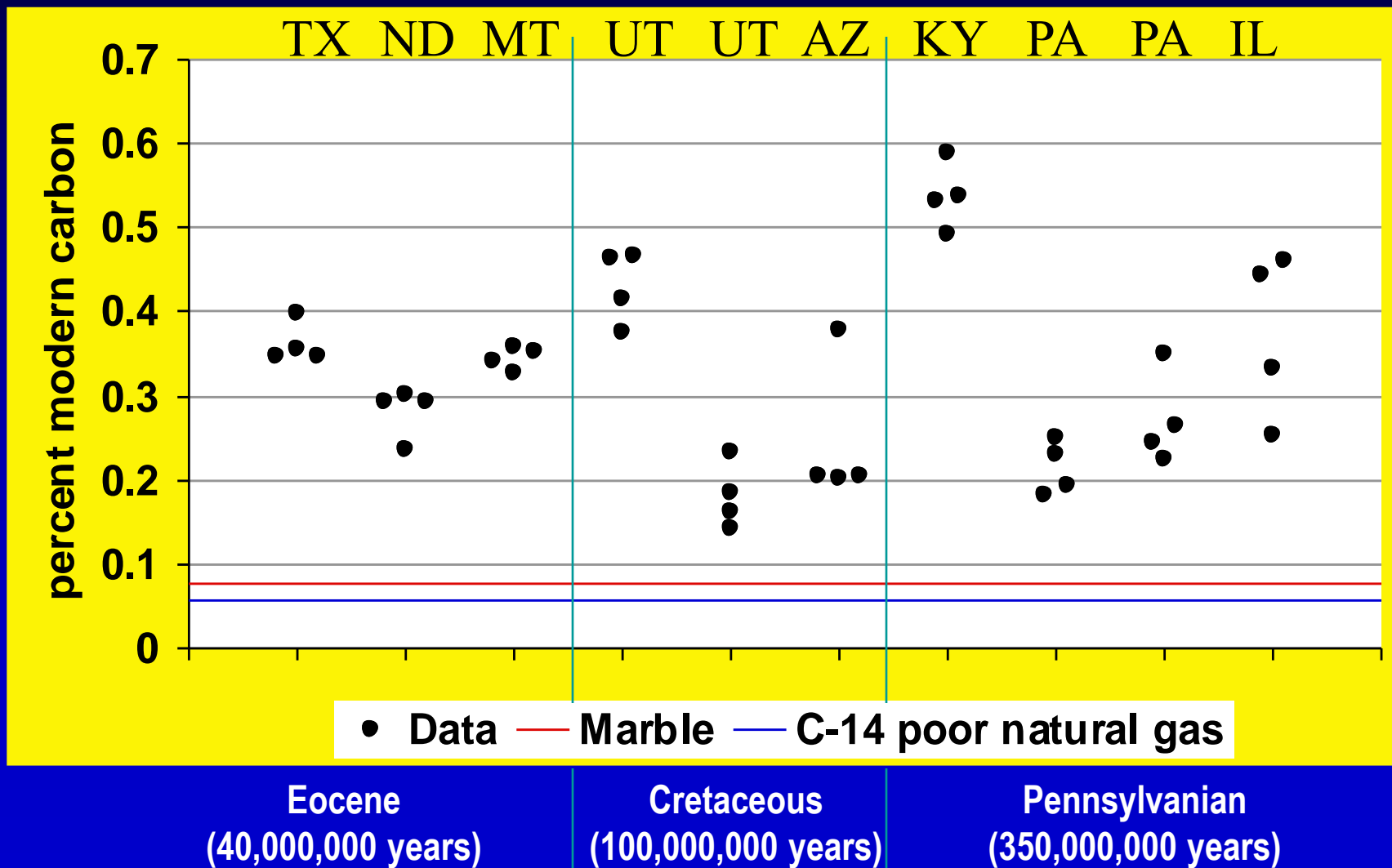
e. ANCIENT CARBON-14

The next slide shows carbon-14 dates from ten samples from coal, including the one from the Blackhawk Formation in Utah mentioned earlier. Note that the dates (even with the background subtracted) are significantly younger than the standard laboratory background which is the red and blue lines at the bottom of the chart.

