

Dear editor,

Please find attached the revised and final version (without markups) of our manuscript.
We have now addressed the following minor points as follows:

Comment 1. Please put the doi for the Pangea data, this will make it easier for anyone to find your data.

Response: We have contacted PANGAEA but as it seems due to increased amounts of datasets being currently submitted the issue of doi: number can take some time. To solve this we can either refer to the published paper and its doi, so they both are connected in PANGAEA depository and are easy to find. Another way would be to contact the CP journal again when the doi is issued so it can be inserted into the publication at later stage. Please let us know if we should do the latter.

Comment 2. I would suggest, in the final version, to advise readers to use the conclusions with the due caution since your dataset does not go beyond the year 1996 due to lack of material and, hence, does not cover the most recent years of warming. This might fit in either the discussion or conclusion section.

Response: We have now added the following lines into the MS discussion (please see p18, lines 23-27):
“When studying the Gullmar Fjord bottom water temperature record for the last 2500 years, it is interesting to note that the most recent warming of the 20th century (presented herein until 1996) does not stand out but appears to be comparable to both the Roman Warm Period and the Medieval Climate Anomaly. This observation has, however, to be used with caution since our dataset does not go beyond year 1996 due to a lack of material and, hence, does not cover the most recent part of the 20th century warming, widely accepted as triggered by growing anthropogenic emissions.”

We also rephrased a bit the last part of the conclusions to the following:

“The record also picks up the contemporary warming of 1930s and the 1990s. When studying the Gullmar Fjord bottom water temperature record for the last 2500 years, it is interesting to note that the warming of the 20th century (presented herein until 1996) is comparable to both the Roman Warm Period and the Medieval Climate Anomaly.

Comment 3. Could you also explicitly refer to other studies showing the same pattern about the recent warming seen in their datasets when bringing up the contemporary warming? This could be easily inserted in the discussion.

Response: We have now added the following lines into the MS discussion (please see p16, line 32 – p17, lines 1-5):

“Gullmar Fjord temperature record shows that when considering a 3-point running mean temperature variability, the most recent warming does not stand out in comparison to the RWP and the MCA, as it has been also previously demonstrated by other studies such as e.g. a tree ring-based summer temperature record from central Scandinavia (Linderholm and Gunnarson, 2005), the Scottish loch data (Cage and Austin, 2010), the North Atlantic SST composite (Cunningham et al., 2013), and a 2000-year temperature record for continental Europe (PAGES2K, 2013).”

We sincerely hope that you find our response satisfactory and can accept the revised paper for further publication in the *Climate of the Past*.

Best wishes
Kjell Nordberg and co-authors