DISCUSSION No. 16

THE ASTONISHING GENESIS FLOOD

Part 3: More Evidence

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OUTLINE

1. INTRODUCTION

2. MORE EVIDENCE FOR THE FLOOD

   a. Unusually widespread sedimentary deposits
   b. Rates of erosion of continents too fast
   c. Paraconformities: Lack of erosion at flat gaps in sediments

3. CONCLUSIONS

4. REVIEW QUESTIONS

1. INTRODUCTION

1. INTRODUCTORY COMMENT

This discussion titled **MORE EVIDENCE** is the third in a three part series about **THE ASTONISHING GENESIS FLOOD.**

Unless you have a good perspective of the Flood events, the first part titled **INTRODUCTION** (Discussion 14) should be read first.

The second part of the series, titled **SOME EVIDENCE** (No 15), should also be read if you want a more complete understanding of all this evidence.

Time is a dominant factor in the discussion between science and the Bible. In order to facilitate satisfactory coverage for each discussion, some of the evidence presented in this discussion is also briefly considered in the third discussion about time (Discussion 9).

1. INTRODUCTORY COMMENT

There are a number of significant features of the sedimentary layers of the earth that are much better explained by a catastrophic worldwide Flood than by slow gradual changes over millions of years. Five of these features were explained in the previous discussion, while three more will be considered below.

1. INTRODUCTORY COMMENT

Current scientific interpretations do not consider the Genesis Flood to have been important in the formation of the sedimentary layers and the fossil record of past life on earth.

On the other hand, the Biblical model implies that the Genesis Flood would have been a major cause for both sediments and fossils.

Several times in the discussion to follow reference is made to specific parts of the geologic column. A slide of the various divisions follows for reference.

MAIN DIVISIONS OF THE GEOLOGIC COLUMN

EON	ERA	PERIOD	EPOCH	Putative age in Ma*
Phanerozoic	Cenozoic	Quaternary	Holocene	0.01
			Pleistocene	1.6
		Tertiary	Pliocene	5.3
			Miocene	24
			Oligocene	34
			Eocene	55
			Paleocene	65
	Mesozoic	Cretaceous		144
		Jurassic		206
		Triassic		248
	Paleozoic	Permian		290
		Carboniferous		354
		Devonian		417
		Silurian		443
		Ordovician		490
		Cambrian		540
PRECAMBRIAN Proterozoic Eon				2500
Archaean Eon				4600

*Ages given represent beginning of time period in millions of years (Ma).
Dates not endorsed by author.

2. MORE EVIDENCE FOR THE FLOOD

a. UNUSUALLY WIDESPREAD SEDIMENTARY LAYERS

2. MORE EVIDENCE

a. UNUSUALLY WIDESPREAD SEDIMENTARY LAYERS

Geologists tend to divide the sedimentary layers into large units called formations. A formation is a group of layers that has special characteristics that separate it from layers above and below. Five examples will be illustrated two slides down.

Many of these unique formations are extremely widespread and do not at all reflect the ordinary localized distribution of stream, lake, and local flood deposition now occurring on our continents. This widespread pattern is what you would expect from the action of water during a major catastrophe like the worldwide Genesis Flood.

2. MORE EVIDENCE

a. UNUSUALLY WIDESPREAD SEDIMENTARY LAYERS

Furthermore, these formations, that are proportionately not all that thick, would have to have extremely flat areas on which to have been deposited. Our present continents are not that flat. Just one major river in a valley in the midst of a formation would prevent deposition of the unique formation sediments across the whole area where it is found.

In the next figure we illustrate five widespread Mesozoic formations, exposed by erosion of a cliff, found north of Vernal Utah.

Steinaker Reservoir, Vernal, Utah

2. MORE EVIDENCE

a. UNUSUALLY WIDESPREAD SEDIMENTARY LAYERS

Details regarding the five formations designated in the previous illustration include:

Frontier Formation: Sandstone and shale. Some marine fossils
Covers 300,000 square kilometers

Mowry Shale: Many fish scales

Covers 250,000 square kilometers

Dakota Formation: Sandstone and shale. Marine and land fossils

Covers 815,000 square kilometers

Cedar Mountain and similar adjacent Burrow Canyon formations. Fossils include rare dinosaurs and plants

Covers 130,000 square kilometers

Morrison Formation. Sandstone and shale. Dinosaur fossils

Covers 1,000,000 square kilometers

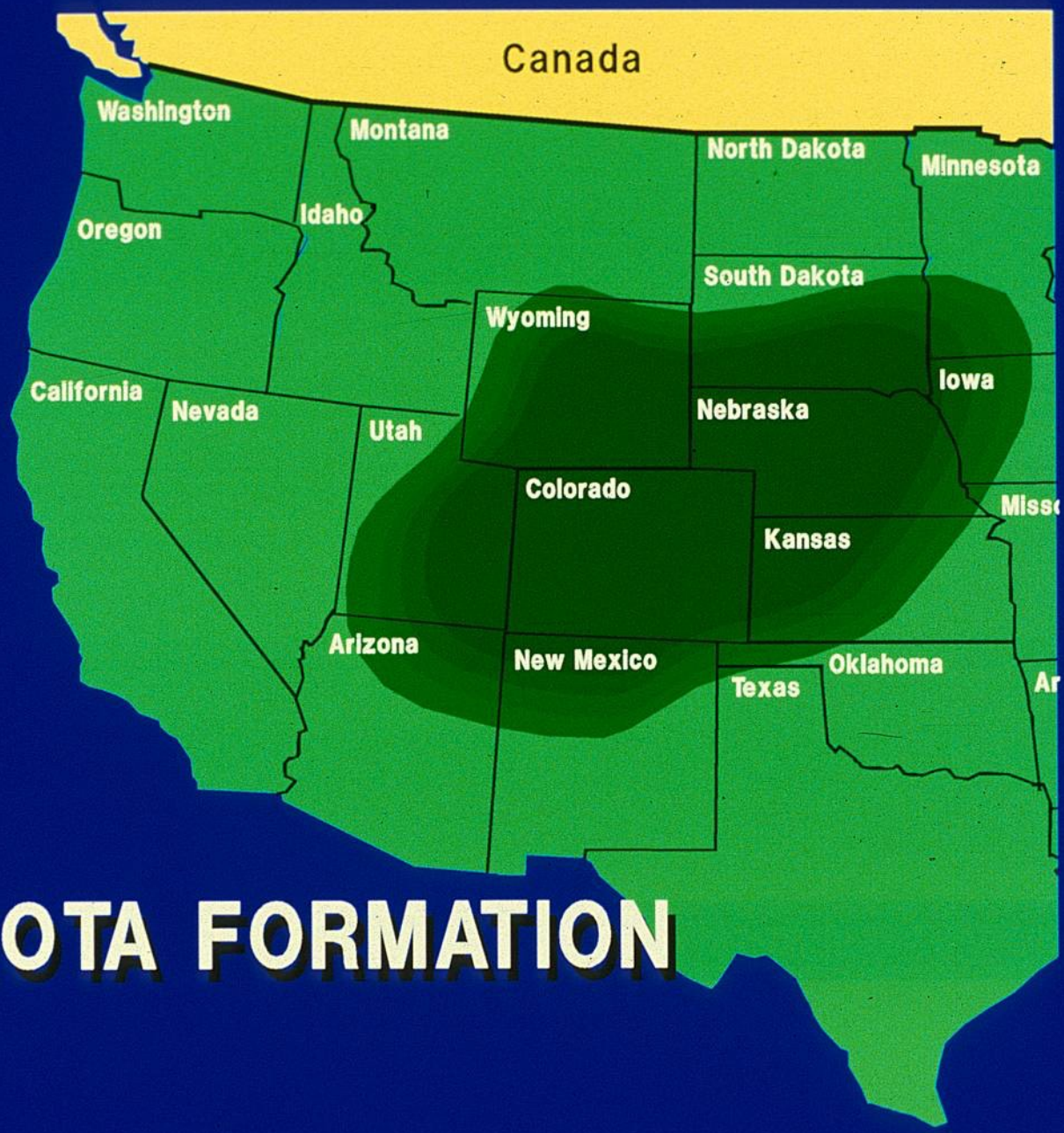
2. MORE EVIDENCE

a. UNUSUALLY WIDESPREAD SEDIMENTARY LAYERS

Not all formations are this widespread, and a number are larger.

