

Geology is traditionally divided into two broad areas. These are **Physical** and **Historical Geology**. The main goal of **Physical Geology** is to describe the material being studied; what it is, where it is, its textures and physical characteristics. This study incorporates everything from the chemistry, all the way to satellite imaging and deep earth imaging. **Historical Geology's** object is to arrange the events of earth history in the regular chronological order of their occurrence and to interpret the processes that brought them to where we find them.

Mainline Geology derives its roots primarily from the works of two men James Hutton (1726-1797) and Charles Lyell (1797-1875). Their worldview was based on the Enlightenment's fixation on explaining every physical process and object by Newtonian Physics. (It is worth noting the "Enlightenment" was in large part a reaction to the superstitions and religious wars of the Middle Ages.) Hutton put forth the idea that we must look at the forces and process that are currently observable to explain what we see from the past. Based on these ideas Lyell later coined the phrase "The present is the key to the past" and developed the Theory of Uniformitarianism. Lyell was also quoted as saying that his aim was "to free the science (of Geology) from Moses"

The result of this newly developing Worldview was to cast aside the Genesis Creation Week and open the door to increasingly longer and longer time scales for the formation of the Earth and its rock deposits. But there are many evidences that challenge the "slow and gradual, old earth" paradigm and are better explained by the worldwide flood at the time of Noah.

Age of the Earth - Before the development of Radiometric Dating, geologists looked at the thick sediments and "saw" vast amounts of time. They looked at the "geologic column" and assigned long ages to the strata because all of the observed active sediment processes were slow. This was just what the evolutionists needed to explain the progression from simple sea life to more complex land-based fossils. Recognizing that each layer of sediment is younger than the layer below it and older than the one above it) they assigned *relative* ages to the rocks. Next the Fossils found in those rocks were assigned that *relative* age. After that it was easy to determine the age of a rock once you identified what fossils were present in it.

In 1862 - Lord Kelvin estimated the age of the Earth to be 100 million years old. This was 3 years after Darwin published "On the Origin of Species". He based this on a calculation of the imagined rate of heat loss from a completely molten Earth to the current surface temperature. This huge jump in the age of the Earth was just what Darwin needed to give **Natural Selection** the time it needed.

Sedimentation - About 75% of the earth is made of **sedimentary** rock deposited by erosional processes, and the rest are either **igneous** crystalized from molten rock or **metamorphic** (heat altered) rocks such as slate and marble. Vast sedimentary

layers are spread across all continents. For instance, the Tapeats Sandstone and Redwall Limestone of Grand Canyon can be traced across the entire US, into Canada, and across the Atlantic to England. The chalk beds of England (the white cliffs of Dover) can be traced across Europe into the Middle East, and are also in the Midwest of the US and Australia. That was all laid down at the same time. Not by local floods over eons.

Bent Rocks - In many mountainous areas, rock layers thousands of feet thick have been bent and folded without fracturing. For instance, in the Grand Canyon, a sequence of Tapeats Sandstone, laid down over “420 million years” is bent and folded 90 degrees. But old dry rocks will not bend. They break! Those layers of sandstone were laid down quickly and folded when they were still wet! They had not been there millions of years. The conventional time frame for sedimentary deposits cannot be correct.

Polystrates are fossilized trees standing upright in sedimentary rocks, indicating the sediments accumulated around them in less time than it would take the tree to decay (100 years max?) - much less than the 100,000 years claimed by uniformitarian geology. So how were polystrates formed?

The explosion of **Mt. St. Helens** in 1980 deposited 25 feet of finely layered sediment in one afternoon, and in five months cut canyons 100 feet deep through solid rock, proving such features do not require millions of years. There were also millions of trees floating on Spirit Lake after the blast, that have begun to sink and be surrounded by sediment, forming polystrates right before our eyes. There are more of these at Yellowstone Park.

Coconino sandstone below the rim of Grand Canyon averages about 500 feet thick and covers a massive 200,000 square miles. Evolutionists say it was “deposited in a windy desert”, because of enormous wave patterns in the sand. But the cross bedding suggests it was formed by rapidly flowing water (5 feet /second = tsunami type events). The sandstone formation is bounded above and below by marine sediments. To say it was formed in a windy desert would require an ocean that rose, became a desert, went down into the ocean again, then back up. What forces would do that without tilting or breaking the sandstone?

The volume of sand is estimated around 10,000 cubic miles, but there is no source of this sand nearby. It must have been transported from northeastern US and Canada. There are no known gradual geological processes that can explain the transport and deposition of such huge volumes of sand over such large distances, but it is easily explained by the Genesis Flood.

