

## Then and Now

1-30-2017 by Harry Zirkelbach

Stars and Sun date 34682

on the Occasion of the 66th Wedding Anniversary of Barbara Foley and Harry Zirkelbach at St Philomenia's Catholic Church at 14th and Detroit Streets Denver Colorado. Thanks Barbara for the journey of a lifetime.

What is the oldest thing you will ever see?

For many North Americans that exists in Western Colorado  
at the Colorado National Monument.

There, just west of Grand Junction, stone walls clearly show rocks through  
eight of the oldest recoded times. At bottom, Pre-Cambrian, petrified rock,  
1.7 billion years old. Nothing physical on earth is older.

That's not completely true. You and I are older. We are star dust. Every  
atom of our being is from from the "Big Bang". Remember when you spoke  
of living before and returning as another living thing? You will,  
be unrecognizable. Enjoy your eternal today.

On a related topic, the Nobel committee has set time on the Doomsday  
clock another half minute closer to midnight; now 2 and one-half minutes.

A radical change, as two years ago that was 3 minutes.

Hmm. Let's see, that says the time remaining is 10 years.

Still, time to be frivolous, enjoy, let others close the door.

Why the worry? It's the environment. Changing so rapidly.

Why are scientists so certain?

Well before recorded time, Stars and Sun date eons ago, the Big Bang and  
all that, this gathering glob of star-dust we call home  
began to experience weather.

Today because of that weather, there exists a mountain of snow near both  
North and South Poles. That means yearly snow began falling on fairly  
large lands. And it kept building, though only a small amount yearly,  
because of raging storms.

The South Pole land is called Antartica. A small portion of that is visible,  
not covered by snow and ice. At the North Pole there is only Ocean. But  
nearby is Greenland, the world's largest Island, 80 percent covered by ice.



At Center, this ice sheet on Greenland, is two miles thick, 10,500 feet. For an idea of height, Denverites looking 60 miles west to the Rockies, see an elevation rise of less than 9,000 feet.

To keep your attention, Greenland is twelve times larger than Colorado; it is larger than Europe.

At Two miles thick, that's a lot of ice.

Greenland's ice formed at the beginning of the last ice age, 150 million years ago. (For comparison, the newest layer of rock in our Colorado Monument is that same age.) This mass of ice is now so great that it deforms the earth beneath, pushing the bedrock several thousand feet into the mantle, its gravitational effect so great, it effects the distribution of the oceans.

This monster, growing over that eon of time, recently awakened from its past glacial slumber. In the past four years, more than a trillion tons of Greenland's ice has been lost, half calving, half melt. Icebergs from calving, do not raise the Ocean level.

This melt, the great threat to Greenland's ice, Ocean levels.

Illustrations of climate change are everywhere; flooded streets in Florida, too warm waters in the Great Lakes and Gulf of Mexico, the beetle infested dead forests of Montana and Colorado, dead fish on the Yellowstone River. Most of this is not obvious to the layman.

Global warming works on a time delay. When carbon dioxide is added to the atmosphere it takes decades for the earth to adjust. This summers' fish kill was the product of warming that became inevitable thirty years ago; the warming being locked in today won't be fully felt until todays toddlers are middle aged. We live in the climate fixed in the past; we have already determined tomorrow's climate and our children's future.

Tick, tock. Tick, tock.