[Reference: **John Baumgardner**: 2005. Carbon-14 Evidence for a Recent Global Flood and a Young Earth. ^[L]_[SEP]In **Radioisotopes and the Age of The Earth: Results of a Young-Earth Creationist Research Initiative**, (Volume II), L. Vardiman et al., eds.

Available at <http://www.icr.org/article/carbon-14-evidence-for-recent-global>

The RATE Group Data. Multiple data for 10 ancient coal samples. State of origin at top, assumed geologic age at bottom. Percent modern carbon at left of 0.1 to 0.6 would give dates in the 40,000 to 60,000 year range.



2. DATA FAVORING A RECENT CREATION

e. ANCIENT CARBON-14

These data are consistent with what was reported in the earlier scientific literature.* One of the usual explanation for this carbon-14, where according to the conventional geologic time scale it should not be there, has been contamination in the laboratory. This was at one time arguable, although doubtful in some cases, but the data from the RATE group cannot reasonably be explained as sample contamination. The relatively consistent carbon-14 concentration of 0.1-0.6% likely reflects the concentration of carbon-14 in the atmosphere and plants before the Flood.

*See **Giem P. 2001. Carbon-14 content of fossil carbon. Origins, No 51, p 6-30.** See: <http://www.grisda.org/origins/51006.htm>.

2. DATA FAVORING A RECENT CREATION

e. ANCIENT CARBON-14 (An Analogy)

Finding carbon-14, that does not last all that long (half life = 5730 years), in purported very ancient carbon in sedimentary rock layers is somewhat comparable to finding a lighted candle in a cave and being told that it has been burning for two thousand years!

The reasonable conclusion is that the burning candle is **much younger** than purported.

Likewise, there should be no carbon-14 left in these assumed very old samples from the sedimentary layers. It should have all decayed long ago if the old geologic ages are correct. Carbon-14 indicates they are younger.

2. DATA FAVORING A RECENT CREATION

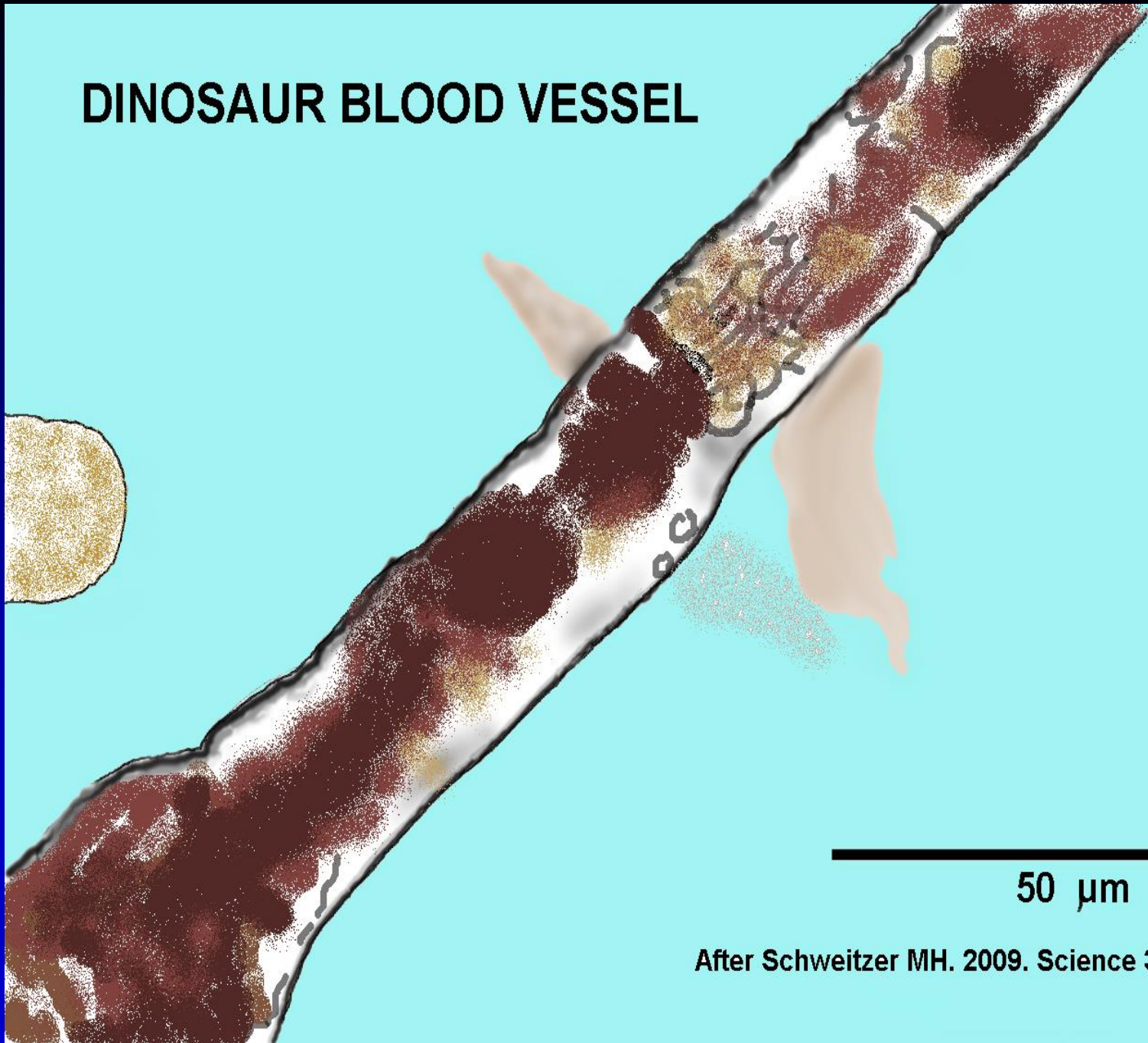
**f. SOFT TISSUE IN “ANCIENT”
DINOSAURS**

