

Re: WI: Antarctica was on the North Pole –

Source: <http://sci.tech-archive.net/Archive/sci.geo.meteorology/2005-03/0022.html>

From: Alfred Montestruc (*amontestruc01_at_yahoo.com*)

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chornedsnorkack@hushmail.com wrote:

> *Alfred Montestruc wrote:*

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> > > > *doktorf wrote:*

> > > > > *This effectively makes North America, oh, let's call it*

> *"Arctica"*

> > > > > *and Eurasia a supercontinent. There might be narrow seaways*

> *between*

> > > > > *the land masses, but we could reasonably expect them to be*

> *frozen for a*

> > > > > *good part of the year. It is also reasonable to expect that*
the

> > > > > *presence of Arctica would make the existence of the Bering*
land

> *bridge*

> > > > > *irrelevant.*

> > > >

> > > > *Depends, even in summer stone age people traveling north of the*

> *arctic*

> > > > *circle will need supplies. Nothing exists to supply travelers*

> *using*

> > > > *stone age technology to travel across far from the sea. No*

food

> *for*

> > > > *500+ miles and very real danger from exposure will make use of*

> *this land > > > for travel by stone age people impractical.*

> > > >

> > > > *What can they hunt? Anything that lives on that land must have*

> *plant*

> > > > *food to eat. What plants will grow in a place that sees 6*

month

> *long*

> > > > *winters of serious hard freezes and mostly no light, with a*

very

> *short*

> > > > *growing season? Yes some plants will grow in the far arctic,*

but

> *this*

> > > *is near the sea which moderates temperature, and assures*

> *rain/snow fall*

> > > *and so fresh water.*

> > >

> > > *Er, vice versa!*

> > >

> > > *In summer, which is what matters for the plants (in winter they*

> *will*

> > > *hibernate no matter whether it is –5 or –50), the Arctic as it*

now

> > > *exist makes the climate harsher, not more moderate!*

> >

> > *No. The proximity to the sea and the fact that open water, or the*

> > *water under the sheet of ice, acts as a huge heat sink/source that*

> *when*

> > *the temperature drops below 0 C, it has an enormous reserve of*

heat

> *to*

> > *give up to keep temperatures at or near 0 C, will moderate*

> *temperature.*

> >

> *Er, no.*

Er yes — learn some basic thermal physics.

Heat flows from higher to lower temperature, the phase change from water to ice

<http://www.physchem.co.za/Heat/Latent.htm#fusion>

The latent heat of fusion of ice is 334 kJ/kg (kiloJoules per kilogram converted)

While the heat needed to raise one kilogram of water one degree C is 4.186 Joules/gram or 4.186 kJ/kg.

<http://hyperphysics.phy-astr.gsu.edu/hbase/thermo/spht.html>

The temperature at which pure water at sea level pressure freezes is 0 degrees C, while salt in the water depresses that a bit (not much) it clearly takes a hell of a lot of heat removal from the water to get it to freeze.

The salt sea water acts during winter as heat *source* that tends to keep the air and ground in contact with it near zero degrees C.

Temperature on the antartic plane far from the sea can sink very far below zero. The lowest recorded was at Vostok station on 24 August 1960 of –88.3 degrees C (see first below web site), and can average –55

degrees C in the winter far from the sea, while near the sea averages of –5 C are seen (second below web site).

<http://ireland.iol.ie/south-aris/climate.htm>

<http://www-das.uwyo.edu/~geerts/cwx/notes/chap03/antarctica.html>

> *The ice on sea acts as a huge heat sink, it has enormous reserves of cold to give up to keep the temperatures at or near 0 C.*

That is during the spring, and temperatures of about 0 C are not all that flipping dangerous to living things. –55 C will kill you, fast even with good personal gear if you are stuck outdoors. That is what happened to the first british expedition to the south pole, the weather turned colder than predicted for a week or more and they died on the march back as a result.

> >

> > *Contrast this to Antarctic land far (say 100 miles +) from the sea,*

> *and*

> > *at elevations of several hundred, to several thousand feet. In that*

> > *case the soil*

>

> *But there is little soil in inland Antarctica.*

Depends on your definition of soil, if you mean soil like in north america, then no. If you mean not very organic rocks sand and dirt, then that is a bunch of crap.

> *That is the reason for*

> *cold there!*

Yes their is, I suggest you learn some thermal physics so you will know what it is.

-----snip