Compared to their widespread distribution these formations are extremely thin. The Dakota Formation in the illustration provided above is the thin whitish layer below the silver grey Mowry Shale. It averages only 30 meters in thickness. The Morrison at the bottom of the group averages only around 100 meters thick. Proportionately, if the area of these formations were about that of an ordinary sheet of paper, the average thickness of the formations would be less than that of the sheet of paper itself. Unusual sediment deposition factors seem necessary for such widespread deposition of these unique sediments.

The next two figures illustrate the extent of two of these formations on maps of the western part of the United States. The Morrison extends from New Mexico in the southern US clear into Canada.



DAKOTA FORMATION

MORRISON FORMATION

2. MORE EVIDENCE

a. UNUSUALLY WIDESPREAD SEDIMENTARY LAYERS

It is hard to imagine the conditions that would spread these thin rather unique deposits over such widespread areas. To move the sediments over even just small portions of such immense areas would require very unusual catastrophic levels of energy.

Recall that you need extremely flat areas without major breaks, on which to spread these continuous flat formations. This suggests little time for erosion between the deposition of the formations. Erosion tends to produce an irregular topography, making it difficult to spread the thin formations, that are unique and different for each formation, across tremendously widespread regions.

2. MORE EVIDENCE

a. UNUSUALLY WIDESPREAD SEDIMENTARY LAYERS

In terms of distribution, the sediments of the earth reflect conditions that fit well with what would be expected during the rapid catastrophic Genesis Flood. They do not at all reflect present conditions where sedimentary deposits tend to be small and localized, and the topography is irregular.

Geologists who do not believe in the Flood occasionally comment on the incongruence between what we see going on now on the surface of the earth compared to what is seen in the sedimentary layers. The next frame is an example.

Brett, Carlton E. 2000. A slice of the "Layer Cake": The paradox of "Frosting Continuity." PALAIOS 15:495-498.

"… beds may persist over areas of many hundreds to thousands of square kilometers precisely because they are the record of truly, oversized events."

"The accumulation of the permanent stratigraphic record in many cases involves processes that have not been, or cannot be observed in modern environments. … there are the extreme events … with magnitudes so large and devastating that they have not, and probably could not, be observed scientifically."

"I would also argue that many successions show far more lateral continuity and similarity at a far finer scale than would be anticipated by most geologists."

2. MORE EVIDENCE FOR THE FLOOD

b. RATES OF EROSION OF THE CONTINENTS TOO FAST

2. MORE EVIDENCE

b. RATES OF EROSION OF THE CONTINENTS TOO FAST

The standard geological time scale proposes that our continents are billions of years old. On these continents we have rock layers assumed to be very young to very old. They comprise the geologic column.

At present, the continents, (i.e. the geologic column) are being eroded away as weathering, rain and streams remove sediments that are carried by rivers to the ocean.

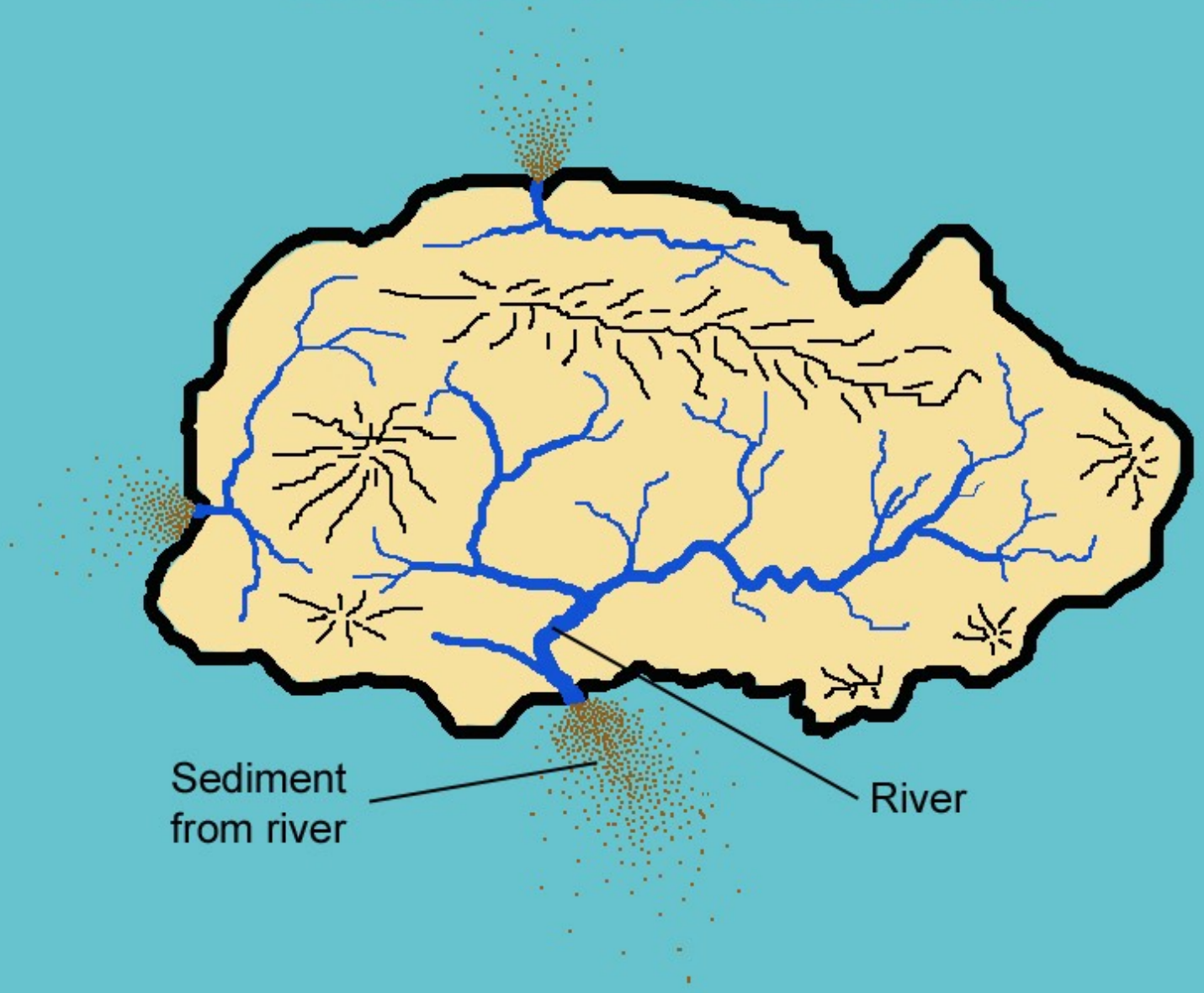
It turns out that at the rate rivers are carrying sediments to the ocean, our continents could have been eroded away many times, probably well over a hundred times, if they are as old as generally suggested. This significant topic is also considered in Discussion 9.

2. MORE EVIDENCE
b. RATES OF EROSION OF THE CONTINENTS TOO FAST

This data challenges the validity of the standard geologic time scale, and makes the Flood model all the more plausible.

Erosion is quite easy to measure. You can tell how fast the basin of a river is being eroded by measuring how fast the river carries sediment to the ocean at the mouth of the river. The next figure of an island surrounded by an ocean illustrates the process.

EROSION OF RIVER BASINS



2. MORE EVIDENCE

b. RATES OF EROSION OF THE CONTINENTS TOO FAST

You can measure the erosion for all the rivers of an island and calculate how long it will take to erode the island away. You can do the same for continents, and calculate how long it would take to erode them away. This has been done many times for the continents of the earth, and the results of twelve such studies are presented in the next frame.

Using the average from all these studies, it turns out that over the earth the rivers are carrying an average of around 25,000 million metric tons of sediment to the oceans every year.

From this it has been calculated that our continents are being eroded away at the rate of 61 mm/1000 years. This may seem slow, but if extended over the billions of years proposed by geologists, the continents should all be gone a very long time ago.