2. DATA FAVORING A RECENT CREATION

f. SOFT TISSUE IN “ANCIENT” DINOSAURS

A recent surprising find has shocked the scientific community. Soft tissue was found in a *Tyrannosaurus rex* bone assumed to be 70 million years old. The conclusion was quickly challenged in the scientific literature, but more soft tissue was found in another dinosaur assumed to be 78 million years old. The problem for those believing in the long geologic ages is that protein molecules are not expected to survive that long, Likely less than 100 thousand years, and no good explanation has yet been proposed. The bones harbor well preserved delicate bone cells called osteocytes along with soft blood vessels containing red-brown globs that suggest blood cells. An illustration from a dinosaur follows.

DINOSAUR BLOOD VESSEL



50 μm

After Schweitzer MH. 2009. Science 324:626-631

2. DATA FAVORING A RECENT CREATION

f. SOFT TISSUE IN “ANCIENT” DINOSAURS

An article in the journal *Science* (**Service RF. 2009. “Protein” in 80-Million-Year Old Fossil Bolsters Controversial *T. rex* Claim. *Science* 324:578.**) points out the dilemma:

“... proteins in tissue normally degrade quickly after an animal dies.”

“Collagen, the principal protein in connective tissue, is rarely found in fossils more than a **few hundred thousand years old.**”

2. DATA FAVORING A RECENT CREATION

f. SOFT TISSUE IN “ANCIENT” DINOSAURS

Experiments (Schweitzer MH. 2014. A role for iron and oxygen chemistry in preserving soft tissues, cells and molecules from deep time. Proc. R. Soc. B 281:20132741) indicate that the survival of tissues that degrade in water in three days can be extended to two years in the presence of hemoglobin.

These results indicate how fast proteins can disintegrate and provide a method of preserving tissue for a longer time. This may explain how proteins in dinosaurs could remain intact for several thousand years since the Genesis Flood. However, they do not explain several chemical degradation models that indicate that proteins should not last for a million years. Perhaps dinosaurs are not 78 million years old.

2. DATA FAVORING A RECENT CREATION

**g. HUMANITY'S GROWTH RATE
TOO FAST**

2. DATA FAVORING A RECENT CREATION

g. HUMANITY'S GROWTH TOO FAST

The human population is **doubling its size every 30 to 60 years**. Calculating backwards in time from the present, it would only take a **few thousand years** to produce the present world population starting back from two original parents. However humanity is purported to have been on earth for several hundreds of thousands to millions of years, depending on various interpretations. At the present rates of reproduction, one should expect that the earth should have been full of humans a very long time ago if man had been around for as long as usually reported by evolutionists.

