

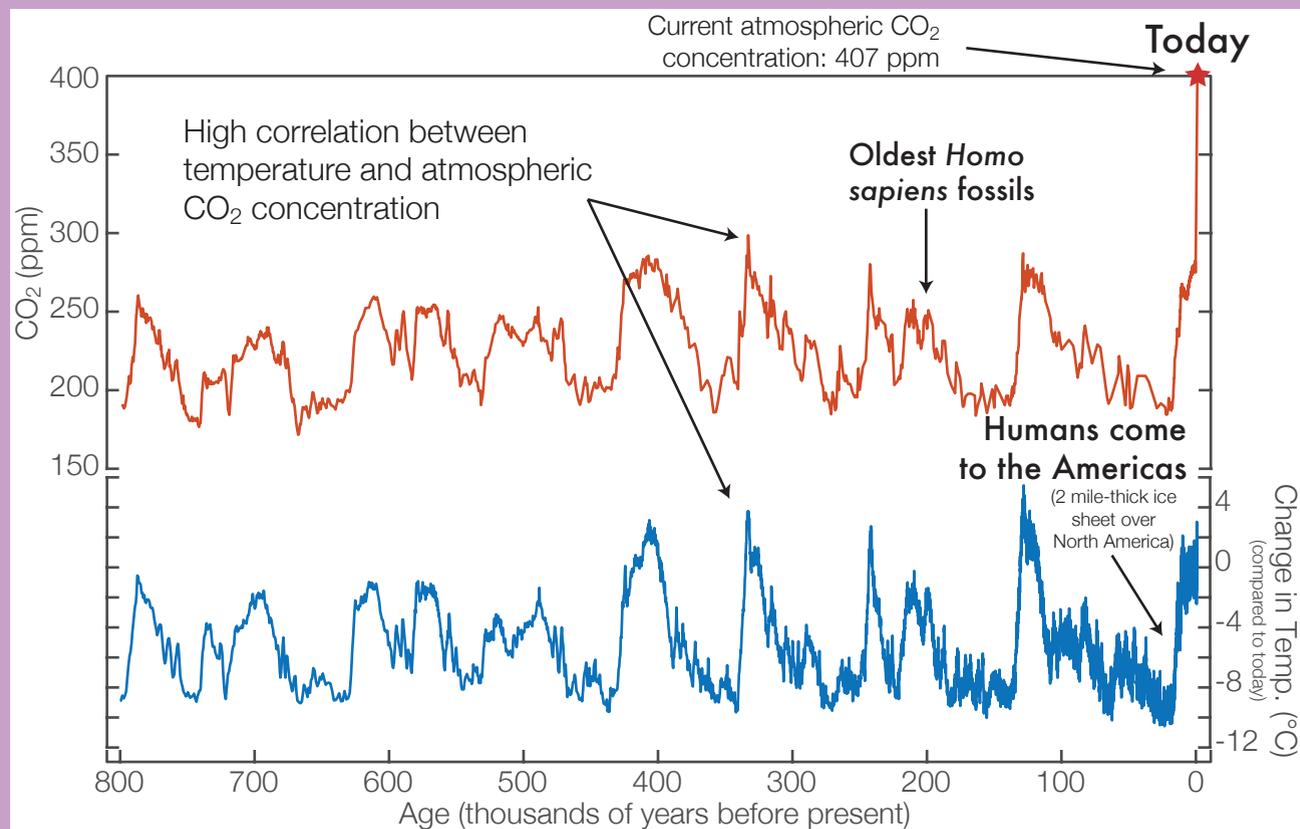
Ice Core Records of Atmospheric CO₂ and Temperature



Over the past 800,000 years, atmospheric CO₂ concentrations and global temperatures have oscillated on roughly 100,000-year timescales. These glacial cycles were accompanied by large changes in land ice and global sea level. At the Last Glacial Maximum (20,000 years ago), there was an ice sheet nearly 2 miles thick over North America! This is also the time when humans migrated to the Americas across a land bridge that connected Siberia to Alaska.

Although atmospheric CO₂ is much higher today than it has been over the past 800,000 years, the climate system takes a long time to respond to these sorts of changes, so we are only beginning to see the effects in global temperature.

SOURCES + RESOURCES:
<https://www.scientificamerican.com/article/ice-core-data-help-solve/>
<http://www.realclimate.org/index.php/archives/2004/12/co2-in-ice-cores/>
 J Jouzel et al., *Science* **317**(5839), 793-797 (2007).
 Luthi et al., *Nature* **453**, 379-382 (2008).
 QUESTIONS? caltech.earthscience@gmail.com



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