

Mann Claim # 1: [Mann] said his so-called “hockey stick” curve on a graph, which shows warming sloping gently upward, and then shooting straight up, has been criticized by many skeptics, but supported by 10 more studies in the last decade. [...] “I don’t think by any stretch of the imagination has our science been discredited, except perhaps by some far-out fringe of the blogosphere.” [...] “A fossil-fuel funded amateur has a Web site that vilifies scientists in my field,” he said. [Mann’s comments reported in a September 25, 2008 article – See: http://www.projo.com/news/content/URI_Honors_Colloquium_25_09-25-08_LUBN73R_v12.1607f3c.html]

Multiple Scientific Reality checks on validity of ‘Hockey Stick’:

Medieval Warm Period Strikes Back! New papers confirm MWP and knock down resurrected 'Hockey Stick' – September 2008

[Note: Craig Loehle also authored a November 2007 study published in Energy & Environment which found the Medieval Warm Period "0.3C warmer than 20th century" The study was “A 2000-year global temperature reconstruction based on non-treering proxies.” ([LINK](#)) & ([LINK](#))]

Published in Journal - Climate Change: Study: A mathematical analysis of the divergence problem in dendroclimatology – By Craig Loehle – September 10, 2008 (Full paper requires subscription)

Excerpts: Abstract Tree rings provide a primary data source for reconstructing past climates, particularly over the past 1,000 years. However, divergence has been observed in twentieth century reconstructions. Divergence occurs when trees show a positive response to warming in the calibration period but a lesser or even negative response in recent decades. The mathematical implications of divergence for reconstructing climate are explored in this study. Divergence results either because of some unique environmental factor in recent decades, because trees reach an asymptotic maximum growth rate at some temperature, or because higher temperatures reduce tree growth. If trees show a nonlinear growth response, the result is to potentially truncate any historical temperatures higher than those in the calibration period, as well as to reduce the mean and range of reconstructed values compared to actual. This produces the divergence effect. This creates a cold bias in the reconstructed record and makes it impossible to make any statements about how warm recent decades are compared to historical periods. Some suggestions are made to overcome these problems. [...] CONCLUSION: In conclusion, the nonlinear response of trees to temperature explains the divergence problem, including cases where divergence was not found. The analysis here also shows

why non-tree ring proxies often show the Medieval Warm Period but treering-based reconstructions more often do not. While Fritts (1976) notes the parabolic tree growth response to temperature, recent discussions of the divergence problem have not focused on this mechanism and climate reconstructions continue to be done using a linear response model. When the divergence problem clearly indicates that the linearity assumption is questionable, it is not good practice to carry on as if linearity is an established fact.

<https://commerce.metapress.com/content/45u6287u37x5566n/resource-secured/?target=fulltext.pdf&sid=mdd4fp45zi5jqs45pnjgx2f2&sh=www.springerlink.com>

Hockey Stick? What Hockey Stick? - How alarmist "scientists" falsely abolished the Mediaeval Warm Period. - September 12, 2008

By Lord Christopher Monckton

Excerpt: An extraordinary series of postings at www.climateaudit.org, the deservedly well trafficked website of the courageous and tenacious Canadian statistician Steve McIntyre, is a remarkable indictment of the corruption and cynicism that is rife among the alarmist climate scientists favored by the UN's discredited climate panel, the IPCC. In laymen's language, the present paper respectfully summarizes Dr. McIntyre's account of the systematically dishonest manner in which the "hockey-stick" graph falsely showing that today's temperatures are warmer than those that prevailed during the medieval climate optimum was fabricated in 1998/9, adopted as the poster-child of climate panic by the IPCC in its 2001 climate assessment, and then retained in its 2007 assessment report despite having been demolished in the scientific literature. It is a long tale, but well worth following. No one who reads it will ever again trust the IPCC or the "scientists" and environmental extremists who author its climate assessments. [...] The continuing affair of the "hockey-stick" graph is a microcosm of the profound collapse of the rigor, objectivity, and honesty that were once hallmarks of the scientific community. The need to look to the State for very nearly all science funding has inflicted upon the scientific community a dull, dishonest uniformity, so that the deliberate falsification of results to support the current official orthodoxy has become commonplace, particularly where the climate question is concerned. It was bad enough that one of those behind the "hockey stick" affair should have told a fellow researcher, "We need to get rid of the medieval warm period." It was worse that the authors of the bogus graph attempted to do just that, by ignoring, undervaluing or even suppressing proxies for northern-hemisphere temperature that did not suit the result they wanted; by falsely stating that they had used data they had in fact replaced with "estimates" of their own that gave them a less inconvenient answer; by overvaluing by many orders of magnitude the contribution of datasets that suited the result they wanted. It was worse still that the IPCC, several leading journals and numerous former co-authors of the three fabricators of the hockey stick should have continued to cling to it as though it were Gospel even though it has