ESTIMATE OF THE RATE AT WHICH SEDIMENTS REACH THE OCEAN

AUTHOR AND DATE	MILLION METRIC TONS PER YEAR
Fournier (1960)	58,100
Gilluly (1955)	31,800
Holleman (1968)	18,300
Holmes (1965)	8,000
Jansen and Painter (1974)	26,700
Kuenen (1950)	32,500
Lopatin (1952)	12,700
McLennan (1993)	21,000
Milliman and Meade (1983)	15,500
Milliman and Syvitski (1992)	20,000
Pechinov (1959)	24,200
Schumm (1963)	20,500

2. MORE EVIDENCE

b. RATES OF EROSION OF THE CONTINENTS WAY TOO FAST

Our continents average 623 meters in elevation, hence at an average rate of erosion of 61 mm/1000 years, they should be eroded to sea level in only about 10 million years. Are they billions of years old?

[In the context of the Genesis Flood it needs be kept in mind that after the sedimentary layers were laid down, and towards the end of that Flood, the waters receding off the continents would cause extremely rapid erosion, but that is not the long ages model we are evaluating here.]

If according to present rates we could erode the continents down in 10 million years, in just one billion years, you could erode them 100 times. Of course you can erode them only once, because you have nothing left to erode after you have eroded them once.

The next slide quotes two geologists, confirming the well recognized figure of eroding our continents in 10 million years. They comment about the dilemma.

Dott RH, Batten RL. 1971. Evolution of the Earth. New York: McGraw-Hill, 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. 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."

2. MORE EVIDENCE

b. RATES OF EROSION OF THE CONTINENTS TOO FAST

In these calculations, it needs to be kept in mind that man's activities, especially agriculture, have increased the rate of erosion, hence erosion was slower in the past. It has been estimated that at present, erosion is double what it was before agriculture, but some suggest quite a bit less of an increase. On the basis of doubling, we would expect that the continents could have been eroded away 100 to 150 times in their assumed two to three billion year existence. But they are still here.

2. MORE EVIDENCE

b. RATES OF EROSION OF THE CONTINENTS TOO FAST

As mentioned earlier, some geology textbooks try to suggest that the continents are still here because they have been renewed from below. However, as we examine the continents we find rocks assumed to be from very old to very young. The whole geologic column is still there and quite well represented. We have not gone through even one complete cycle of erosion and renewal. This is not a valid explanation.

Rates of erosion challenge the long geologic time, and also the time usually implied for the intriguing features we call paraconformities (disconformities) that we will now consider.

2. MORE EVIDENCE FOR THE FLOOD

c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

2. MORE EVIDENCE

c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

Paraconformities are a special kind of gap in the geologic layers. To understand them you need to keep two very different factors in mind: flat and gap.

Often when you are looking at an extensive sequence of sedimentary layers, you are likely unaware that significant parts of the geologic column are missing between some of the layers. In other words, there are gaps. At the gaps there is nothing there, so they are not easy to spot! The layers often lie flat on top of each other as if there was no gap, but there can be a gap in time based on the fossils found and especially according to dating using the standard geologic time scale. The layer just below the gap is considered to be significantly older than the layer immediately above.

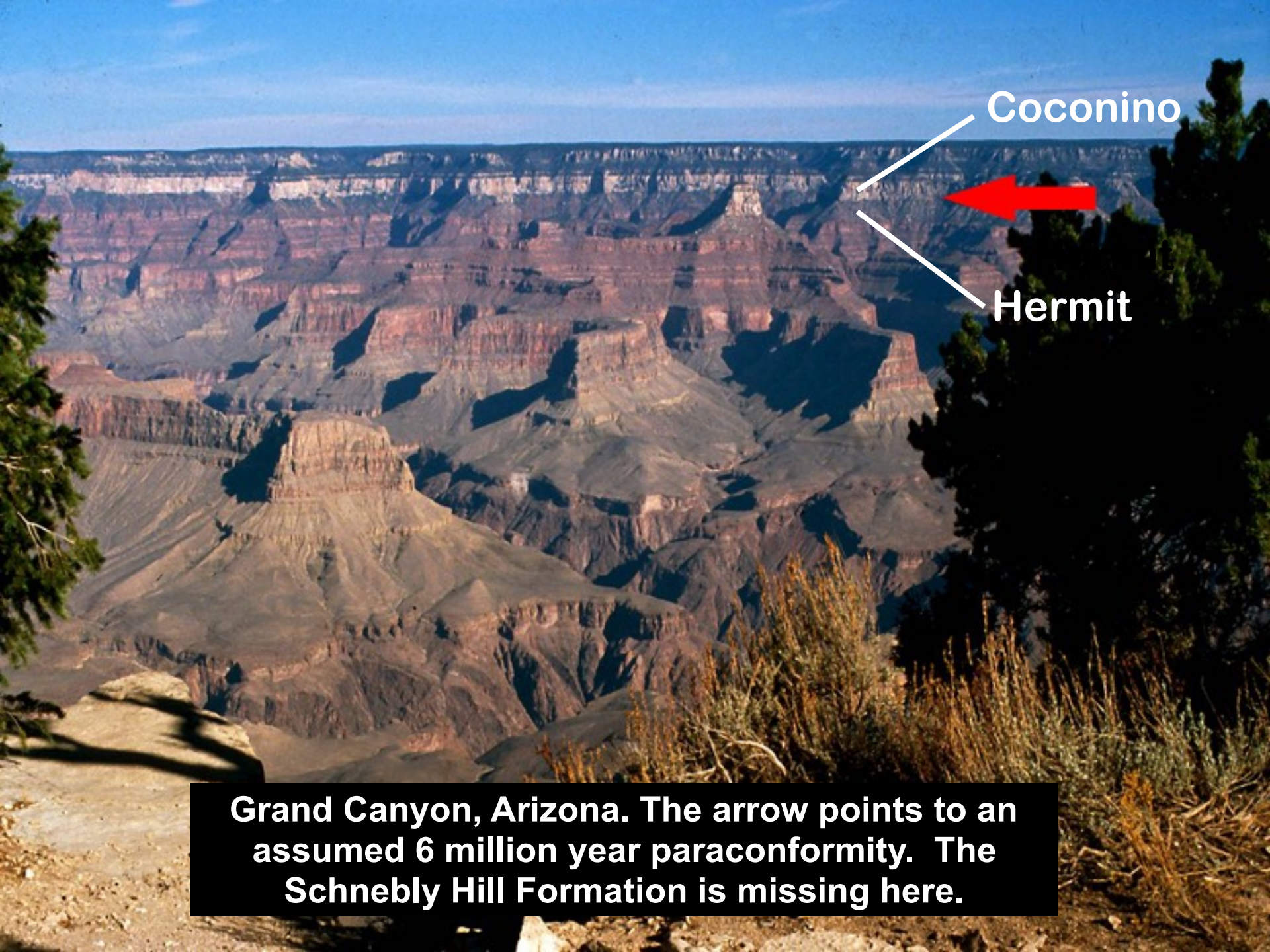
We determine that there are gaps because in other parts of the earth the missing parts of the geologic column are represented. For instance if, the Jurassic is missing between the Triassic and Cretaceous in a particular locality you have a gap, because normally as you go up the geologic column the order is Triassic, then Jurassic, and Cretaceous above.

2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

If the sediment layers above and below a major gap are parallel (i.e. flat), the contact line (i.e. surface) is called a paraconformity. Sometimes the words disconformity, nonsequence, or the general term unconformity, are also used in designating these significant gaps.

To put it simply, a paraconformity is a flat gap. Layers are missing and the layers above and below the gap are parallel.

The arrow in the next figure points to a paraconformity in the Grand Canyon. According to the geologic time scale, this is a 6 million year gap; i.e. the light colored layer (Coconino Sandstone) above the tip of the arrow is considered to be 6 million years younger than the reddish layer (the Hermit Formation) just below it.



Grand Canyon, Arizona. The arrow points to an assumed 6 million year paraconformity. The Schnebly Hill Formation is missing here.

2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

If you go 140 kilometers south of the Grand Canyon to Sedona, Arizona and beyond, there is a significant formation called the Schnebly Hill Formation that lies right between the Coconino and the Hermit, and it, (and a small gap below it), is thought to have taken around six million years to form. Since there is no Schnebly Hill Formation in the Grand Canyon, geologists conclude that in that region there is a six million year gap between the Coconino and the Hermit. Finding layers elsewhere that are missing in a particular locality is how gaps are identified.

