

The solution to the warm winter paradox during the Pliocene

Michael J. Oard

Uniformitarian scientists have deduced that the paleoclimate of the Mesozoic and early Cenozoic (Paleogene) was very warm worldwide, especially during the Eocene, when global temperatures were 9–14°C warmer than today (figure 1).¹ The Paleogene includes the Paleocene (Pal), Eocene (Eo), and Oligocene (Ol), while the Neogene includes the Miocene (Mio) and Pliocene (Pli). The Pleistocene (Plt) follows the Neogene. The early Eocene also includes the Paleocene–Eocene Temperature Maximum (PETM), which secular researchers interpret as an abrupt rise in global surface temperature by 5–8°C for 200,000 years within the uniformitarian timescale. These temperature estimates are based on very warm climate fauna and flora at high latitudes.

The Pliocene, 5.3–2.6 Ma, or late Neogene in figure 1 is much cooler than the early Cenozoic but still warmer than the Pleistocene multiple ice age period. However, proxy data from paleoflora shows Pliocene temperatures in the Canadian High Arctic were 14–22°C warmer.² Early Pliocene temperatures on Ellesmere Island were estimated to be 18°C warmer than today, mostly in winter.³ This is called the ‘warm winter paradox’.

Models cannot explain the paradox

Climate simulations cannot explain the warm winter paradox:

“... terrestrial data suggests that Pliocene northern high latitude temperatures were much higher than can be simulated by models. ... Here the temperatures obtained from models and different proxies can vary by more than 20°C.”⁴

Atmospheric modellers have spent several decades trying to tease out more warmth in their Pliocene models for the high Northern Hemisphere latitudes. They have manipulated initial conditions in many ways—by increasing the amount of carbon dioxide, changing Arctic Ocean gateways, changing river routing patterns, changing the ocean bathymetry, raising and exposing the shallow Barents Sea, reducing the albedo of sea ice, manipulating the distribution of plants and trees, varying the area of the Greenland Ice Sheet, increasing the number of lakes, and changing the amount of sunshine due to Milankovitch variations—all without success. Much higher CO₂ is believed to have helped the Mesozoic and early Cenozoic warmth, but not the Pliocene, since CO₂ levels were about the same as they are today. Different Milankovitch orbital configurations were of no help either.⁵ Despite numerous models and model comparisons, the proxy data still

show much warmer high-latitude winter temperatures than they can account for:

“However, at northern high-latitude sites the data suggest much higher temperatures than the models. ... the models are unable to accurately simulate terrestrial polar amplification. ... temperatures from the data [mostly regarding the high latitude winter temperatures] are greatly in excess of those from the models.”⁶

So, it appears the modellers have gone about as far as they can go: “Refinements to model boundary conditions or proxy dating are unlikely to contribute significantly to the resolution of the warm winter paradox.”⁴ Modellers still hold out that model differences somehow could be due to inadequate boundary conditions, model structural uncertainties, uncertainty in proxy dating, proxies not measuring winter temperatures, and uncertainties in data reconstruction methods. Furthermore, there are no modern analogues with which to compare their boundary conditions.

Despite great effort, the researchers concluded: “It is likely that the warm winter paradox cannot be solved by one single factor and instead that it is due to a multitude of factors.”⁷ They

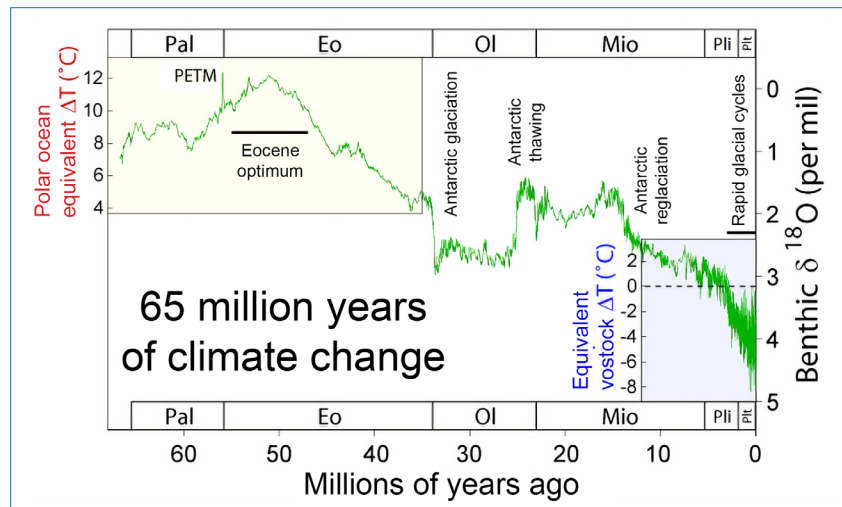


Figure 1. Climate change during the last 65 Myr within the uniformitarian timescale as expressed by the oxygen isotope composition of benthic foraminifera