been justifiably and utterly discredited in the scientific literature, and should have gone through an elaborate pantomime of rewriting and publishing previously-rejected papers with the connivance of a dishonest journal editor, so that an entirely fictitious scientific support for the false graph could be falsely claimed by the IPCC in its current Fourth Assessment Report.

http://scienceandpublicpolicy.org/monckton/what_hockey_stick.html

New Hockey Stick 'may have intentionally manipulated data'- September 20, 2008

Excerpt: It is my contention that these series will have a negative slope or more negative slope than the 55 proxies which were used. I have no way of knowing that, but looking at the piles of BS data I have previously noted and considering the pressures on Mann (internal and external) I believe they may have taken the step of intentionally eliminating data which did not support their conclusion!!! My belief (based only on what I say are suspicious methods) is that the critical end of the latest hockey stick has been created from cherry picked data!

<http://noconsensus.wordpress.com/2008/09/20/online-experiment-with-the-latest-hockey-stick/>

Physicist Dr. Lubos Motl on Mann's revived 'Hockey Stick' -- 'If this is not fraud, what is?' – September 21, 2008

Excerpt: It seems that the paper is not only a case of sub-prime science but an example of scientific fraud. For example, look at the two graphs of the temperature in 1700-2000 above (click to zoom in). Imagine that you have two curves, the purple one and the blue one. Imagine that you are Michael Mann and you want to write a paper about global warming. Which one would you use? What do these two lines mean? The purple line comes from 64 datasets that were not used, for unspecified reasons, while the blue line comes from 55 datasets that dominate Mann's extrapolation procedure. Wow, it's just amazing. The numbers 55 and 64 are pretty large. Don't tell me that you will get these two qualitatively different curves by averaging "random" subsets of the datasets. Unless Jeff has made a mistake, the "convenient" datasets were clearly chosen by hand while the "inconvenient" ones were manually thrown away. If this is not fraud, what is?

<http://motls.blogspot.com/2008/09/jeff-id-cherry-picking-in-new-hockey.html>

Mann's 'Hockey Stick' called 'the most completely discredited artefacts in the history of science' – September 21, 2008

Excerpt: “There was no hint that the ‘hockey stick’ is among the most completely discredited artefacts in the history of science, not least thanks to the devastating critique by Steve McIntyre, which showed that the graph’s creators had an algorithm in their programme which could produce a hockey-stick shape whatever data were fed into it.

http://web.me.com/sinfonia1/Global_Warming_Politics/A_Hot_Topic_Blog/Entries/2008/9/21_Global_Warming%E2%80%99s_Boom_Bust.html

German Scientist: Revival of the Hockey Stick - a new Low in Climate Science - September 4, 2008

By German scientist Ernst-Georg Beck, a biologist: (Beck's website here, http://www.biokurs.de/treibhaus/180CO2_supp.htm but this paper not yet posted - (Full paper attached and full text pasted below)

Excerpt of critique on Mann's 'Hockey Stick' Revival

Revival of the Hockeystick Graph - a new Low in Climate Science - September 4, 2008

Excerpt: Mann's new temperature contour is very similar to his contradicted „hockeystick graph“. Thousands of studies round the world give evidence for a MWP and a LIA showing much higher temperatures during MWP than today. The tree limits in the mountains or near the arctic circle had been several hundred meters higher respectively towards the north compared to today.

2. Mann is comparing smoothed decadal temperature reconstructions from proxis with the high resolution annual averages from direct measurements since 1850. (in red) This is not acceptable.

3. As direct measured temperature data he used the exaggerated data from CRU (UK), which display a rise of approx. 1,3 °C since 1850, in contrast to the 0,7 °C by IPCC.

4.If these direct data were omitted (in red) the proxis clearly show higher temperatures during the MWP.