Coal - there are vast deposits on all continents. Geologists say coal formed in swamps over millions of years. (But when they cut into a seam of coal, methane gas often hisses from the fresh face. That would not happen if millions of years old).

Why do they say coal formed in a swamp? It is the only way to imagine lots of vegetation in one place by slow and gradual processes. But decaying vegetation normally disintegrates, even in a rain forest. So, a slightly acidic, oxygen free swamp is imagined. They won't say it "washed" into place, because that would require a flood of biblical proportions. Yet we have no modern examples of coal forming in the many swamps across the world today.

Swamps would have to be just above sea level. Too low and would "drown", too high would dry out. Must cover hundreds of miles, and would have had to sink gradually over hundreds of thousands of years at exactly the same rate that the vegetation was accumulating, and stay level all those years.

Problems: Usually no soil underneath, which would be expected if the vegetation grew in place and not washed in. Strata above and below coal deposits usually show evidence of being deposited by flowing water. Thin bands of clay run through most coal, but would not be deposited in a swamp. Often fossils above and below which show rapid burial, and would indicate rapid deposition of the coal deposits too. Sharp contacts with layers above and below indicate there has been little or no time between those layers and the coal formation. However, these vast beds of quickly buried massive amounts of vegetation are consistent with the world wide Flood of Genesis.

Fossil Graveyards - In Colorado there are 10,000 dinosaurs all buried together in approximately 1 square mile! This is clear evidence of catastrophe, not slow and gradual processes.

Mam Tor in England is a favorite place of evolutionists who say it took a million years to form the 100 meter high wall of repeating sandstone and mudstone layers, with each layer taking about 10,000 years. But an earthquake in Canada's Maritime Provinces in 1929 formed the same kind of "turbidites" in a matter of minutes.

Granites (p179), until recently geologists believed enormous "balloons" of molten rock (magma) 5-20 miles across bubbled up through solid rock over millions of years to near the surface, then slowly cooled over eons and eroded, leaving formations like Stone Mountain, GA. Now geologists call those ideas "an offense to reason." They now believe plumes of magma pushed up in a matter of hours or weeks through cracks a meter wide, before pooling into saucer shaped plutons a mile or more below the surface and cooling quickly. The enormous tectonic upheaval of the earth's crust and mantle at the beginning of the Flood was unlike anything ever seen on earth, either before or after, and is the best explanation the formation of these large igneous, granitic bodies.

We now know fossils, stalactites and stalagmites, sandstone, mudstone, opals, granites, and petrification can form in months to years, and do not require the hundreds of thousands or millions of years taught by uniformitarianism.

As the Flood waters drained off

Thick deposits of **Quartzite boulders** in NW USA and Canada, up to 3 feet, rounded, gouged are found 300-620 miles from their source on the Continental Divide. To move those boulders that far would have required water 200 ft. deep, flowing at 65 mph, which is 3-4x the size and speed of flash floods today.

Channeled Scablands of SE Washington State - are a relatively barren and soil-free region of interconnected relict and dry flood channels that were caused by cataclysmic floods during the Ice Age. J. Harlan Bretz described this area as being formed by a catastrophic flood in 1923. Bretz's explanation of the scablands was not accepted for two reasons; 1) he couldn't explain where all of the water came from and 2) prejudice that Uniformitarian Geologist had for anything that pointed to a flood catastrophe.

However in 1942 when Joseph T. Pardee published his paper on the "*Unusual Currents in Glacial Lake Missoula*" he was able to show that the failure of a glacial ice dam let lose 500 cubic miles of water from Western Montana's Lake Missoula. Once the source for the Scabland's water was clear the geologic community had to accept that flood larger than any that they could imagine formed this terrain in SE Washington. Remember, only the Flood can explain the ice age, (warm water evaporating and condensing over cool land and producing great quantities of snow) and this Lake Missoula flood occurred after the ice age.

Erosion - North America is eroding $\frac{1}{2}$ centimeter in an average human lifetime. That doesn't sound like much, but at that rate our entire continent would have been worn down to sea level in just 10 million years! In the Grand Canyon there are expansive sedimentary layers requiring huge water flows over "hundreds of millions of years", yet with no signs of erosion.

Submarine Canyons - some larger than Grand Canyon that form at the mouth of rivers, show evidence of massive run-off, best explained as the end of the Flood.

Next Week: The Fossil Record

What are fossils and how are they formed? What did Darwin say about the fossil record? If he was correct what would we expect to find in the fossil record? What is the best fossil evidence for evolution? What is the significance of the "Cambrian Explosion"? What do we know about "ape-men" and dinosaurs from the fossil record? What are "living fossils"?

