

# *Smoky Mountain Bible Institute*

## *Geology 107 Ice Age evidence*

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 have a lot to cover as we continue our discussion of the Ice Age and its effect on the Earth.

First, let's examine the question of areas that are now deserts like the Sahara and the Middle East, which were once very green, but are now very dry, and how that might be connected with large inland lakes that no longer exist. Shorelines and evidence of sea life confirm that they once existed in these areas. The North American continent had many of these massive lakes after the flood. They even have names such as Lake Agassiz which once covered the center third of Canada. Lakes Missoula and Bonneville once covered vast regions of the western US. The Great Salt Lake is a mere puddle compared to the massive lake of which it was once a part. These are just a few examples. If you start to do some research on prehistoric lakes and land elevations below sea level, you will find dozens of lakes, and sea salt being collected in areas hundreds of feet below sea level in places where there is no historical record of water. Sea salt hundreds of miles from the nearest sea makes clear there was once a sea there. The Ice Age played a major role in filling some of these lakes. How did these lakes drain? Some were drained quickly, cutting massive canyons, and others just evaporated over hundreds or even thousands of years. We know this for two reasons. First, there is evidence of animal and human life on the ancient deserted shore lines of many of these lakes. Secondly, there is evidence that the main reason the vast desert regions of the Earth are so dry is because of sustained dry weather cycles. Being cut off from the ocean, these lakes could not sustain their water cycle, and when the water evaporated, it was carried to other places. After hundreds and thousands of years, these lakes became dried-up basins that we know today by such names as Death Valley or the Great Rift Valley.

Another strange phenomenon to consider in conjunction with the Ice Age is mass extinctions of disharmonious associations, like woolly mammoths, hippos, musk ox, reindeer, giant beavers, saber tooth cats, all living in places like Great Britain. All became extinct over a relatively short time, a few hundred years or so. A mixture of harsh weather conditions and lack of food would logically follow during a 500-year or so cooling, ice-expanding part of the Ice Age. Many of the animal kinds that got off the ark probably did not make it past the first thousand years.

Ice cores are used to argue for an old Earth. Many measurements of these cores are used to calculate old ages like mass spectrometry, electroconductivity, deuterium excess, and CO<sub>2</sub> levels. These dating methods all have unprovable assumptions, just like Carbon 14 and other dating methods discussed in the Biology Wing. Ice cores have rings, and it is still argued by many that each ring signifies a layer of summer ice followed by winter snow. When you examine the numbers from this method, you can see why all old Earth ice core dating methods "melt down". One of the deepest ice core samples ever drilled was 10,000 feet deep and contained 135,000 layers. Well, if you need millions of years, that won't do you much good. That is why they use chemical methods to make the deepest layers microscopically thin.

Here is a little better way to calculate the ice core data: Ice and snow layers are not representing years, but are warm and cold indicators. Therefore, you can get multiple layers depending on the weather patterns. We have a great example in two P-38 aircraft that crash-landed on the ice cap in 1942. They were both recovered in 1990, and after 48 years, the planes were 263 feet deep under hundreds of layers of ice and snow. At an average cover rate of 5.5 feet per year, the ice cap is only about 1824 years old using our oldest ice core of 10,000 feet. However, we must account for the lower layers being compressed at some reasonable rate making them thinner. Using this data makes it very easy to estimate the current ice cap to be approximately 3600 to 4300 years old.

I thought I would spend a little time on global warming—so here it is. Weather comes in cycles, sometimes warm and sometimes cold. In my lifetime, we saw cooling in the 1970's and warming in the 1990's. We should be good stewards of our environment, but I think it is a little misguided to think we have any great influence or control over our weather patterns. That wraps up the Ice Age. Next lesson: Fossils.