5. Using fig. 2 of his latest study we see the proxi data compared to the direct measurements since pre-industrial times 1850 (CRU).

source: Mann et al. 2008 (fig. 2, extract) But there is absolutely no correlation in the second half of the 20th century when the CRU data claim a sharp rise of the temperature and the proxis suggest a cooling. If the reconstructions are valid modern measured temperature data published by CRU are in error.

6. Mann exclusively had used data received on continents omitting ocean data despite of a 61% coverage of the northern hemisphere by oceans.

Summary: Mann’s new paper is another attempt to falsify climate history by selective and statistical fitted data. MWP and LIA are the most complete documented periods in climate history. The referees who passed such a most questionable piece of paper

obviously agreed with Mann's results to confirm IPCC's man made greenhouse fantasies.
<http://icecap.us/images/uploads/revivalhockey.pdf>

Former Colorado State Climatologist Dr. Roger Pielke Sr: New 'Hockey Stick' 'failed to examine substantive issues' on surface temperature records - "North Hottest for 1500 Years" - Really? – September 1, 2008

Excerpt: If the scientists are quoted correctly in the news release [which is always a question!], then they have failed to examine the substantive issues that have been raised with the surface temperature record. The Reporter certainly neglected to properly investigate the claims of the authors and, as a result, has presented the public with yet another biased news article on climate. [...] This is, quite frankly, a very poor (and erroneous) news report. The data used for its construction are not temporally homogeneous (such as kludging a thermometer record on the end of a proxy temperature record) as well as ignoring the very substantial evidence of a warm bias in the surface temperature record that is summarized in Pielke Sr., R.A., C. Davey, D. Niyogi, S. Fall, J. Steinweg-Woods, K. Hubbard, X. Lin, M. Cai, Y.-K. Lim, H. Li, J. Nielsen-Gammon, K. Gallo, R. Hale, R. Mahmood, S. Foster, R.T. McNider, and P. Blanken, 2007: Unresolved issues with the assessment of multi-decadal global land surface temperature trends. *J. Geophys. Res.*, 112, D24S08, doi:10.1029/2006JD008229 and Lin, X., R.A. Pielke Sr., K.G. Hubbard, K.C. Crawford, M. A. Shafer, and T. Matsui, 2007: An examination of 1997-2007 surface layer temperature trends at two heights in Oklahoma. *Geophys. Res. Letts.*, 34, L24705, doi:10.1029/2007GL031652. <http://climatesci.org/2008/09/02/north-hottest-for-1500-years-really>

Scientific Studies Refute 'Hockey Stick' Claims

Excerpt: Are you aware of multiple scientific studies showing the medieval warm period (before SUV's and human emissions) to be warmer than current temps?

(See: 1: A November 2007 study published in *Energy & Environment* found the Medieval Warm Period "0.3C warmer than 20th century" The study was authored by C. Loehle and titled "A 2000-year global temperature reconstruction based on non-treering proxies." <http://www.ncasi.org/publications/Detail.aspx?id=3025> –

2) A June 29, 2007 scientific analysis by Gerd Burger of Berlin's Institute of Meteorology in the peer-reviewed *Science Magazine* challenged a previously touted study claiming the 20th century had been unusually warm. Excerpt: "Burger argues that [the 2006 temperature analysis by] Osborn and Briffa did not apply the appropriate statistical tests that link the proxy records to observational data, and as such, Osborn and Briffa did not properly quantify the statistical uncertainties in their analyses. Burger repeated all analyses with the appropriate adjustments and concluded "As a result, the 'highly significant' occurrences of positive anomalies during the 20th century disappear." ([LINK](#)) [...] Are you aware that the Earth is currently in one of the coolest periods in its

geologic history? (See: Ivy League geologist Dr. Robert Giegengack is a professor of earth and environmental science at the University of Pennsylvania. Giegengack noted that the history the last one billion years on the planet reveals “only about 5% of that time has been characterized by conditions on Earth that were so cold that the poles could support masses of permanent ice.” Giegengack also noted “for most of Earth’s history, the globe has been warmer than it has been for the last 200 years. It has rarely been cooler.” - (Link [Here](#) & [Here](#))

<http://canadafreepress.com/index.php/article/4612>

JunkScience.com Analysis Mann’s New ‘Hockey Stick’