The next illustration from Sedona shows the thick dark orange Schnebly Hill, lying between the dark red underlying Hermit and the overlying pale Coconino. Further east the Schnebly Hill nearly triples in thickness to 600 meters.

View to the northwest from Sedona, Arizona

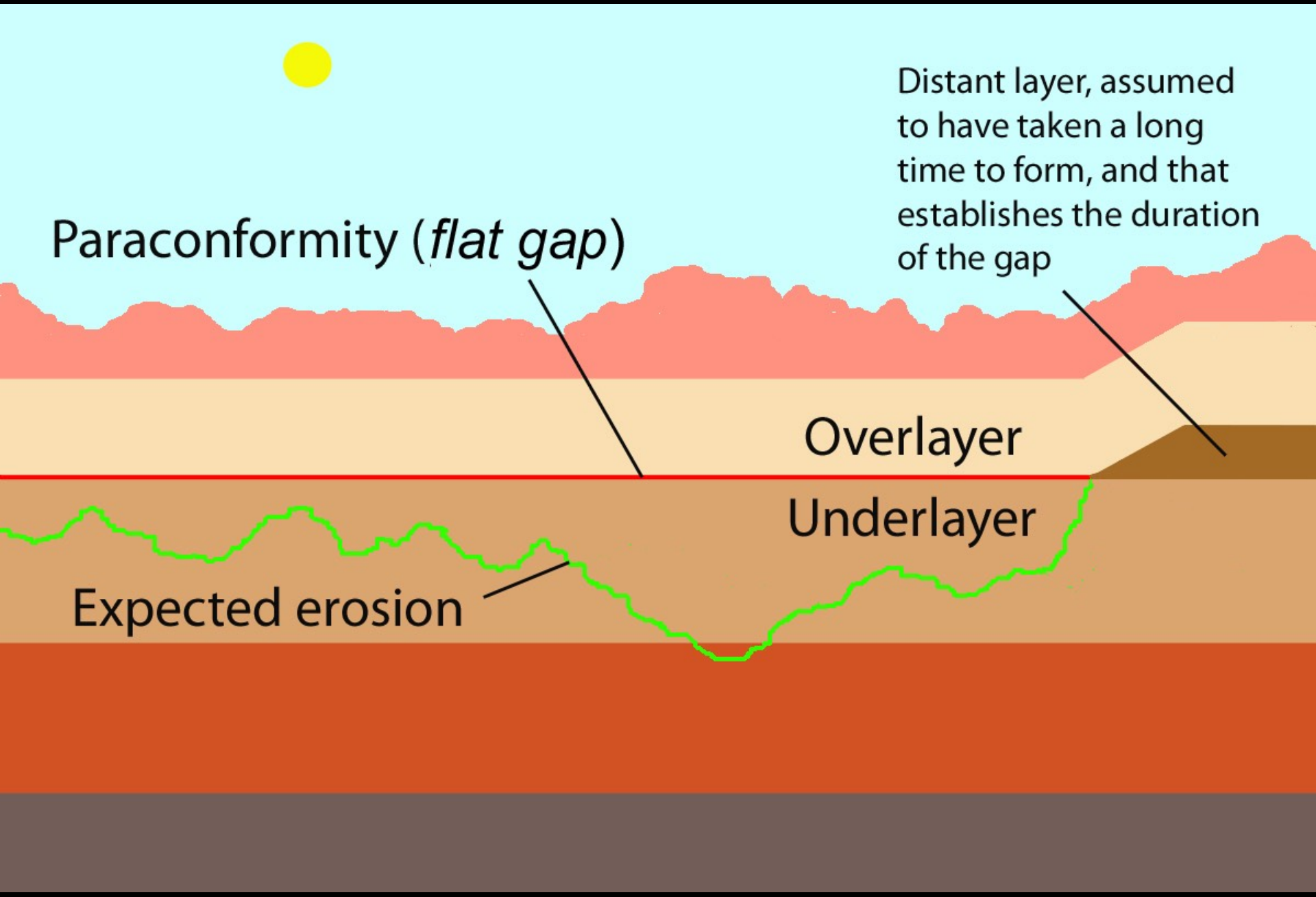
2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

The importance of paraconformities is that they challenge the geologic time scale of billions of years for depositing the sedimentary layers of earth's crust. They are what would be expected from the rapid Genesis Food.

At a paraconformity you have a gap, and the region is assumed to have been elevated during the time of the gap, so no sediments were deposited on it. That explains the gap. However the exposed surface should show lots of irregular erosion over the millions of years postulated for the long gap, and thus it should not be flat. The lower surface at the gaps is sometimes called the underlayer. The usual lack of evidence at that surface for the long ages postulated for the gap, especially the lack of erosion of the underlayer, indicates that the long geologic ages postulated for the gap never occurred.

2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

In review, during the long time proposed for the gaps, you would expect a lot of weathering of the exposed underlayer and especially its erosion. The underlayer is expected to be dominantly irregular as the landscape is eroded by rain, streams, rivers, etc. However, the flatness of the underlayer at the paraconformities indicates that there was no time for erosion. Examine the next slide. This flatness (red line) is what would be expected for the rapid events of the Genesis Flood, but not for the millions of years suggested for exposure and erosion of the rocks during the long gaps (green line).


Paraconformity (*flat gap*)
Distant layer, assumed to have taken a long time to form, and that establishes the duration of the gap
Overlayer
Underlayer
Expected erosion

2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

On our restless earth, over the millions of years postulated, you either have erosion or deposition of the crust. If there is deposition you have no gap, if there is erosion you should not have flat gaps. Since we have the flat parconformities, it does not look like the millions of years suggested for the gaps ever occurred.

The next picture illustrates how irregular erosion tends to be. This is a view of the Colorado River cutting its way through eastern Utah. The Grand Canyon itself, that we mentioned earlier is an extreme example of erosion. Flat erosion occurs only if you have a very hard layer under soft layers. Most paraconformities do not have a hard underlayer.

