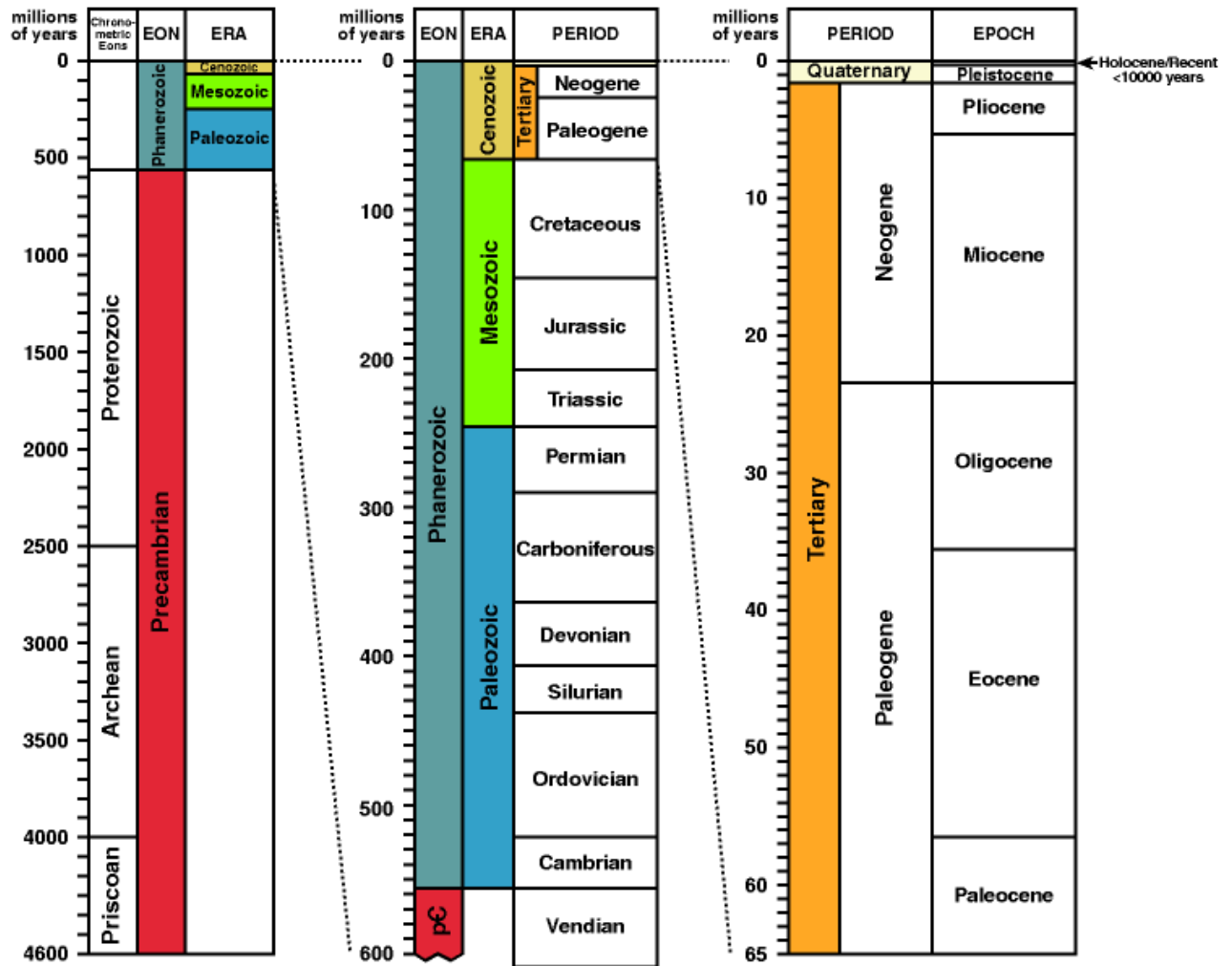


Phil Varela
 Bring Back
 November 3, 2005

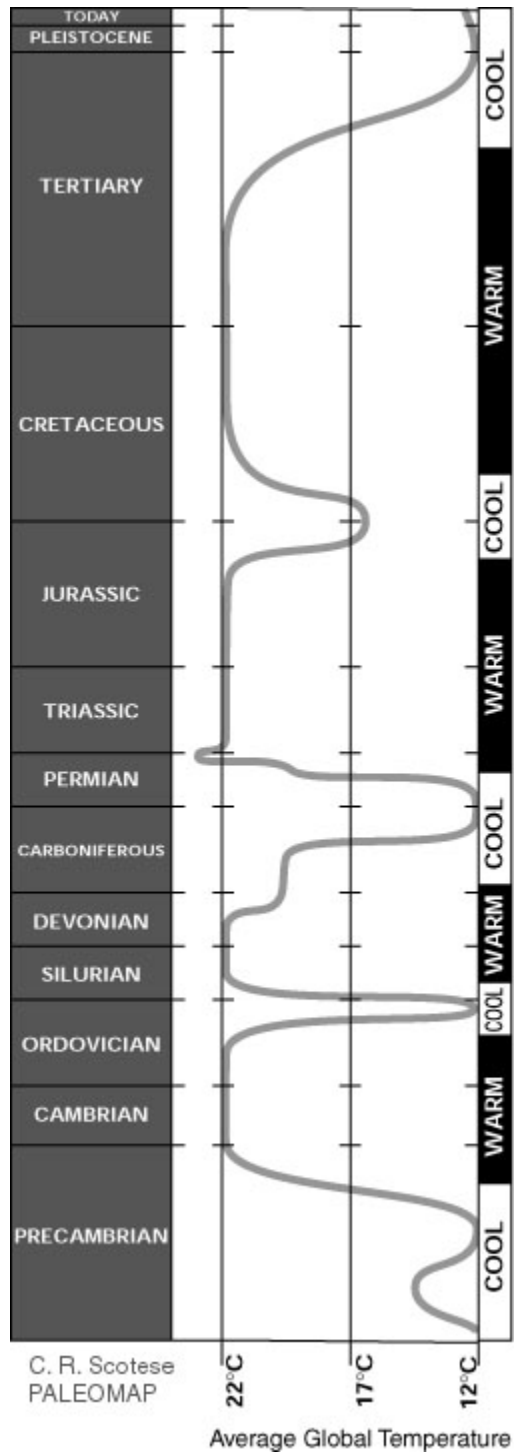
History of the Earth

I wanted to bring us back and let us look at the large scale history of the earth possibly in a more geological perspective. When we last looked at climate change through the eons, one component that was missing was a time scale. I wanted to provide one:



Note the Chromatic Eons, Eons, Eras, Periods, and Epochs.

The image we looked at before:



Some of us were asking what could have gone on during those shifts that may have caused changes?

Some important dates in geologic history:

3800 Million Years Ago (Ma): Earliest evidence of liquid water

3500 Ma: Earliest evidence of life

2450-2200 Ma: Buildup of oxygen in atmosphere

700 Ma: Ice covered earth?

565 Ma: Worldwide distribution of multi-cellular organisms

439 Ma: Mass extinction [corresponds to abrupt cooling event]

420 Ma: Earliest mammals

364 Ma: Mass extinction [corresponds to abrupt cooling event]

208 Ma: Mass extinction [corresponds to abrupt warming event]

125 Ma: Earliest flowering plants

65 Ma: Mass extinction (bolide [meteor] impact; dinosaur event)

5 Ma: First hominids

.12 Ma: First appearance of our species

Think about:

- How these significant events relate to climate.
- Did climate cause these events, or did these events cause climate change? Or both?
- What past mass extinctions say about importance of climate change? Is it important?