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Dear Phil,

Thanks for your message. I've chosen to "expand" the distribution list to include a few other individuals who can better address some of the key points you raise.

A meeting in January built around the AMS meeting (which should bring people into the Boulder vicinity) sounds like a good tentative plan. Peck? I'm assuming everyone on this list is a potential attendee...

As for your general comments, they get to some essential points. The modeling community leaders are probably about as skeptical about our paleo-reconstructions as we are of their sulphate aerosol parameterizations, flux corrections (or more worrying, supposed lack thereof in some cases!), and handling of the oh-so-important tropical Pacific ocean-atmosphere interface... So my personal philosophy is that more than one side here can benefit from extending the olive branch, and there are a few individuals in the modeling community who could benefit from slowing down on the stone throwing from their fragile glass tower :)

More to the point, though, I strongly believe the paleo community needs to present an honest but unified front regarding what we all agree we can definitely, probably, and simply not yet say about the climate of the past several centuries, and plan strategies that will allow us all to work towards improved reconstructions without stepping on each others toes. There's a challenge there, but one I'm sure we can all rise to. I am grateful to Peck for realizing that the time is ripe for a workshop in which we all strategize as a group towards these ends. I believe we all go into this in "good faith", and I'm very excited about what the workshop might produce, in particular, in terms of effective long-term strategies.

I share Phil's concern about getting things "straightened out" before the IPCC report. As one of the lead authors on the "observed climate variation and change" chapter for the 3rd assessment report, a key goal of mine will be to present fairly and accurately all of our different efforts, and the common denominator amongst them...

I also understand all-too-well Phil's concerns about free data exchange. In fact, we've been working closely w/ Peck to get every aspect of our reconstructions, including calibration/verification statistics, etc., available on-line at NGDC. The one catch w/ the paleo network is that a few of the indicators we used were provided us under conditions that they not yet be passed along (this includes, I believe, the Moroccan tree rings, and some others. And at least one important indicator--Malcolm's Yakutia record--was as yet unpublished. Not myself knowing the details of the proprietary issues involved here, I have resisted simply putting our entire multiproxy network out their for public consumption. But working w/ Peck and Malcolm, I'm sure we can do this appropriately and quickly. That's an example of a key issue that would be on the table at the workshop in question.

-----PHIL'S MESSAGE TO PECK-----

Peck,

Thanks for the comments on the paper in The Holocene !
The paper stems from work Keith and I have been doing with the

Climate Change Detection group headed by Tim Barnett. It is much toned down from some of the things about paleo data that Tim and Simon Tett wanted to say. Long paleo series (either the individual ones or regional/hemispheric averages) have got to be good before these sorts of people will begin to use them and believe they tell us something about variability in the past - something that cannot be got from long control runs of GCMs.

A small meeting would be a good idea, therefore. Mike Mann knows the next few times I'll be in the US. The first possible date for him is the AMS annual meeting in Dallas in Jan 99 - maybe we can tag something onto the end of this for a day or two. I'll let you and Mike work something out on this. I'm also in the US for a meeting on Climate Extremes which is tentatively scheduled for March 9-13 in Asheville.

Presentation of the paleo data is the key in all this. Tim Barnett was somewhat horrified by the coherency diagrams he produced (fig 9). He then produced Fig 10 from the GCM and that was not much better. Hidden between the lines of the paper is the theme that a number of us have been saying for years (especially Ray and Malcolm) that the LIA and MWE were not that global and not that different from today's temperatures. Mike's paper in Nature reiterates this. Keith and I have been thinking of writing a forum piece for The Holocene addressing in somewhat provocative terms what paleoclimatologists should be doing with regard the detection issue and to some extent with respect to science in general - should be continue using terms like LIA and MWE for example. We hope to address many of the issues you make in your email - seasonality, consistency of the proxy through time, goodness of the proxy etc. We need to come up with some agreed strategy on this especially with IPCC coming up.

What we did in the paper was one way of assessing proxy quality. Something like Tables 2 and 4 are what is required though to inform the uninitiated (modellers) about proxy data. For use in detection at the moment a paleo series has to be a proxy for temperature. I know proxies tell us about other aspects of the climate as well, but a clear, unambiguous temperature signal is what is needed.

Some other quick answers -

- 1) Happy to send to you all the series and the hemispheric values. I hope Mike will send all his as well, but the last time we discussed this he said that some could not be made freely available. This isn't Mike's fault but there are still some stumbling blocks to free exchange of data within the various paleo communities.
- 2) We all know the quality of proxies changes with time. Trees don't have dating problems but do have the reduction in sample depths you talk about. Dendro people are much more open about this though than the coral and especially the ice core communitites.
- 3) Trees may not grow everywhere but they are more global in extent than the others. There are also many more chronologies available and this is a factor. We had much more choice there than in the other paleo groups.
- 4) Whilst we are taking bets, proxies will never be better than instrumental data. Corals will eventually extend the SOI series but never be better than it for the years after 1850. Similarly with the NAO. Instrumental data exists to extend this to about 1750 and the fact that such data is sitting out there is only just beginning to be realised. A great NAO reconstruction could be produced if the real data extended over nearly 200 years, enabling the low-frequency aspects to be considered in much more detail than ever before

(a la Stahle with the SOI).

That's enough for now.

Cheers
Phil

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