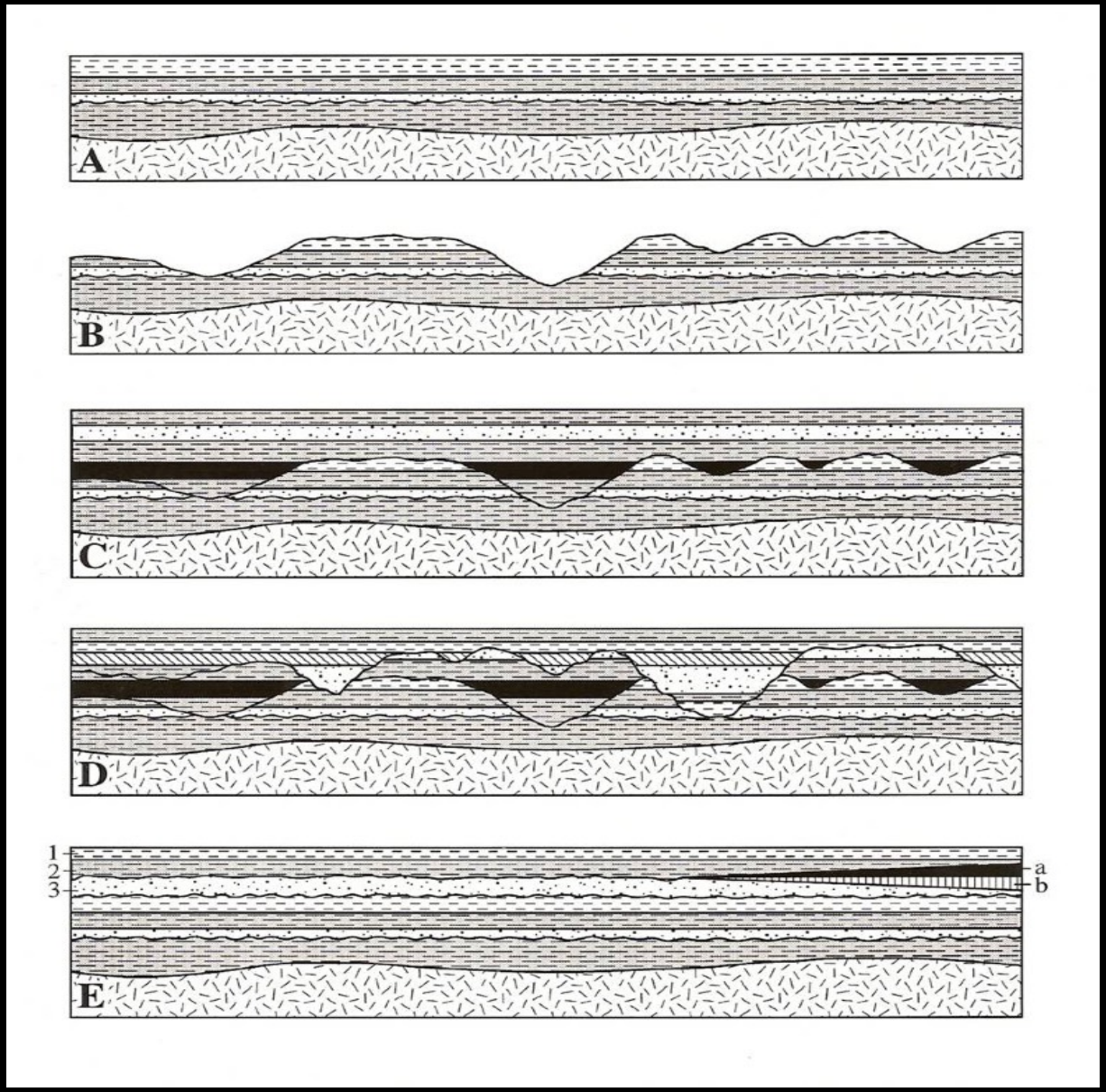
Colorado River, Eastern Utah

2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

The problem paraconformities pose for the long geologic ages is illustrated again in the next figure. (A) is normal horizontal deposition. (B) is normal erosion over a long time. (C) is renewed horizontal deposition. The irregular past erosion surface is well preserved and obvious. (D) illustrates another cycle of erosion and deposition following C. If we had the long gaps of time that are suggested for the paraconformities the geologic layers should look like D. (E) This is more how the geologic layers look and what you would expect from the rapid Genesis Flood with little time at the gaps.

In (E), if you assume that layers (a) and (b) took millions of years to form this means that you have a paraconformity between layers (2) and (3). If millions of years were involved in laying down layers (a) and (b) you should have pronounced erosion of the underlayer (3). Since it is flat as commonly seen in sediments, it looks like the millions of years never occurred.

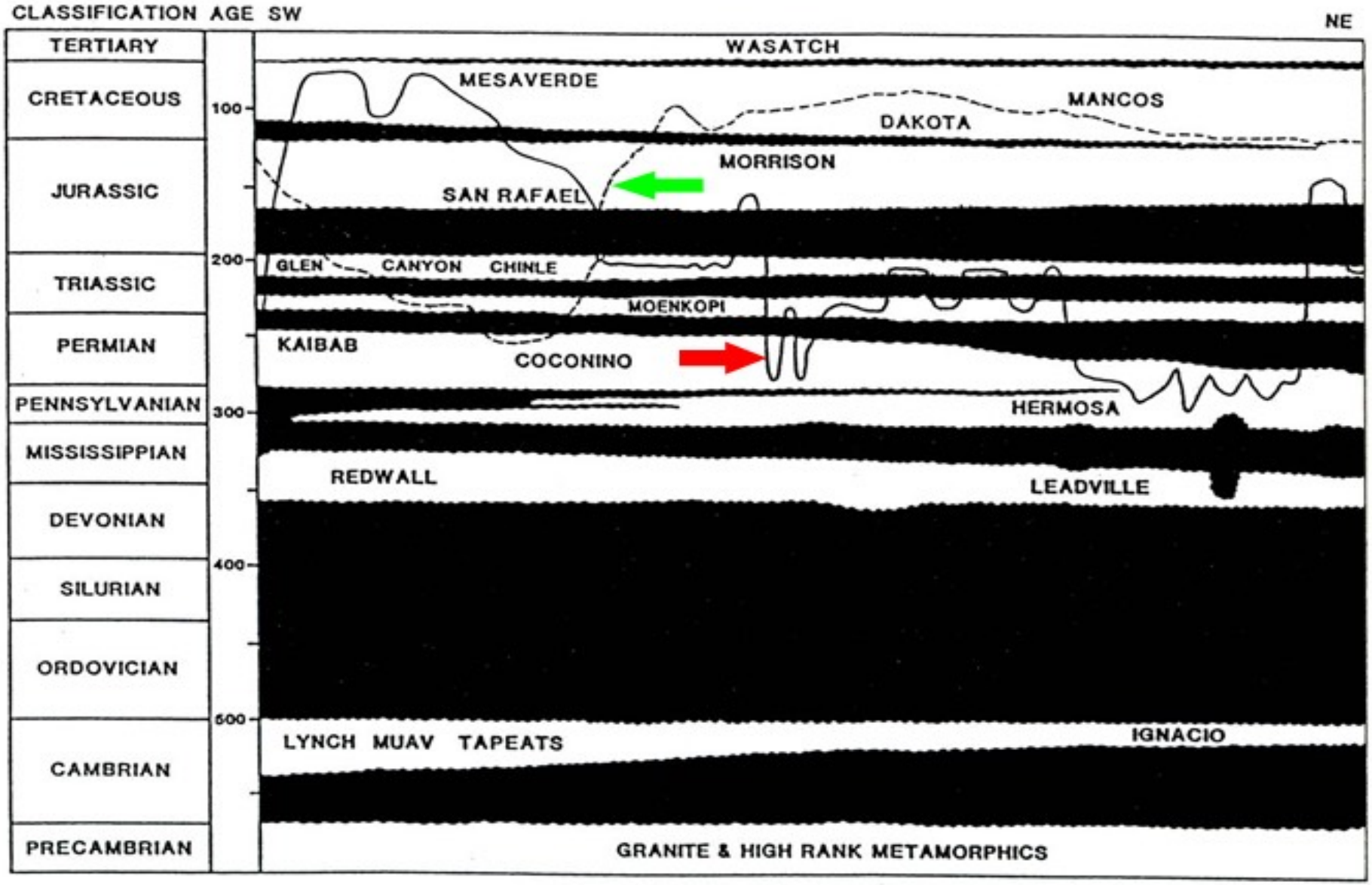
SEDIMENT DEPOSITON PATTERNS



2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

The next figure represents the geologic layers found northeast of the Grand Canyon, displayed according to their assumed age, which is given in the column near the left in millions of years. The rock layers are the white parts and they actually lie directly on top of each other, while the black parts are the gaps (paraconformities) whose thickness reflects their assumed length of time according to the geologic time scale. Most of the black layers are flat enough that they represent the gaps of paraconformities. The chart represents rock layers that are 3.5 km thick, and a 133 km horizontal distance, hence there is about a 15X vertical exaggeration in the illustration.

CONTRAST BETWEEN PRESENT SURFACE TOPOGRAPHY (narrow black lines) AND FLAT GAPS (thick black regions)



2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

In the figure above, the present irregular erosional surface of the land in the region, in two different localities, is represented by the dashed line (green arrow) that is probably the flattest in the region, and the solid line (red arrow) that reflects more pronounced erosion found further south. Note the striking contrast between the irregularity of the present surface (lines at arrows) with the flatness of the rock layers (white layers). If the rock layers had been laid down over millions of years, you would expect lots of irregular erosion of the underlayers, especially at the very long gap illustrated by the thickest black layer. There both the Ordovician and Silurian periods of the geologic column and more are missing.

2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

Sometimes one finds minor erosion of the underlayer at paraconformities, and, of course, some erosion would be expected during the Genesis Flood, but the erosion found is insignificant compared to what would be expected over the long ages suggested for the gaps. Furthermore, as mentioned earlier, according to present rates of erosion and standard geologic time, all the rock layers should have been eroded away many times.