Image: Robert A. Rohde, Wikimedia / CC-BY-SA-3.0

are starting to think it could be that the models are not good enough. They do admit that models are imperfect: “Models are, by their nature, an imperfect representation of reality and all models have errors.”⁸ They further conclude:

“For the warm winter paradox, we find that structural model uncertainties are likely to be more important than uncertainties in the model boundary conditions. This is because the data-model discord does not seem to be largely dependent on the exact age of the proxy data or simulated orbital [Milankovitch] boundary conditions, yet the range of temperatures simulated by different models is relatively large.”⁹

The warm winter paradox is not unique to the Pliocene either; it also occurs at other times within the Mesozoic and Cenozoic:

“For older, greenhouse climates in the Mesozoic and early Cenozoic there has been a long standing ‘equable climate problem’... whereby models typically predict temperatures 20°C colder than data over the continental interiors.”⁷

Moreover, as quoted, the Mesozoic and early Cenozoic proxy data show an equable climate in which there is little change between seasons. Such a mild equable climate is typical of the tropics, and yet the proxy data indicate that it also occurred at high latitudes.

Pliocene warmth used to reinforce global warming scare

Pliocene warmth is also fueling the global warming scare. Because carbon dioxide was supposedly about the same as today, around 400 ppm, the Pliocene is viewed as an analogue for future global warming: “The mid-Pliocene warm period (~3.264 to 3.025 Ma) is a potential analogue for future climate under global warming.”¹⁰

The Flood solution to the warm winter paradox

Climate models have such difficulty because winter temperatures are mainly dependent on the angle of the sun, which cannot change. But the warm climate vegetation, found particularly at high latitudes and in continental interiors at mid latitudes, can be explained by the Genesis Flood.^{11,12} There are two possible ways this could have happened. First, the fossilized plants and animals found in mid and high latitudes could have lived at those latitudes before the Flood, in a generally warm climate. Second and more likely, the vegetation was transported to high latitudes by log mats during the Flood. Log mats make the most sense, since it would be difficult for plants and trees to survive the 3 to 5 months of extreme cold and darkness near the South Pole. Even more intriguing is that during the Cretaceous and early Cenozoic, there are cycad fossils found along with trees that have wide growth rings. Some of the trunks are 1 metre in diameter. Both indicate a tropical to subtropical climate.¹³

The warm-climate vegetation found at high latitudes during (in evolutionary terms) the Cenozoic, including the Pliocene, not only supports the Flood model but also supports a Flood/post-Flood boundary, which is generally above the Pliocene at high latitudes.

References

1. [Paleoclimate date before 2,000 years ago](#), ncei.noaa.gov, accessed 9 May 2024.
2. Davies, N.S., Gosse, J.C., and Rybczynski, N., Cross-bedded woody debris from a Pliocene forested river system in the high Arctic: Beaufort Formation, Meighen Island, Canada, *J. Sedimentary Research* **84**:19–25, 2014.
3. Czank, A.Z., Patterson, W.P., Eglinton, R.M., Rybczynski, N., and Basinger, J.F., Climate variability in the Early Pliocene Arctic: annually resolved evidence from stable isotope values of sub-fossil wood, Ellesmere Island, Canada, *Palaeogeography, Palaeoclimatology, Palaeoecology* **308**:339–349, 2011.
4. Tindall, J.C., Haywood, A.M., Salzmann, U., Dolan, A.M., and Fletcher, T., The warm winter paradox in the Pliocene northern high latitudes, *Climates of the Past* **18**:1385–1405, 2022; p. 1385.
5. Tindall *et al.*, ref. 4, pp. 1385–1405.
6. Tindall *et al.*, ref. 4, p. 1386.
7. Tindall *et al.*, ref. 4, p. 1399.
8. Tindall *et al.*, ref. 4, p. 1398.
9. Tindall *et al.*, ref. 4, pp. 1399, 1401.
10. Yan, Q., Zhang, Z.S., Wang, H.J., Gao, Y.Q., and Zheng, W.P., Set-up and preliminary results of mid-Pliocene climate simulations with CAM3.1, *Geoscientific Model Development* **5**:289, 2012.
11. Oard, M.J., Mid and high latitude flora deposited in the Genesis Flood—part I: uniformitarian paradox, *CRSQ* **32**:107–115, 1995.
12. Oard, M.J., Mid and high latitude flora deposited in the Genesis Flood—part II: a creationist hypothesis, *CRSQ* **32**:138–141, 1995.
13. Francis, J.E., Growth rings in Cretaceous and Tertiary wood from Antarctica and their palaeoclimatic implications, *Palaeontology* **29**(4):665–684, 1986.