

SEPP Science Editorial #34-2009 (10/31/09)

By S. Fred Singer, President, SEPP

The rebirth of the hockey-stick?

The hockey-stick is attempting a comeback – and instead of relying on tree rings, it now relies on ancient midge larvae in lake sediments. It's all part of a determined effort to show that the 20th century is 'unusual' -- and therefore supports the IPCC claim of AGW. Here is the press release:

<http://www.spacedaily.com/2006/091019211717.zuuii19g.html>

WASHINGTON (AFP) Oct 19, 2009: *Sediment cores from a small Arctic lake in Canada stretching back 200,000 years show unprecedented gains in global warming since 1950, indicating human activity is the likely cause. "The past few decades have been unique in the past 200,000 years in terms of the changes we see in the biology and chemistry recorded in the cores," University of Colorado glaciologist Yarrow Axford said in the study by Canadian and US researchers. "We see clear evidence for warming in one of the most remote places on Earth at a time when the Arctic should be cooling because of natural processes," added the chief author of the study published in the Proceedings of the National Academy of Sciences.*

One suspicious item is the fact that the editors of PNAS, in their obvious desire to publish this paper, assigned its review to an editor [Mark Brenner, U of FL] of their own choosing. So the paper has not been peer reviewed in the usual sense; this depreciates its credibility and also that of the PNAS, particularly in a contentious area like climate science.

It is difficult for a non-specialist on midges like me to judge the quality of the data. But it would have been reassuring if similar results were to be published from other lakes in the Arctic, of which there are many thousands, rather than from just a single one. Obviously, even if there is a warming, one cannot identify its cause from the data presented. Actual temperature data of the Arctic, taken with thermometers, show a peak in 1935 followed by a cooling trend that reversed only in the 1970s.

Of course, there has been warming since 1950, a low point in temperature. First, we had the sudden temp jump in 1976-77 (certainly not caused by CO₂); then the large El Nino warming of 1998. How can the authors possibly claim a human influence? In addition, their claim that there should have been a significant 'cooling' trend over just 50 years from astronomical causes makes no sense either.

Of interest, below, is the abstract of what appears to be a very similar study (May 2004), complete with diatoms and chironomids (midge larvae), but with dissimilar results

<http://linkinghub.elsevier.com/retrieve/pii/S1040618204000448>

Similarities and discrepancies between chironomid- and diatom-inferred temperature reconstructions through the Holocene at Lake 850, northern Sweden.

*A quantitative temperature reconstruction using chironomids and diatoms has been attempted from a high-elevation lake in northern Sweden (Lake 850). Since 7000 cal. years BP, both chironomids and diatoms recorded similar temperatures (in the range of present-day estimates) but the correspondence between chironomid and diatom-inferred temperatures was highest in the recent Holocene (2500 cal. years BP to the present). Between ca. 9000 and 7000 cal. years BP, inferred temperatures from chironomids were warmer than today (ca. 12°C), in accord with other climate reconstruction using pollen, plant macrofossils and oxygen isotope analysis in lakes of northern Scandinavia. In contrast, diatom analysis did not infer warmer temperatures during this period. The insensitivity of diatoms to temperature in Lake 850 between 9000 and 7000 cal. years BP could be attributed to other environmental factors affecting the diatom assemblages through time, especially lake-water pH. Diatom-inferred pH showed a gradual decrease (0.5 pH units) between 9000 and 7000 cal. years BP, while it remained more or less constant since 7000 cal. years BP. Changes in lake-water pH acting on diatoms seem to mask the effect of climate, leading to temperature reconstructions that are inaccurate. **Ways of disentangling climate and other environmental factors when attempting climate reconstruction should be further investigated.***