Smoky Mountain Bible Institute

Geology 106 Ice Age

Welcome back, class. Please get settled in and take hold of your pick point rock hammer and hand lens so that we can continue our study of geology. We will examine ice ages today. The last major geophysical event to takes place on Earth was the Ice Age. Now the uniformitarian models for ice ages are all sadly lacking in sound plausible theories for anyone to latch on to and say this is the predominate theory or theories. There are currently dozens of theories that are all fraught with algorithmic holes or unobservable and improvable assumptions. So first let's dispense with the currently accepted models of 30 ice ages that have as their only basis the need for time and flawed ice core assumptions which I will address later. While we are at it, let's also dispense with the more popular predecessor of 4 major ice ages. Let's imagine for a moment one ice age, and when we do this, we will find that all of the problems that other models suffer from will evaporate, because a model that has one ice age following a world wide flood around 4300 years ago, and taking about 500 years to peak and about 200 to melt to our current ice levels, actually fits very nicely with both observable glacial geology, strange mass extinctions, and the biblical narrative.

So we now jump into a discussion that spends most of its time arguing for the biblically harmonious explanation, and less time on disproving the currently popular, albeit weak, models. It is always good to start with Scripture, and a good text to start this discussion is St. Paul's first letter to the church at Thessalonica which says in chapter 5, verse 21, ***but test everything; hold fast what is good.*** This is taken a bit out of context, but is a good research principal all the same. First let's acknowledge that the worldwide temperature went down, and glaciers advanced from about 1350 to 1850 in what is often called the little ice age. This, however, was not an ice age in the sense we are speaking of. It was simply a 500-year cooling period in a worldwide cooling and warming cycle that has existed since we were kicked out of the garden around 6000 years ago…give or take a few decades. This could lead to a global warming (aka climate change) discussion, but that will have to be put off to another lesson.

So why are we discussing the ice age under the topic of geology? Because our Earth is covered with geological evidence of that geophysical event. Geologic formations exist that can only be explained by the ice age, much of it associated with glaciers: glacial till, moraines, lakes, scratches, U-shaped valleys, and erratic boulders. We can understand each of these formations while also reviewing a sound theory for how the ice age came to be.

Following the flood in around 2300 BC, the oceans were much warmer due to volcanic and plate tectonic activity. This led to greater evaporation which led to greater cooling, combined with the high levels of particulates in the atmosphere which provided for further cooling. These two things would have been sufficient to start a steady cooling trend that in approximately 500 years, depending on which models and variables you plug in, could easily develop ice sheets and glaciers onto the Eurasian and North American continents, down to the latitudes where we know they once existed because of the geological formations that we can observe:

- Glacial till: the mixed rock matter caused by glaciers breaking off and carrying and mixing sediment from various sources of various sizes. Glacial till is often found on top of sedimentary rock, not found covered by layers of sedimentary rock. This is what you would expect to find if the ice age followed a worldwide flood which is responsible for many sedimentary rock layers.
- Glacial moraines: ridges of mixed glacial till pushed into place by a glacier, giving evidence of where the sides and ends of glaciers were before melting. If the ice age started melting back around 1800 BC and reached close to current levels around 1600 BC, then we would expect to see these formations as we do today showing evidence of only about 3600 years of erosion.
- Lakes, long striations or scratches, and U-shaped valleys. All three of these are evidence of glacial activity. Many lakes in North America and Eurasia can be attributed to the extreme weight and land-moving ability of glaciers. Rocks of all sizes and large rock surfaces show the scratches and scoring that you would expect to see when tons of rock and ice flow for years over a hard surface. Normal erosion leads to V-shaped valleys, but when large glaciers create valleys, they scrape to the bedrock. Therefore, U-shaped valleys can be

attributed to glaciers.

- My favorite glacial geographic formation is erratic boulders. These boulders, some larger than houses and weighing tons, are located in some cases hundreds of miles from the closest formation that contains that kind of rock. So, we have three main theories about how they got to their current location: they floated there inside an iceberg, were carried there inside a glacier, or during the melting of a large glacier were washed to that location in a violent and powerful flash flood following the breaking of an ice dam. Part or all of these processes can easily explain the existence of erratic boulders.

I seem to have run out of time and still have not addressed some other important ice age questions. Next month I will address how areas that are now deserts, like the Sahara or parts of the Middle East, were once very green, with evidence of large (now dry) deep inland lakes, and mass extinctions of disharmonious associations like wooly mammoths, hippos, musk ox, and reindeer. We will discuss ice cores, and I also need to briefly address global warming.