

## Re: U of South Carolina Releases Topper Radiocarbon Dates

Source: <http://sci.tech-archive.net/Archive/sci.archaeology/2004-12/0096.html>

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**From:** Lee Olsen (*paleocity\_at\_hotmail.com*)

**Date:** 12/02/04

Date: 2 Dec 2004 09:37:39 -0800

icycalmca@yahoo.com (Daryl Krupa) wrote in message  
news:<c70365ef.0411301727.1ee90ad5@posting.google.com>...  
> paleocity@hotmail.com (Lee Olsen) wrote in message  
news:<40a73547.0411300739.5768f52f@posting.google.com>...  
>> icycalmca@yahoo.com (Daryl Krupa) wrote in message  
news:<c70365ef.0411262320.52358a2c@posting.google.com>...  
>>> paleocity@hotmail.com (Lee Olsen) wrote in message  
news:<40a73547.0411241031.52c0085a@posting.google.com>...  
>>>> <snip>  
>>>>> *The excavations have uncovered an enormous amount of ground and not  
>>>>> just a tiny fireplace pit. Where's the beef (oops, I mean humus) and  
>>>>> better yet, why should there be any in the first place 50 thousand  
>>>>> years ago? Humus soil does not necessarily form in dunes, but it  
>>>>> doesn't seem possible that some wouldn't have formed somewhere in that  
>>>>> amount of time. I have never been to the Topper area, but I can assure  
>>>>> you out here on the Pacific Coast vegetation takes hold in the dunes  
>>>>> and on the over-bank flood-plains rather rapidly. For example, the  
>>>>> Kennewick Man site has 14C dates on humus (this area gets only 7  
>>>>> inches of rain a year and no oak, pine etc. grows there) and the  
>>>>> Columbia River has a history of more violent flooding than anything  
>>>>> seen on the Savannah River. The \*no humus\* seems like a legitimate  
>>>>> puzzle.*  
>>>>> <snip>  
>>>>  
>>>>> *I forgot to mention the most obvious (and most problematic) explanation  
>>>>> for the lack of humic paleosols at depth: consumption by fire.*  
>>>>  
>>>>> *I don't think you will have much luck selling this idea.*  
>>>>  
>>>>> <http://www.nps.gov/yell/nature/fire/>  
>>>>> *"Surveys revealed that less than 1% of soils were heated enough to  
>>>>> burn below-ground plant seeds and roots."*  
>>>>  
>>>>> <http://www.x98ruh.net/yellowstone/fire.htm>  
>>>>> *"Many people thought that Yellowstone would never recover. Scientists,  
>>>>> however, knew that fire was a necessary part of the cycle of life in a*

- > > forest. Life would not only go on, but would also benefit from the
- > > fire."
- >
- > Unless IDNRC, Yellowstone's forests are not founded on sand.
- > Unless IDNRC, Yellowstone's forests are not red pine or xeric scrubland.
- > Unless IDNRC, Yellowstone's fires were crown fires.
- > Unless IDNRC, Yellowstone's precipitation increased after the fire,
- > so therefore Yellowstone's climate could not be called xeric afterward,
- > and it's debatable if it should have been called xeric before the fire.

I see, say the word xeric, and we have a 36 thousand year constant desert that was somehow different in South Carolina than any place else in the world that grows pine, oak, cherry and buckeye trees.

- >
- > > > Open boreal woodland near Late Glacial Maximum:
- > > >
- > > > "This vegetation map showing the eastern USA during the period
- > > > 28,000–25,000 14C y.a. has been compiled by Paul & Hazel Delcourt.
- > > > An ice sheet already covered most of Canada and extended south of
- > > > the Great Lakes. Boreal conifer woodlands and forests predominated
- > > > in what is now the cool temperate forest zone, and the cool and
- > > > warm temperate forest belts were compressed southwards."
- > >
- > > The URL I cited in my reply to Bob cited Delcourt and Delcourt.
- >
- > It's more complicated than that:
- > The site at one of the URLs you cited in your reply cited 4
- > Delcourt and Delcourts, but it didn't display D&D's map from that time;
- > the vegetation history and climate history starts at 18ka BP, at
- > [http://www.srs.fs.usda.gov/sustain/report/pdf/chapter\\_24e.pdf](http://www.srs.fs.usda.gov/sustain/report/pdf/chapter_24e.pdf)
- > I'm not sure why you mention this.

I'm not sure why you mentioned a URL that has a 60,000 year gap that includes the time in question.