The next slide is an example that illustrates the rapid growth of humanity. Note the extensive increase in buildings in the San Bernardino Valley in California, in just a third of a century.



1971

2005

San Bernardino Valley, California

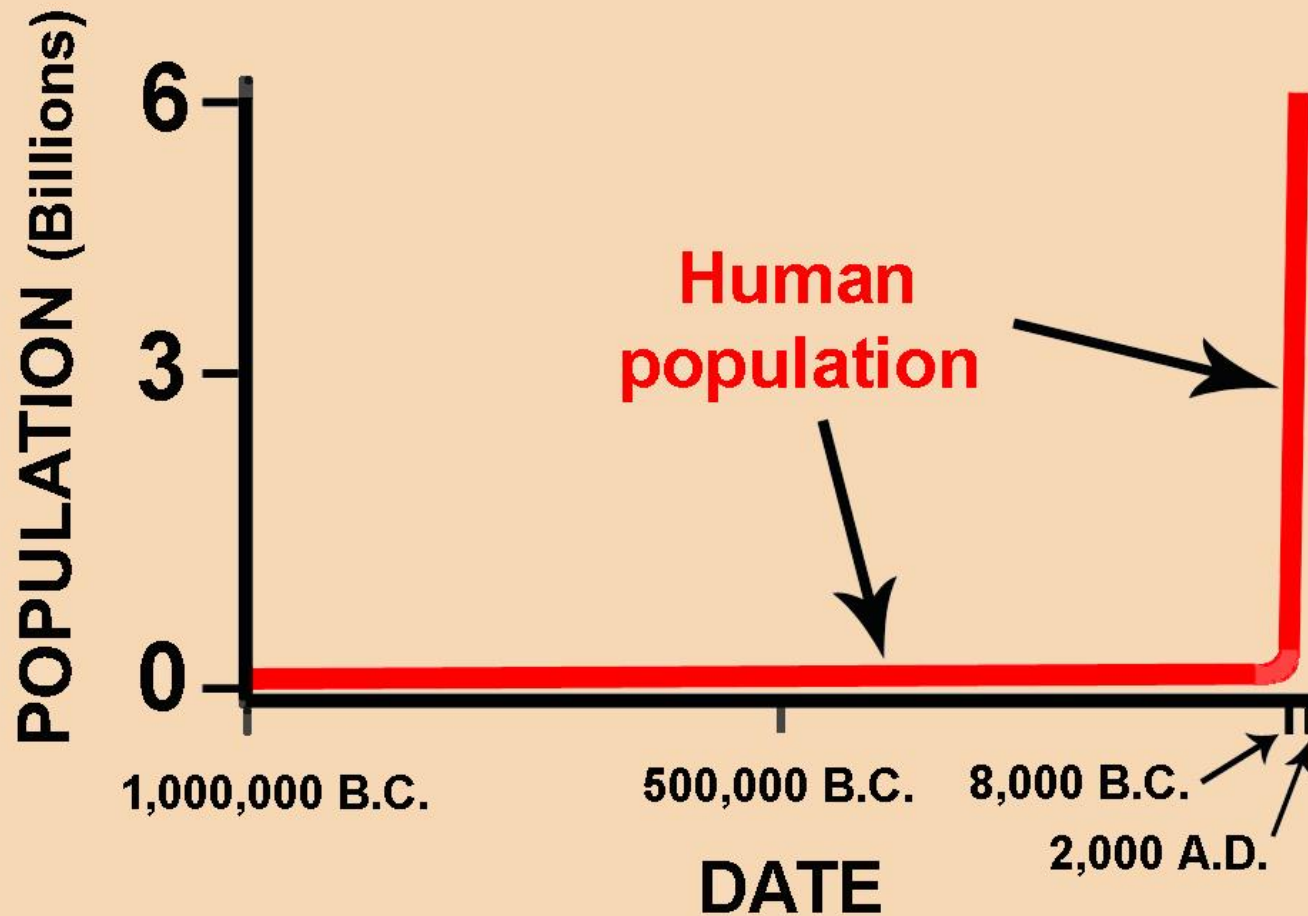
2. DATA FAVORING A RECENT CREATION

g. HUMANITY'S GROWTH TOO FAST

The next illustration is a graph of the size of the human population over time as suggested by the evolutionary model. Note the dramatic increase in size during the past few thousand years compared to little change for hundreds of thousands of years earlier. Such a sharp contrast in growth rate demands a valid answer, and that answer may well be that humanity has only existed for a few thousand years.