Excerpt: Mikey's (Michael Mann) at it again, still appending instrument records to proxy reconstructions against all advice and good practice (pretty colored spaghetti graph, below). Without that nonsense addition this time Mann's effort looks a little more like the non-treemometer reconstruction of [Loehle](#) and a lot less like the [hokey "hockey stick"](#) of days gone by. The point is now, and always has been, that no contemporary proxy measure exceeds (or even equals) proxies from the Medieval Climate Optimum (or Medieval Warm Period, as it's now known). Check out "[divergence problem](#)" to see what we mean about the stupidity of tacking thermometrics onto a proxy time series. [...] Appending thermometrics to proxy records is plain stupid because the time series do not match -- while the thermometric record indicates rising near-surface temperatures treemometers indicate cooling over the same period, hence the "[divergence problem](#)". [...] As our planet has demonstrated so many times in the past "runaway warming" is simply not possible on this watery world (for those who don't understand this it is because more warming increases evaporation and more evaporation leads to more clouds, more reflected sunlight, less warming... we have a form in [this page](#) where you can play with solar radiation, albedo and greenhouse effect to see what effect it has on global temperature). The always ignored negative feedbacks in our climate system ensure the fantasies of gorebull warming hysterics can never occur.

UN IPCC Scientist Refutes New ‘Hockey Stick’ Study

By Dr. Richard Courtney, a UN IPCC expert reviewer and a UK-based climate and atmospheric science consultant via email on September 2, 2008

The 'Hockey Stick'

Excerpt: The IPCC, RealClimate.org, and other AGW propaganda organizations assert the importance of "peer reviewed" publications. Therefore, in their own terms, the most important evaluations of Mann's 'hockeystick' are those in peer reviewed published papers. In this context, a review comment I provided on the draft of IPCC AR4 (2007) is

pertinent because it cites the peer reviewed published papers that assessed Mann's 'hockeystick' . Of course, the IPCC ignored it (and all other inconvenient truths) in its final publication. My review comment said: Page 1-13 Chapter 1 Section 1.5.2 Line 36 - For accuracy and completeness, after "(IPCC, 2001a)" it is very, very important to add: "However, since the TAR several studies have provided doubt to that work of Mann et al.. Many studies provide data that conflict with the findings of that work of Mann et al. (e.g. Beltrami et al) (ref. Beltrami et al "Long-term tracking of climate change by underground temperatures", Geophysical Research Letters v.12 (2005)). In 2005 McIntyre and McKittrick published two papers that together provide a complete refutation of that work of Mann et al. (ref. McIntyre S & McKittrick R, Energy & Environment, v 16, no.1 (2005)) (2005), Geophysical Research Letters Vol. 32, No. 3, (2005)). But, perhaps the most important of their studies of that work of Mann et al. was their publication in 2003 (ref. McIntyre S & McKittrick R, Energy & Environment, v 24, pp 751-771 (2003)) that showed it is not possible to replicate the work of Mann et al. There are several reasons for the inability to replicate this work of Mann et al.; not least that Mann refuses to reveal his source codes. The inability to replicate this work of Mann et al. means it has no scientific worth: i.e. this work of Mann et al. is anecdote of similar kind to a report of a ghost sighting. Hence, the IPCC now apologises for including it in the TAR. The IPCC will now disregard this work of Mann et al. and recommends that all others should also disregard it until it can be – and has been – independently replicated." Richard S Courtney (exp.) - News Story in 'The Australian' - According to the report: "The findings deeply reinforce the incontrovertible conclusion that we are warming rapidly outside natural variability," said climate scientist Andy Pitman, co-director of the Climate Change Research Centre at the University of NSW." Well, no! Mean global temperature (i.e. "We") is cooling - not warming - and has been for a decade. And also according to the report: "According to Professor Pitman, the work showed clearly that despite "wiggles" of warming and cooling in the past, driven by natural variation, surface temperatures in the modern period (1961-1990) show an upward trend not triggered by solar variability or other natural processes." So, Pitman asserts that the study covers the period 1961-1990 and not the cooling of the last decade. And he calls periods of cooling "wiggles" that should be ignored. But he deduces that the warming of 1961-1990 is anthropogenic because he and his colleagues have failed to discern its cause as being "solar variability or other (sic) natural processes". In other words, he says he ignores inconvenient data as being "wiggles" and he claims complete knowledge of all "natural processes" that cause warming. In other words, Pitman claims deific omniscience and calls that claim a scientific "report". But such assertions should not be a surprise when they come from people who choose to be associated with Michael Mann whose scientific integrity is demonstrated by the 'hockey sick' saga.