The next few slides are pictures of paraconformities identified at the end of red arrows. The length of time for the assumed gap is also given. On the pictures "Ma" stands for: millions of years (year = annum).

Sometimes the part of the geologic column that is missing is indicated as well as the amount of erosion expected, which is based on average rates of erosion for continents and is what would be expected for the assumed length of time for the paraconformity.

Dead Horse Point, Utah
Expected erosion at 10 Ma gap is 300 m, at 20 Ma gap is 600 m.
Maximum depth of canyon is 600 m.

2. MORE EVIDENCE

c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

Paraconformities tend to be widespread. The 10 million year gap shown in the last illustration is the same one shown in the next one that is near the town of Virgin, Utah, but the two localities are 340 Km apart. These paraconformities tend to be very widespread.

East of Hurricane, Utah

Grand Canyon, Arizona

Top arrow: 6 Ma, expected erosion, 180 m
Middle arrow: 14 Ma, expected erosion, 420 m
Lowest arrow: 100 Ma, expected erosion, 3000 m

2. MORE EVIDENCE

c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

At the lowest arrow in the previous slide, both the Ordovician and Silurian periods of the geologic column are missing. Some geologists, who believe in long ages and who have studied the Grand Canyon for years, have the following comments to make about the paraconformities designated by the two lowest arrows of the previous slide. Even though representing millions of years, the gaps can be hard to find.

Ronald C. Blakey

"Contrary to the implications of McKee's work, the location of the boundary between the Manakacha and Wescogami formations [where the 14 m.y. gap is] can be difficult to determine, both from a distance and from close range."

Stanley S. Beus

In referring to some localities of the very long lower gap states: " Here the unconformity [gap, paraconformity], even though representing more than 100 million years, may be difficult to locate."

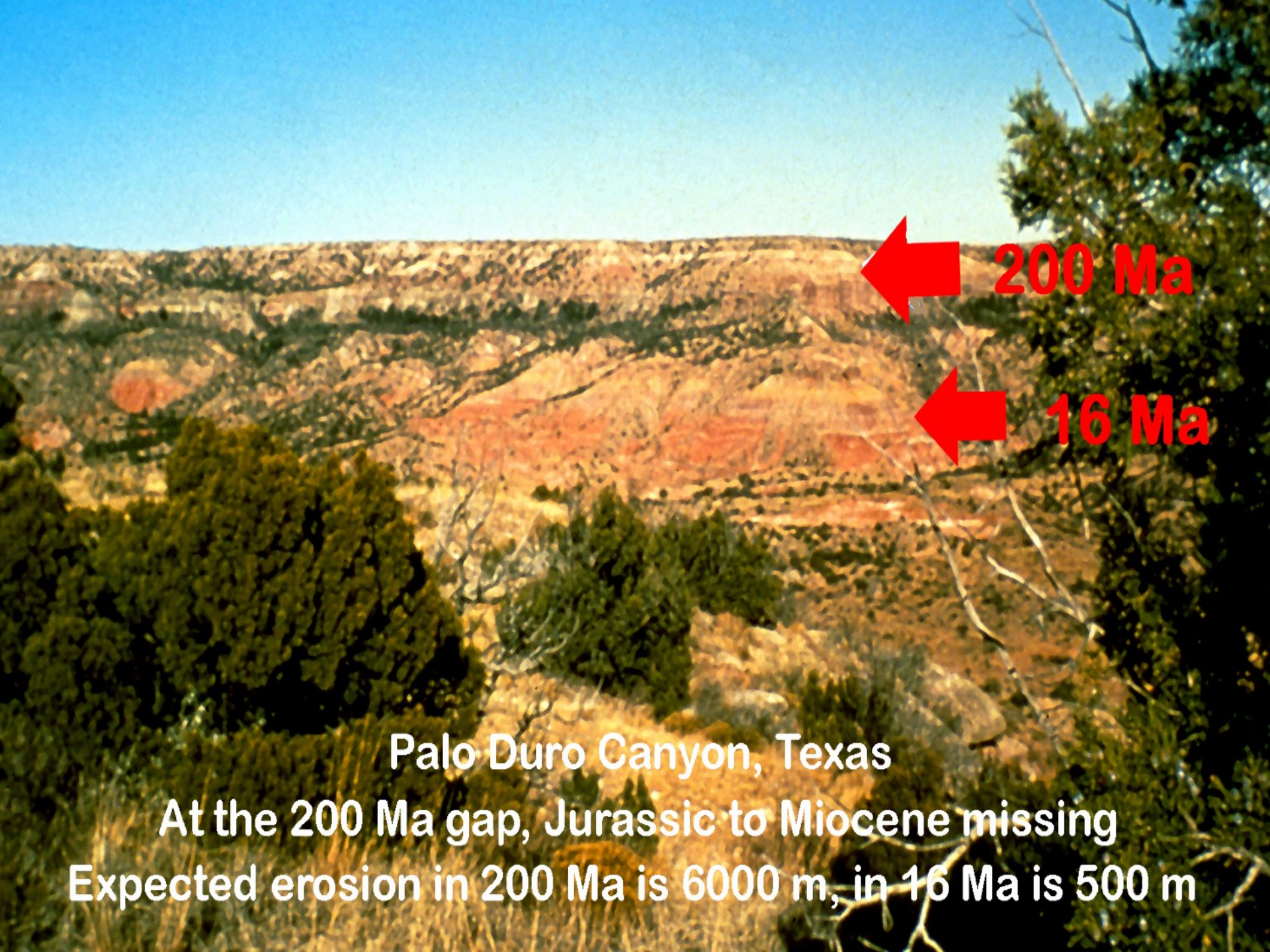
Reference: Beus SS, Morales M, editors. 1990. Grand Canyon Geology. Oxford University Press, p 158, 111.

2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

The Grand Canyon is long. The picture shown two slides up is near the eastern end. Towards the western end, the suggested 100 million year gap shows up more clearly. The next slide is still of the Grand Canyon, but 200 kilometers west near its "mouth." The flat paraconformity is between the light grey layer just below the tip of the arrow, and the medium grey layer just above the tip of the arrow. You can follow the flat gap across the picture. It goes across the whole length of the Grand Canyon.

One can see a little erosion at this gap in the eastern part of the Grand Canyon, but it is insignificant compare to the 3000 meters expected for average erosion rates over 100 million years.


100 Ma
Western region of Grand Canyon



Palo Duro Canyon, Texas

At the 200 Ma gap, Jurassic to Miocene missing

Expected erosion in 200 Ma is 6000 m, in 16 Ma is 500 m

Petrified Forest National Park, Arizona
Jurassic, Cretaceous, and most of Cenozoic is missing at the 190 million year gap. Expected erosion is 5700 meters.

2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

The next two figures illustrate the same paraconformity. The first picture is from north of Vernal, Utah; the second from Continental Divide, New Mexico. Part of the Lower Cretaceous is missing at the paraconformity. The reason the gap is considered to be 20 million years in Utah and 40 million years in New Mexico is that in northern Utah you have the tan Cedar Mountain Formation just above the paraconformity filling in part of the gap. That layer is missing in central New Mexico resulting in a greater gap. These two localities are 570 kilometers apart. You can follow the 40 million year gap for 200 kilometers as you travel along highway I-40 in central New Mexico.


20 Ma
Northeastern Utah

Continental Divide, New Mexico

2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

- The famed paleontologist Norman Newell has occasionally addressed the problem of paraconformities. His comments are not particularly encouraging for the long geological ages model.

- The next two slides quote from his publications.

Newell ND. 1984. Mass extinction: unique or recurrent causes? In: Berggren WA, Van Couvering, JA, editors: Catastrophes and earth history: The new uniformitarianism, p 115-127. Princeton Univ. Press.

"A puzzling characteristic of the erathem boundaries and of many other major biostratigraphic boundaries [boundaries between differing fossil assemblages] is the general lack of physical evidence of subaerial exposure. Traces of deep leaching, scour, channeling, and residual gravels tend to be lacking, even when the underlying rocks are cherty limestones (Newell 1967b). These boundaries are paraconformities that are identifiable only by paleontological [fossil] evidence."

Newell ND. 1967. Paraconformities. In: Teichert C, Yochelson EL, editors: Essays in paleontology and stratigraphy, p 164. Department of Geology, University of Kansas, Special Publication 2. University of Kansas Press.