Debatable reports of very ancient humans are often discussed, but **remains are rare** and that fact stands in sharp contrast to our overflowing modern cemeteries. This contrast suggests that **humanity has really not been around for half a million years** as often proposed by evolutionists.

ESTIMATE OF THE SIZE OF THE HUMAN POPULATION OVER RECENT EVOLUTIONARY TIME



(Based on *Scientific American*, Sept. 1974, p 42)

2. DATA FAVORING A RECENT CREATION

h. THE IMPRESSIVE EVIDENCE FOR HUMANITY'S ACTIVITY IS RECENT

2. DATA FAVORING A RECENT CREATION

h. THE IMPRESSIVE EVIDENCE FOR HUMANITY'S ACTIVITY IS RECENT

Adding to the growth rate evidence that man has not been around for a very long time is the fact that our **archaeological evidence**, like pyramids, aqueducts, complex ancient dwellings, and roads, seem to be only a few thousand years old; and furthermore, **historical evidence**, such as our oldest **ancient writing**, are no older. Minor evidence such as probable tools or simple shelters that are assumed to be older are sometimes reported, but identification and dating are questionable. If humanity has been around for hundreds of thousands of years, why haven't we found a lot of good evidence of human activity, such as writing and buildings, during the earlier parts of that extended period of time. The impressive evidence for human activity seems all very recent, suggesting that man **has only been here recently**.

2. DATA FAVORING A RECENT CREATION

h. THE IMPRESSIVE EVIDENCE FOR HUMANITY'S ACTIVITY IS RECENT

Humanity tends to leave substantial evidence of its presence. The ruins of ancient dwellings illustrated in the next slide are from Native Americans who lived in Mesa Verde in Colorado. They date from around 1100 to 1300 A.D. Why did ancient man, if he existed for so long a time before that, not leave all kinds of durable buildings around? Why are the dramatic and firm evidences for man all so abundant and recent?



Cliff Palace, Mesa Verde, Colorado

2. DATA FAVORING A RECENT CREATION

- i. MUTATIONS ARE TOO FREQUENT FOR HUMANITY TO HAVE SURVIVED THE LONG AGES**

2. DATA FAVORING A RECENT CREATION

i. MUTATIONS ARE TOO FREQUENT FOR HUMANITY TO HAVE SURVIVED THE LONG AGES

Beneficial mutations are extremely rare. One per 1,000 mutations is a very generous figure for evolution. Almost all mutations are neutral or detrimental, and many are lethal. Fortunately, most cause only minor changes; however, these changes slowly contribute to the **degeneration of the human genome** as each generation follows another, and more and more mutations are passed on to offspring.

When you see a newborn baby (next slide), the striking fact is that the DNA is not an exact combination coming from mother and father. A surprising number of novel mutations, perhaps **60** or more, are found there.



2. DATA FAVORING A RECENT CREATION

i. MUTATIONS ARE TOO FREQUENT FOR HUMANITY TO HAVE SURVIVED THE LONG AGES

Recent data indicates that every person that is born has a lot more mutations than the two or three previously surmised. This higher estimate of around **60** for each person is due in part to the fact that the major part of the human genome, previously thought to be nonfunctional, turns out to be essential. Thus, much more DNA that is now known to be necessary, is considered subject to meaningful mutations and is included in the calculations.

2. DATA FAVORING A RECENT CREATION

i. MUTATIONS TOO FREQUENT FOR HUMANITY TO HAVE SURVIVED THE LONG AGES

In an evolutionary scenario, the way to get rid of mutations that are causing degeneration of the genome is to get rid of those weak individuals harboring the aberrant DNA. The survival of the fittest principle is expected to eliminate the inferior individuals. This would be essential to just prevent the degeneration of humanity without even considering any new evolutionary advancement.