- >
- > > And, since none of these URLs gave an opinion for the time in
- > > question, c50 k 14C date, I compared that with the GRIP cores and
- > > see no climate match for a forest of the hearth type.
- >
- > If by "a forest of the hearth type" you mean
- > the woods that formed the charcoal in the supposed 50 ka BP firepit
- > ("oak, red cherry, buckeye and pine"?),

Yes.

- > then I'm afraid I don't see
- > how you are doing your climate matching.

Two ways: 1) The Topper site is a lowland site, just as my URL says. Isn't the borderline some distance above your Fall Line? I don't think anyone is claiming that these maps of different ecosystems were constant over the entire Pleistocene, when fig. 24.2 says 27 k to 9500 years ago it means what was dominate during that time, even though the boarders ebbed and flowed like the tide. Then the odds of "oak, red cherry, buckeye and pine" being in the Topper area at c50 kya are not very good, IMO. 2) The URLs provided by both of us are loaded with terms like: this suggests, could have beens and just about everything but science; they are rough estimates and nothing more. At c50 kya the climate is conducive to xeric scrubland, not buckeye, but more on this point below.

> *Are you equating climate with ecotype?*

Yes.

> *What would you call the ecotype of ""a forest of the hearth type"?*

I'm not sure what you mean.

> *If the assemblage of charcoal is artifactual, then wasn't it*

> *necessarily un-naturally selected, and so isn't it*

> *a random, and*

> *not necessarily a representative,*

> *sample of the wood available?*

Not according to Stafford. Goodyear has found charcoal in the upper meter of the site (which is expected). So far, I haven't read or seen anyone cite any found in the lower levels (except for the alleged hearth).

> *That's all hot-burning wood, and some of it will burn when damp.*

Yeah damp, kind of like in a NW rain forest.

> *I don't think that we can say nay more than that*

> *the assemblage of charcoal is a subset of the contemporary vegetation*

> *assemblage.*

It may well be a sub-set of contemporary vegetation from some time, but it does not match very well with the site data, location or the climate for that time.

>

> *Maybe the GRIP dates are off?*

>

> *You got me. Could you reference your GRIP dates for me?*

The graph I like (Wolfgang Schirmer) is one that I cited some time ago on sap, but the site is no longer up. Science and Nature have many

articles by Bond, Dansgaard etc. that have good graphs and dates for the time in question. Regardless, not much has changed in the last 20 years on the scale we need.

>  
> > <http://www.esd.ornl.gov/projects/gen/NA28-25kyr.gif>  
> > >  
> > > "28,000-25,000 14C y.a.; shortly before Last Glacial Maximum.  
> > > In the eastern USA, conditions may have been generally drier than today.  
> > > A xeric scrub cover existed in Florida at this time, instead of the  
> > > present forest (Watts & Stuiver 1980).  
> > > In Maryland (38N, 75W) pollen evidence indicates pine-birch barrens or  
> > > spruce parkland  
> > > dominating after 30,000 14C years ago (Wells 1992 p.612), and it is  
> > > possible that most of the eastern USA had an open wooded vegetation  
> > > cover at this time."  
> > >  
> > > <http://www.esd.ornl.gov/projects/gen/nercNORTHAMERICA.html>  
> > >  
> > > Hmmm ... xeric scrubland ... fire-dominated ecosystem ... IIRC,  
> > > Georgia pines are well-adapted to both sandy soils and a regular  
> > > occurrence of fire.  
> > > Dry piney duff burns ferociously, and fires in such environments  
> > > often totally consume what surface organics might have accumulated.  
> >  
> > I'm not going to buy this idea. I just drove through the remnants of a  
> > pine forest fire last Thursday. You can't burn a forest down. By the  
> > time the dead trees and roots rot, new trees are growing better than  
> > ever.  
>  
> Not in truly xeric conditions.  
> Have you ever seen a fire in dead pines on sand dunes that have dried  
> out, with a thick dry carpet of pine needles on the sand? In a hot climate?  
> The conditions I'm talking about do not exist in Alaska.

Hot climate in a Pleistocene winter? Do you think Pleistocene South Carolina was the Sahara Desert? Do you think every fire was started in desert-heat conditions, you said yourself that some of this wood burns when damp.

>  
> > Then:  
> > <http://www.tillamoo.com/burn.html>  
> > >  
> > > Today you can drive through this area and you would never know there  
> > > was even a fire there unless someone told you:  
> > > <http://www.tillamookforest.org/>  
> > >  
> > > Unusual conditions may impede regrowth for a short time, but on the  
> > > hundred-year-scale fires have no detrimental impact at all.  
>

> *Oregon rain forest is not representative of xeric scrubland.*

I never said it was. Do you need me to spell out that last sentence in all caps? You have a forest that contains flora that is more conducive to hydric than xeric, at least part of every year in South Carolina.