Geologist's point of view - 'The signal of a discernible human contribution to global climate change has not emerged from this natural variability' Global Warming

Excerpt: If humans are in fact altering Earth's climate with our cars, electrical powerplants, and factories these changes must be larger than the natural climate

variability in order to be measurable. So far the signal of a discernible human contribution to global climate change has not emerged from this natural variability or background noise. [...] In the last 600 million years of Earth's history only the Carboniferous Period and our present age, the Quaternary Period, have witnessed CO₂ levels less than 400 ppm. Global Temperature and Atmospheric CO₂ over Geologic Time There has historically been much more CO₂ in our atmosphere than exists today. For example, during the Jurassic Period (200 mya), average CO₂ concentrations were about 1800 ppm or about 4.7 times higher than today. The highest concentrations of CO₂ during all of the Paleozoic Era occurred during the Cambrian Period, nearly 7000 ppm -- about 18 times higher than today. The Carboniferous Period and the Ordovician Period were the only geological periods during the Paleozoic Era when global temperatures were as low as they are today. To the consternation of global warming proponents, the Late Ordovician Period was also an Ice Age while at the same time CO₂ concentrations then were nearly 12 times higher than today-- 4400 ppm.

<http://floatingleaf.rediffiland.com/blogs/2008/08/30/Global-Warming-Geologist-s-point-of-view-II.html>

"Best summary ever" of the hockey stick saga – August 11, 2008 – By Bishop Hill

Excerpt: Shortly after its publication, the hockey stick and its main author, Michael Mann, came under attack from Steve McIntyre, a retired statistician from Canada. In a series of scientific papers and later on his blog, Climate Audit, McIntyre took issue with the novel statistical procedures used by the hockey stick's authors. He was able to demonstrate that the way they had extracted the temperature signal from the tree ring records was biased so as to choose hockey-stick shaped graphs in preference to other shapes, and criticised Mann for not publishing the cross validation R², a statistical measure of how well the temperature reconstruction correlated with actual temperature records. He also showed that the appearance of the graph was due solely to the use of an estimate of historic temperatures based on tree rings from bristlecone pines, a species that was known to be problematic for this kind of reconstruction.

<http://bishophill.squarespace.com/blog/2008/8/11/caspar-and-the-jesus-paper.html>

The Hockey Stick Debate as a Matter of Science Policy – By Roger Pielke Jr.

Excerpt: Here at Prometheus we have for years closely followed the controversy over the so-called temperature reconstruction “hockey stick.” So it was with some interest that I saw this blog post linked from Climate Audit, apparently written by a Scottish libertarian blogger called Bishop Hill. [...] Steve McIntyre took us up on our challenge (as did his collaborator Ross McKittrick). Michael Mann declined the invitation. McIntyre explained that the debate over the hockey stick mattered not because of its direct relevance to the

debate over what to do about global warming, but because of matters of what we call around here “science policy”— peer review, public confidence in science, and simply getting this right rather than wrong. [...] Having collaborated a bit with Steve McIntyre in recent years, and seen how the community reacts to him in the peer review process, I have seen some of the frothing and irrationality that he stirs. Further, as a long-time observer of this debate, how the more vocal climate science community has dealt with the criticisms of the Hockey Stick and McIntyre’s determined efforts is really an embarrassment to all of the hard-working and brilliant scientists who work out of the limelight trying to advance knowledge in a rigorous manner. The problem is that the behavior of the few reflects upon the community as a whole. McIntyre may never get the recognition that he deserves from the climate science community (though some, like Peter Webster and Judy Curry have shown leadership by recognizing Steve’s legitimacy, and apparently taken their lumps for it), but within science policy circles it is becoming increasingly clear that has made a significant contribution to upholding the integrity of climate science, and for this he should be applauded.

<http://sciencepolicy.colorado.edu/prometheus/the-hockey-stick-debate-as-a-matter-of-science-policy-4511>

CO2 Science Medieval Warm Period Project

Was there a Medieval Warm Period? **YES**, according to data published by **597** individual scientists from **352** separate research institutions in **38** different countries ... and counting! This issue's Medieval Warm Period Record of the Week comes from the [Northern Russian Treeline](#), Russia. To access the entire Medieval Warm Period Project's database, [click here](#).

<http://www.co2science.org/data/mwp/mwpp.php>