2. DATA FAVORING A RECENT CREATION

i. MUTATIONS TOO FREQUENT FOR HUMANITY TO HAVE SURVIVED THE LONG AGES

How has humanity survived over hundreds of thousands of years with such a degenerative load. Calculations (**Sanford JC. 2008. Genetic Entropy. FMS Publications, p 113**) suggest that we should go extinct in just a few thousand years.

It does not seem that humans are evolving; **we are degenerating**, and quite rapidly. In view of this a geneticist wonders “Why aren’t we extinct?” (**James F. Crow. 1999. The odds of losing at genetic roulette. Nature 197:203-294**).

2. DATA FAVORING A RECENT CREATION

i. MUTATIONS TOO FREQUENT FOR HUMANITY TO HAVE SURVIVED THE LONG AGES

COMMENT: The number of deaths required to eliminate humans with deprecating mutations, so as to preserve the integrity of the normal human genome (DNA), would be enormous. Some have suggested (**Michael Nachman, Susan Crowell. 2000. Estimate of mutation rate per nucleotide in humans. Genetics 156:297-304**) that each mother needs to produce **40 individuals** just to maintain the two “normal,” necessary DNA genomes for the human population, while the rest died off. However, more recent information indicates that that number is way too low, you would need vastly more than 40. The cost of natural selection is very high. Again, see the book: **Sanford JC. 2008. Genetic Entropy. FMS Publications, Waterloo, NY**, for further discussion of this intriguing challenge. **It does not appear that humanity has been around for a very long time.** Also, we are degenerating way too fast, and not evolving.

**3. LOTS OF TIME
DOES NOT SOLVE
EVOLUTION'S
PROBLEMS**

3. LOTS OF TIME DOES NOT SOLVE EVOLUTION'S PROBLEMS:

**THE BILLIONS OF YEARS POSTULATED FOR THE
EARTH ARE TOTALLY INADEQUATE FOR THE
IMPROBABILITIES OF EVOLUTION**

Evolution needs a great deal of time and evolutionists rely heavily on time to explain the improbable events they postulate. However it is disappointing that this great reliance on time is treated as a great vast unknown factor. We shall see that when you get down to the facts of science and the calculations of mathematical probability, the **billions of years** proposed for evolutionary time are **totally inadequate** for the improbabilities postulated.

The billions of years proposed for the universe do virtually nothing for the prime questions of evolution such as the origin of the first living organism or the evolution of the complexity we find in advanced organisms. The improbabilities are way too high.

3. LOTS OF TIME DOES NOT SOLVE

EVOLUTION'S PROBLEMS:

THE BILLIONS OF YEARS POSTULATED FOR THE EARTH ARE TOTALLY INADEQUATE FOR THE IMPROBABILITIES OF EVOLUTION

One of the severe problems evolution faces is how to get several random mutations to occur all at once so as to provide survival value for evolving interdependent parts of new systems. While **rapidly reproducing microorganisms** such as microbes can reproduce in an hour and can undergo minor genetic changes in a relatively short time, this is not the case for **advanced organisms that sometimes require years between generations**. Calculations by Michael Behe indicate that the very long geologic ages are way too short to accommodate the improbabilities involved for even very simple changes. This is an especially acute problem for advanced organisms such as reptiles, birds and mammals that reproduce very slowly; and these organisms are abundantly represented in the fossil record. How did they all evolve without adequate time.

For further discussion see: **Behe MH. 2007. The Edge of Evolution: The search for the limits of Darwinism. New York: Free Press, p 44-63.**

**3. LOTS OF TIME DOES NOT SOLVE
EVOLUTION'S PROBLEMS:
THE BILLIONS OF YEARS POSTULATED
FOR THE EARTH ARE TOTALLY
INADEQUATE FOR THE IMPROBABILITIES
OF EVOLUTION**

The French biophysicist Lecomte du Nöuy reports on how long it would take to form just one specific protein molecule by random activity. Starting with a quantity of atoms equivalent to the number of atoms in the earth, he estimates that it would take 10^{242} billion years to produce just one specific protein molecule. (See: **du Nöuy L. 1947. *Human Destiny*, p 33-35**).