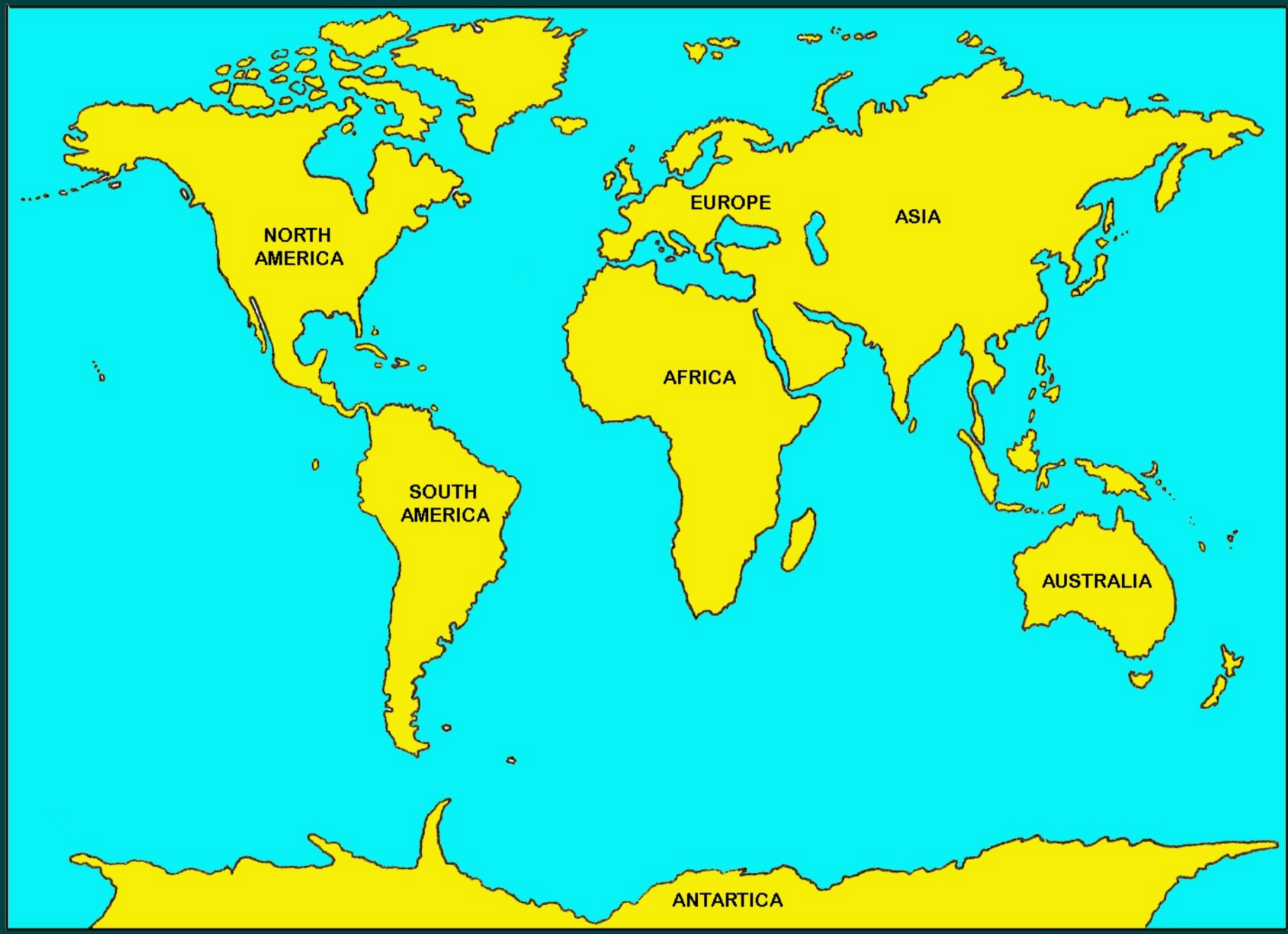
"The origin of paraconformities is uncertain, and I certainly do not have a simple solution to this problem."

2. MORE EVIDENCE

c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

- **The lack of erosion at paraconformities challenges the long geologic ages, and it appears that a lot of assumed geologic time is missing at these gaps. They are common enough in various parts of the geologic column over the world that it looks like most of all of the long geologic time is challenged in one place or another by paraconformities.**

- **If geologic time is missing in one place on the earth it is expected to be missing everywhere, because time is a universal feature of all the earth. It cannot be missing in only one part of the earth. Keep the whole earth (next illustration) in mind.**


NORTH AMERICA
EUROPE
ASIA
AFRICA
SOUTH AMERICA
AUSTRALIA
ANTARTICA

2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

The next slide is of considerable historical interest. A century and a half ago, Charles Darwin was aware of paraconformities, although he does not use that specific term. In his famous book *The Origin of Species* he refers to them as a possible explanation for the gaps in the fossil record. The next slide quotes some of his comments. His explanation that these might represent the bottom of the sea is incorrect because sediments do accumulate at the bottom of the sea; hence you have no gap. Furthermore, none of the examples we have shown represent bottom of the sea deposits. It is easy to identify sea floor deposits by their characteristic fossils.

Charles Darwin. 1859. *The Origin of Species*
Chapter 10: On the Imperfection of the Geological Record

"The many cases on record of a formation conformably covered [flat parallel layers], after an immense interval of time, by another and later formation, without the underlying bed having suffered in the interval any wear and tear, seem explicable only on the view of the bottom of the sea not rarely lying for ages in unaltered condition."

2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

The following slide tells us more about the history of paraconformities. It is a comment from Adam Sedgwick who was Darwin's professor of geology at Cambridge University. Sedgwick disagreed with Darwin's belief in evolution and his comment emphasizes the lack of physical evidence for time at these parconformities (gaps). The paraconformity problem has been known for a long time, but is generally ignored.

ADAM SEDGWICK: THE SPECTATOR
7 April 1860, p 334-335

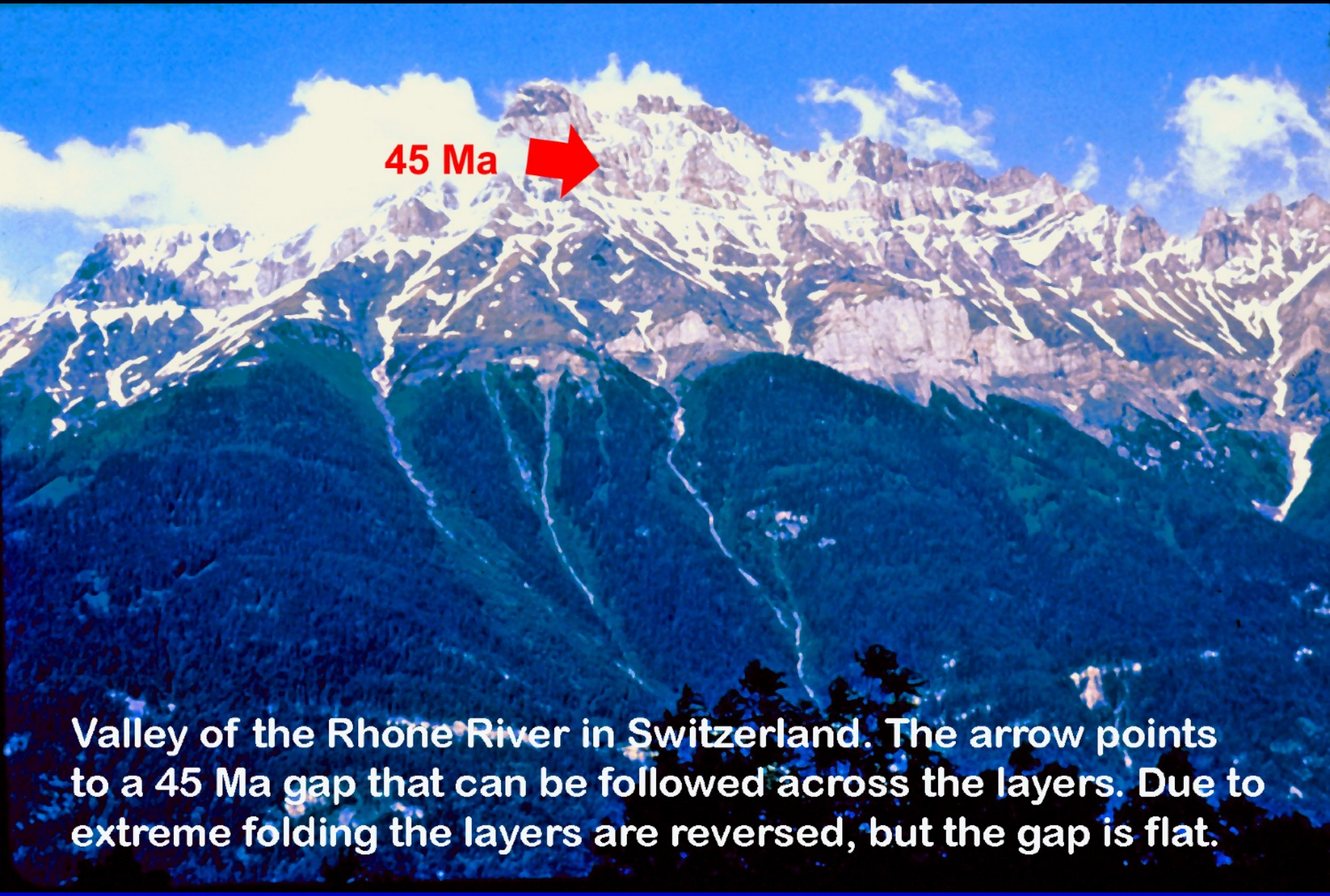
"I think it would be a very rash assertion to affirm that a great geological interval took place between the formation of the upper part of the new red sandstone and the lias. Physical evidence is against it. To support a baseless theory, Darwin would require a countless lapse of ages of which we have no commensurate physical monuments;"