The problem with your argument is that you keep repeating over and over the word pine like that was all they found. Does cherry grow on Pleistocene xeric-tundras? Just exactly how many inches of rain fall separates xeric from hydric? Forest fires don't happen in winter in your opinion?

>

> > *What ash remained could have been stripped by winds, to be*

> > *redeposited in lower ground (or carried away by the river when it*

> > *topped the bank [no pun intended]).*

> > *The lack of humic horizons in the sediment face might indicate that*

> > *they tended to be catastrophically oxidised before being covered with*

> > *a preserving layer of sediment.*

> >

> > *Doesn't happen that way. If all the seeds and roots blew away (and*

> > *they can't blow away forever) there wouldn't have been a pine forest*

> > *in the first place.*

>

> *I'm not talking about seeds and roots.*

Well I am.

> *I'm talking about paleosols.*

So am I, but you seem to be demanding larger ones than needed to leave a record.

> *And humic staining of soil.*

And roots don't stain soil, but one small hearth does?

> *And duff. And A horizon. Not seeds and roots.*

>

> > *Anyway, it's the oak and buckeye that troubles me. See fig 24.2.*

>

> *If you see buckeye there, you've got more troubles than you think.*

No, I don't have troubles, Topper has troubles. That is exactly my point. Here we have this oak, red cherry, buckeye and pine forest that is not going to flash away every time for 36 k years with no trace, fire or no, yet that backhoe found nothing or if they did they haven't said that I know of. It takes rain to support such a system, you keep talking xeric, so I'll ask you the same question you asked me:

Whatever are you on about? Oak, red cherry, buckeye and pine forest are not desert-tundra flora 100% of the time.

- > *What are you talking about?*
- > *Are you assuming that only modern vegetation assemblages*
- > *were represented in the past?*

No. I'm assuming oak, red cherry, buckeye and pine have roots, require water and do not burn into vapor without leaving a trace with every single fire every single time for 36 K years.

- > *There's a good reason why the labels in 24.1 and 24.2 don't match, at*
- > *[http://www.srs.fs.usda.gov/sustain/report/pdf/chapter\\_24e.pdf](http://www.srs.fs.usda.gov/sustain/report/pdf/chapter_24e.pdf)*
- >
- >> *Fragments of pine cones would be interesting to investigate.*
- >>>
- >>> *A shallow fire pit might be a localised site of aeolian redeposition*
- >>> *of burned remnants of forest or forest floor material, followed by*
- >>> *aeolian deposition of mineral material to flatten out the surface,*
- >>> *but then,*
- >>> *so would a hollow created by a wallowing bison.*
- >>
- >> *First it has to be proven that an oak, pine, cherry and buckeye system*
- >> *was in place at the time of Stafford's 14C dates.*
- >
- > *First before what? Before a bison can wallow a hollow?*

What bison? Did I miss the corprolite evidence?

- > *Before eolian*
- > *deposition?*

Wind that blows away roots?

- > *Before investigating pine cone fragments?*

Pine cones? Did you cite that evidence too (in the lower unit)?

- > *Whatever are you on about?*

That's what I'm wondering about you.

- >
- >>> *There's a site in northwestern Alberta (Saskatoon Mountain) that is*
- >>> *similar in many ways: a hillside above a source of aeolian sediment*
- >>> *(dried-out drained-glacial-lake bed), where the prevailing westerlies*
- >>> *tended to deposit layers of silty sand just below the crest of the hill,*
- >>> *where the wind velocity decreased after compression of the transporting*
- >>> *air mass by the hillside below.*
- >>> *Some humic horizons there, along with some evidence of fire.*
- >>> *The oldest artifacts, 9500 BP, predate the establishment of*
- >>> *coniferous boreal in the area, and thereafter vegetation cover*
- >>> *tended to anchor the lake surface and limit sediment removal to*
- >>> *the dig site, and so the record ends quite early.*

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- > > > *Conditions at the Topper site might possibly have been similarly*
- > > > *susceptible to climatic and vegetation–cover influences, creating*
- > > > *interruptions or hiatuses in the sedimentary record.*
- >
- > > *Sure, nothing is constant, but 36,000 years of what appears to be a*
- > > *blank spot except one fire pit and a few iffy tools?*
- >
- > *At Saskatoon Mountain,*

Saskatoon Mountain is no more the Topper site than a NW rain forest.