3. LOTS OF TIME DOES NOT SOLVE EVOLUTION'S PROBLEMS:

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Molecular biologist Herbert Yockey of the University of California (Berkeley) has calculated how long it would take to form a specific protein molecule starting with amino acids already assembled. As expected, starting with amino acids formed would require a shorter time, but it still is not much help for evolution. He calculates that it would take on an average 10^{23} years to produce one specific protein molecule (See: **Yockey HP. 1992. *Information Theory and Molecular Biology*, p 248-255).**

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Since the assumed geological age of the Earth is less than five billion years, that time is **10,000 billion times too short** to produce one specific protein molecule. In addition, life is assumed to have started in a short amount of time fairly early in the history of the Earth, so you don't have five billion years to start out with anyway.

For the origin of the **simplest form of life** that we know of (mycoplasma), you need several hundred different kinds of specific protein molecules, and thousands of replicates. They all need to be in the **same place and at the same time** with many more other kinds of molecules to form a living cell.

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When quantitatively evaluated, the long geological eons are **totally inadequate** for the time requirements of evolutionary improbabilities. The geologic eons of billions of years do not provide a realistic model for the origin of life. They are way, way too short for life to have originated spontaneously or for advanced organisms to have evolved. A very perceptive God seems absolutely essential to explain what science has discovered.

4. CONCLUSIONS

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There are a number of serious challenges to the long geologic ages, including:

- a.** Rates of erosion too fast
- b.** Oceans should be full of sediments
- c.** Old flat surfaces should be gone
- d.** Flat gaps in the rock layers (Paraconformities)
- e.** Ancient carbon-14
- f.** Soft tissue in “ancient” dinosaurs should not be there
- g.** Humanity’s growth rate is too fast
- h.** The good evidence for human activity is recent
- i.** Mutations too frequent for humanity to have survived long ages

Furthermore, geologic time is **way too short** for the improbabilities of evolution.

While science keeps coming up with new ideas, and some of the evidence presented above may change, **there is an impressive amount of scientific data that supports the biblical model of a recent creation.**

5. REVIEW QUESTIONS

(Answers given later below)

5. REVIEW QUESTIONS – 1

(Answers given later below)

1. Rates of erosion are so fast that our continents could have been eroded away over a hundred times if they are billions of years old. How do evolutionary geologists explain the presence of continents and mountain ranges after so much erosion? Why is their explanation inadequate?
2. At the present rate that sediments enter the ocean (adjusted for agricultural erosion), we would expect the oceans to have been filled up several times over the long geologic ages. What is the problem with suggesting that the sediments carried to the oceans by the rivers are subducted into the earth at the oceanic trenches.?
3. What is the problem that old flat surfaces, like Kangaroo Island in Australia, pose for the long geologic ages?

REVIEW QUESTIONS – 2

(Answers given later below)

- 4. Paraconformities are major flat gaps in the sedimentary layers of the earth. What would be the consequences of having flat sediments deposited at these gaps, as in a lake, or of having erosion there, as by a river?**
- 5. “Ancient carbon-14” refers to carbon-14 found in samples usually assumed to be many millions of years old. Explain why you should not find carbon-14 in these samples, and what that suggests for their real age.**
- 6. Why does the presence of soft tissue in dinosaur bones assumed to be 78 million years old favor the model of a recent creation?**

REVIEW QUESTIONS – 3

(Answers given later below)

- 7. Three lines of evidence suggesting that humans have not been around for hundreds of thousands of years are: (1) humanity's growth rate, (2) ancient human activity, (3) mutation rates. Briefly explain how each one of these challenges the hundreds of thousands of years proposed for humans on earth.**
- 8. The billions of years proposed for the evolution of life on earth are way, way too short to produce by random changes even one specifically required protein molecule, let alone all life, including slowly reproducing reptiles, birds and mammals. How do evolutionists relate to this problem?**

REVIEW QUESTIONS AND ANSWERS - 1

1. Rates of erosion are so fast that our continents could have been eroded away over a hundred times if they are billions of years old. How do evolutionary geologists explain the presence of continents and mountain ranges after so much erosion? Why is their explanation inadequate.

They propose that continents and mountain ranges have been renewed from below over time. However the presence of the geologic column from old to young layers on the continents, and especially in mountains where erosion is especially rapid, indicates the continents have not been eroded or renewed even once, thus suggesting a much younger age.

