

## NOT “THE HOTTEST YEARS ON RECORD”

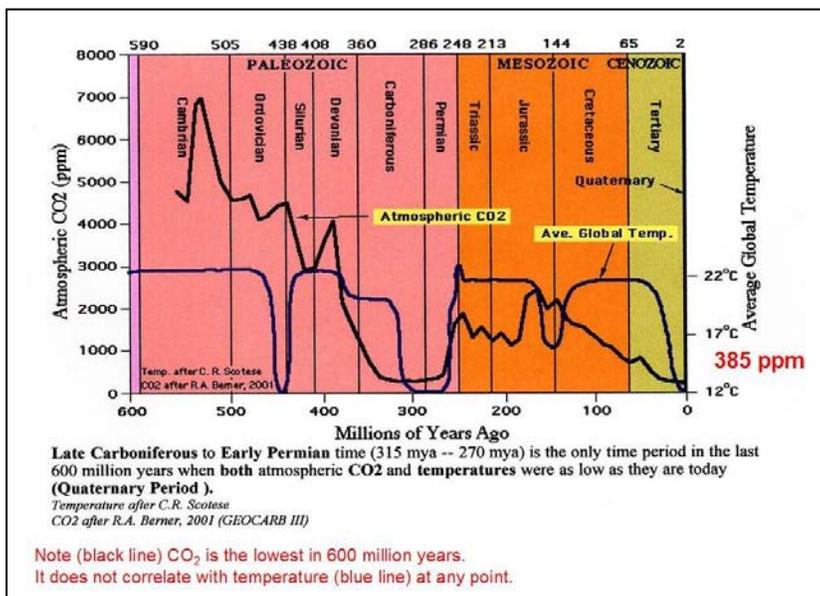


The topic of climate change is dominating headlines. An unusually warm winter in parts of Canada and Europe (caused by a cyclical warm-water ocean phenomenon called El Niño) has fostered cataclysmic media reports and commentary about global warming and made great fodder for TV fundraising commercials by environmental lobby groups targeting an increasingly alarmed public. Many media reports proclaim that we are witnessing the hottest years in history. Typical was the following comment by a Canadian TV producer:

*“The 10 hottest years on record have all occurred since 1990, with the past six years all in the top 10. We’re seeing massive melting at both poles. Sea levels are rising. The evidence is getting hard to ignore. It’s possible there are other explanations for why all this is happening. Maybe skeptics are right in saying this is a short-term climate trend, or that it has little to do with human activity. But right now, the facts as we know them say otherwise.”* — Daniel Kitts, “Climate-change skeptics don’t deserve equal time,” *Globe and Mail* Web Edition, January 25, 2007

### Calming Climate Change Hysteria with Needed Context

In fact, throughout periods of its history, the world has been much warmer. The current warm spell needs context. Paper records from weather stations are a relatively recent development (dating only from 1861 in western Canada), particularly in the context of the Earth’s long geological age:



- If the thickness of a sheet of paper is .10 millimetre, 100 pages would be approximately 1 centimetre thick. Assuming paper records began in the middle 1800s, and that each year represents a sheet of paper, that would give us a small pile of about 150 pages or 1.5 cm. of paper.
- The geological age of the Earth—4.55 billion years—would represent a stack of paper that is about 45.5 kilometres high.
- It is misleading to refer to temperatures recorded in the first 1.5 cm. of a paper pile that is 45.5 km. high and call them the hottest temperatures in history.
- These alarmist reports refer vaguely to modern instrumental records covering about 150 years. That’s one of three ways in which temperature records have been collected
- The others are historic records covering about 3,000 years, and geologic and biologic

evidence covering the remainder of time. The degree of accuracy decreases as you go back in time. They are derived from a wide variety of sources. For example, the ratio of oxygen 16 to 18 isotopes is a function of temperature. Certain plant species such as coral are very temperature-sensitive. Tree rings, ice cores, pollen sequences and many others also provide data. These records are compared with each other to confirm long-term variations. Some records, such as tree rings and the instrumental records, provide confirmation through overlap.

- The chart above traces average global temperatures and carbon dioxide emissions over the past 600 million years. It shows present temperature and CO<sup>2</sup> levels at historically low measures.

**Sources:** <http://www.co2science.org/scripts/CO2ScienceB2C/subject/c/summaries/co2climatehistory.jsp>; H. H. Lamb, *Climate: Present, Past and Future*, CO<sup>2</sup> Digest