- > *the sedimentary conditions that created the*
- > *hillside dune deposit lasted 5,000 years, beginning as soon as the*
- > *glacial lake drained and its bed dried 10,000 years ago,*

Great, did you even read what I wrote above— (I said: "Unusual conditions may impede regrowth for a short time,")? Your time line is off by a factor of almost TEN. Until you have hard evidence to demonstrate otherwise. I normally don't shout unless the person doesn't hear me the first time.

- > *and lasted only*
- > *5,000 years until trees became established in the area 5,000 years ago.*
- > *Those conditions will not recur until the regional vegetation is*
- > *reduced to herb tundra again, or to desert playa, which is not going*
- > *to happen for quite some time hence. See?*

You have oak, red cherry, buckeye and pine forest that are not herb tundra or desert playa every day of the year and therefore have absolutely no reason to burn into unidentified vapor every single time. See?

- > *Millennia of non–sedimentary*
- > *hiatus.*

5000 isn't 36 k plus.

- > *Also, a gap in the record can be created by erosion: beside a river,*
- > *36,000 years of sedimentary accumulation can be removed overnight.*

Here in the NW a million years can be removed overnight and this type of activity is easy to spot. Where is your evidence for 36 k removal at Topper?

You just got through telling us the site is below the Fall Line in your other reply. Now you are contradicting your own arguments and what little site formation process we have given to us by Goodyear.

- >
- > > *Now wasn't that a lucky shot? Goodyear is quite proud that he*
- > > *dug a little deeper than the Clovis horizon. But he admits himself:*
- > > *"But river–cobble chert and the large hammerstones present in the*

- > > *river bottom today are absent from the pre-Clovis zone at Topper."*
- > > *Another words the fact that he dug deeper at a Clovis site had*
- > > *nothing what-so-ever to do with the fact that he hit fire residue.*
- > > *There really isn't any particular reason for anyone to be at a chert*
- > > *quarry when there isn't any chert.*
- > > *There are 3 million square miles of land area in the U.S. How many*
- > > *millions of miles of river shoreline? He just sunk a hole in the*
- > > *ground and hit by random chance a man-made hearth 50 thousand years*
- > > *old?*
- >
- > *I cannot grasp your inference.*
- > *Are you suggesting that Goodyear manufactured the evidence?*

You are doing the manufacturing. Please show where I'm accusing Goodyear of manufacturing evidence. Did you read what Stafford was quoted as saying about the charcoal found at the site? I was just pointing out there was no more reason to dig deeper at that particular site, just because Colvis was found there. There was no relation between the two events. Any riverside spot in the US would have been just as logical to hit a man-made hearth. Far more likely to hit some sort of natural charcoal, however it got there.

- >
- > > > *The view upwind:*
- > > >
- > > > <http://www.pinetreeline.org/photos/belodg/belod228.jpg>
- > > >
- > > > *The dig, with some evidence of paleosols:*
- > > >
- > > > <http://www.pinetreeline.org/photos/belodg/belod226.jpg>
- > > >
- > > > *Reading:*
- > > >
- > > > *Beaudoin, A. B., M. Wright and B. Ronaghan, 1996.*
- > > > *Late Quaternary Landscape History and Archaeology in the*
- > > > *"Ice-Free Corridor": Some Recent Results from Alberta.*
- > > > *Quaternary International, 32:113-126*
- > > >
- > > > *Zo, if the dominant vegetation at the Topper site during the*
- > > > *mid-Wisconsinan interstadial was subject to frequent intensive*
- > > > *fire disturbance, then the lack of humic horizons might be*
- > > > *explained by conditions tending to act against the chance of*
- > > > *preservation of surface organic material.*
- > > >
- > > > *'Nuff said?*
- > >
- > > *No :-).*
- >
- > *Please take your time while formulating your reply.*

Please try taking your own advice.

- > *Using disturbance in*
- > *a modern NW U.S. temperate rain forest*
- > *to make a point about conditions in*
- > *an interstadial SE U.S. semi-desert*
- > *was a mark of wasteful haste.*

Using desert tundra and Saskatoon Mountain to account for burning into oblivion an oak, pine, cherry and buckeye forest was a mark of wasteful haste.

So far you have provided zero evidence that oak, pine, cherry and buckeye forests burn to nothing in sand, nor have you given any evidence that these grow only in xeric conditions (maybe we need a definition on just what exactly is xeric in your mind?). So, this statement by you is false: "I forgot to mention the most obvious (and most problematic) explanation for the lack of humic paleosols at depth: consumption by fire." You made the statement, but you have provided no evidence to support it. Sure pine needles dry out, but just exactly how dry to burn all evidence of a forest for every fire for 36 k years?

- >
- > *Daryl Krupa*