2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

Paraconformities are quite common over the earth, but it takes some study to identify them, because you have to know the details of the local geologic column to establish them.

The next few figures illustrate some paraconformities in other parts of the earth.

The fine line across the cliff (arrow) is the Marshall Paraconformity, here seen in New Zealand. The paraconformity is widespread through the South Pacific. The gap is assumed to be 3 Ma and much more.



Valley of the Rhone River in Switzerland. The arrow points to a 45 Ma gap that can be followed across the layers. Due to extreme folding the layers are reversed, but the gap is flat.

Clifton, Australia. Gap at top of Coal seam is 6 Ma. Could coal, or vegetation forming the coal, survive for 6 Ma?

2. MORE EVIDENCE
c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

The geologist Van Andel comments about another paraconformity in Venezuela. According to the standard geological time scale there is a 15 million (Myr = Ma) year gap, and you would expect on an average 450 meters of erosion during that time, yet he could not find the gap. The next slide quotes his report.

Van Andel TH. 1981. Consider the incompleteness of the geological record. Nature 294:397-398.

"I was much influenced early in my career by the recognition that two thin coal seams in Venezuela, separated by a foot of gray clay and deposited in a coastal swamp, were respectively of Lower Paleocene and Upper Eocene age. The outcrops were excellent, but even the closest inspection failed to turn up the precise position of that 15 Myr gap."

2. MORE EVIDENCE

c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

Not only is there a lack of erosion at parconformities, but there are some exposed flat surfaces of the earth that are considered to be very old that do not show any erosion over the millions of years of exposure postulated. Kangaroo Island (mentioned in Discussion 9), located in South Australia, is an example. The 50 by 150 kilometer island is almost all flat. Based on radiometric dating and fossil evidence, the surface of the island is assumed to be around 160 million years old. Yet the surface is extremely flat. In 160 million years, we would expect 4800 meters of vertical erosion. As can be seen in the next figure the island is very flat. It very much looks like the surface of Kangaroo Island is not 160 million years old!

KANGAROO ISLAND, AUSTRALIA

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

2. MORE EVIDENCE

c. FLAT GAPS IN THE SEDIMENTARY LAYERS (PARACONFORMITIES)

CONCLUSIONS ABOUT FLAT GAPS

1. Because paraconformities (flat gaps) are so abundant over the earth, they represent an important component for the interpretation of earth history.

2. Paraconformities pose a serious challenge to the standard geologic time scale, radiometric dating, and interpretations of extended time for the development of life on earth.

3. Paraconformities are what would be expected from the rapid deposition of sediments during the Genesis Flood.

For questions and answers about paraconformities see Roth AA. 2009. "Flat gaps" in sedimentary rock layers challenge long geologic ages. Journal of Creation 23(2):76-81.

3. CONCLUSIONS FROM THE DISCUSSIONS: “SOME EVIDENCE” AND “MORE EVIDENCE” FOR THE FLOOD

3. CONCLUSIONS

THE FOLLOWING FACTORS FROM THE TWO FLOOD DISCUSSIONS TITLED "SOME EVIDENCE" AND "MORE EVIDENCE"(No. 15, 16) SUMMARIZE SOME DATA THAT FAVORS THE GENESIS FLOOD

1. Abundant sediments from the oceans on the continents
2. Abundant underwater activity such as turbidites and other mass flow deposits on the continents
3. Continent-wide current direction for sediment deposition
4. Incomplete ecological systems, i.e. lack of plant food for animals
5. Anomalously thick and widespread coal deposits
6. Extremely widespread sedimentary deposits on the continents
7. Rates of erosion of continents way too fast to reconcile with the standard geologic time scale. The continents should have been eroded away long ago; they are not that old
8. Lack of erosion at the flat gaps (paraconformities) in the sedimentary layers; it looks like they were laid down rapidly

3. CONCLUSIONS
(Continued)

There is a lot of scientific data that is hard to explain unless you believe in the Genesis Flood.

4. REVIEW QUESTIONS ABOUT "MORE EVIDENCE" FOR THE FLOOD

(Answers given later below)

4. REVIEW QUESTIONS – 1

(Answers given later below)

1. Why is a tremendously widespread layer like the Dakota Formation evidence for the Flood?

2. How fast are current rates of erosion and why and by how much should you reduce those rates of erosion when considering what happened in the distant past? What do these erosion rates challenge?

3. There are significant flat gaps in the sedimentary layers of the earth. How does one determine the assumed length of time (based on the standard geologic time scale) for the duration of a gap?

4. Why are the paraconformities (flat gaps) that we find over the earth a dilemma for those proposing the long geologic ages?

REVIEW QUESTIONS AND ANSWERS - 1

1. Why is a tremendously widespread layer like the Dakota Formation evidence for the Flood?

Spreading a thin layer like the Dakota Formation over 815,000 square kilometers, unlike our local floods, would require major catastrophic conditions with tremendous energy as expected for the Flood. Furthermore the flatness of the layers on which the Dakota is laid indicates little time for erosion which produces an irregular topography as is evident on the present surface of the continents.

2. How fast are current rates of erosion and why and by how much should you reduce those rates of erosion when considering what happened in the distant past? What do these erosion rates challenge?

Present rates are about 61 millimeters per 1000 years. Agricultural practices may have doubled erosion rates (some say less), so they should be cut in half for an assumed distant past without agriculture. These slower rates still severely challenge the much accepted geologic time scale of long ages. At these rates, our continents could have been eroded to sea level over 100 times.

REVIEW QUESTIONS AND ANSWERS - 2

3. There are significant flat gaps in the sedimentary layers of the earth. How does one determine the assumed length of time (based on the standard geologic time scale) for the duration of a gap?

The way one tells there is a gap is that layers representing parts of the geologic column are missing. These layers are represented elsewhere in the sedimentary record of the earth. The length of time assumed for the deposition of the layers that are missing at the gap determines the duration of the gap.

4. Why are the paraconformities (flat gaps) that we find over the earth a dilemma for those proposing the long geologic ages?

Paraconformities cancel the millions of years proposed for the duration of the gaps they represent, because there is essentially no erosion there. The problem is that if you have slow deposition of sediment at the "gaps," there is really no gap; and if you have no deposition, you should have erosion over the millions of years proposed; since you have neither deposition nor erosion, it looks as though the layers were laid down rapidly as expected for the Genesis Flood.

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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