REVIEW QUESTIONS AND ANSWERS – 2

2. At the present rate that sediments enter the ocean (adjusted for agricultural erosion), we would expect the oceans to have been filled up several times during the long geologic ages. What is the problem with suggesting that the sediments carried to the oceans by the rivers are subducted into the earth at the oceanic trenches.?

Only a small portion of these sediments seems to be going down into the trenches -- probably only 10-20% of what the rivers deliver to the oceans.

3. What is the problem that old flat surfaces, like Kangaroo Island in Australia, pose for the long geologic ages?

If they have been exposed for the long ages proposed, they should at least display lots of irregular erosion. In fact, based on average rates of erosion, Kangaroo Island should be eroded down 5 kilometers during its assumed age.

REVIEW QUESTIONS AND ANSWERS – 3

4. **Paraconformities are flat gaps in the sedimentary layers of the earth. What would be the consequences of having flat sediments deposited at these gaps, as in a lake, or of having erosion there, as by a river?**

If you have deposition, as in a lake, there is no gap, hence no paraconformity. If you have erosion, as by a river, the gap would not be flat, hence no paraconformity. For a paraconformity you must have a flat gap, and this indicates essentially no time for either deposition or erosion. Flat gaps attest to rapid deposition.

5. **“Ancient carbon-14” refers to carbon-14 found in samples usually assumed to be many millions of years old. Explain why you should not find carbon-14 in these samples, and what that suggests for their real age.**

If the samples are as old as purported, all of the carbon-14 should have disintegrated a long time ago. Carbon-14 does not last that long; its half life is only 5,730 years. The presence of carbon-14 in these samples suggests that the samples are much younger in age.

REVIEW QUESTIONS AND ANSWERS – 4

6. Why does the presence of soft tissue in dinosaur bones assumed to be 78 million years old favor the model of a recent creation?

The protein molecules of soft tissues are not expected to survive the many millions of years postulated. They should all have disintegrated. Their presence suggests dinosaurs are likely recent in age.

REVIEW QUESTIONS AND ANSWERS – 5

7. Three lines of evidence suggesting that humans have not been around for hundreds of thousands of years are: (1) humanity's growth rate, (2) ancient human activity, (3) mutation rates. Briefly explain how each one of these challenges the long ages proposed for humans on earth.

(1) Present rates of reproduction over hundreds of thousands of years would have resulted in an earth that would have been filled with humanity long ago, yet fossil man is rarely found.

(2) All the impressive evidence for human activity such as writing, pyramids, aqueducts and tall buildings are only a few thousand years old. If man had been here for a long time why did he not leave lots of evidence?

(3) It does not seem that humanity could survive for more than a few thousand years with the rapid rate of degeneration caused by the high rate of mutations that has been found.

REVIEW QUESTIONS AND ANSWERS – 6

8. The billions of years proposed for the evolution of life on earth are way, way too short to produce by random changes even one specifically required protein molecule, let alone all life, including slowly reproducing reptiles, birds and mammals. How do evolutionists relate to this problem?

They tend to ignore it; the improbabilities are seldom considered. It is assumed that if there is a lot of time, most anything could happen, but mathematical calculations indicate that this is not the case.

ADDITIONAL REFERENCES

For further discussions by the author (Ariel A. Roth) and many additional references, see the author's books titled:

1. **ORIGINS: LINKING SCIENCE AND SCRIPTURE.** Hagerstown, MD. Review and Herald Publishing Association.
2. **SCIENCE DISCOVERS GOD: Seven Convincing Lines of Evidence for His Existence.** Hagerstown, MD. Autumn House Publishing, an imprint of Review and Herald Publishing Association.

Additional information is available on the author's Web Page: Sciences and Scriptures. www.sciencesandscriptures.com. Also see many articles published by the author and others in the journal **ORIGINS** which the author edited for 23 years. For access see the Web Page of the Geoscience Research Institute www.grisda.org.

Highly Recommended URLs are:

Earth History Research Center <http://origins.swau.edu>

Theological Crossroads www.theox.org

Sean Pitman www.detectingdesign.com

Scientific Theology www.scientifictheology.com

Geoscience Research Institute www.grisda.org

Sciences and Scriptures www.sciencesandscriptures.com

Other Web Pages providing a variety of related answers are: Creation-Evolution Headlines, Creation Ministries International, Institute for Creation Research, and Answers in Genesis.

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