



The article that accompanied this photograph proclaimed,
*"The picture is worth a thousand words. Very sad
thousand words. This picture tells the story of hapless
polar bears clinging on to whatever is left of their home."*

Polar Bear Propaganda

**A Useful Tool for the Promotion of
Environmental Hysteria and Politicized Science**

By Dr. Tim Ball

About the author



Dr. Tim Ball

Tim Ball has an extensive science background in climatology, especially experience in water resources and areas of sustainable development, pollution prevention, environmental regulations and the impact of government policy on business and economics. He is a regular contributing writer for Country Guide magazine and a researcher/author of numerous papers on climate, long range weather patterns, impacts of climate change on sustainable agriculture, ecosystems, historical climatology, air quality, untapped energy resources, silting and flooding problems. After a long academic career at the University of Winnipeg, he moved to Victoria in 1996. He has a B.A. from the University of Winnipeg, an M.A. from the University of Manitoba and a PH.D. (Doctor of Science) from the University of London, England.



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Polar Bear Propaganda

If a picture is worth a thousand words, then it can also be used to tell a bigger lie. In this case, of the 29 words used to describe the scene depicted in the photograph, eight of them are emotional: "very sad", "hapless", "clinging", "whatever is left" and "home". This should alert readers to the fact that they are being manipulated with baseless propaganda.

Polar bears commonly seek high points for a better view. In this image, they were simply observing a cruise ship carrying the tourist who took the image. The phrase "whatever is left of their home" is inaccurate, anthropomorphic and deliberately emotional. Polar bears don't have "homes". Females build dens on land to give birth, but that's all. While some bears spend all their time on the ice, most come ashore when the ice melts.

Anthropomorphism is disturbing, especially when used by scientists. A good example is the absurd comment by Manitoba Provincial biologist Darryl Hedman about the den used by a female polar bear. "Unreal," said Hedman as he squeezed into the den. "Imagine spending a winter in a space like this where you can barely move and not have any food to eat or water to drink." (Ref.)

This is all part of the emotional propaganda used by activists in this age of environmental hysteria. More often than not, it is based on inaccurate science, or information taken totally out of context.

Yet governments regurgitate unsubstantiated claims by climate activists and their allies in academia and mass media that polar bears are doomed because of global warming. Consider the July 17, 2012 article "Bleak future for polar bears, U of A scientists say" in the Calgary Herald, Montreal Gazette, Edmonton Journal and other newspapers. Reporter Ed Struzik asserts, "Most of the world's polar bears are likely to disappear in the next 30 to 50 years if the Arctic continues to heat up as climatologists predict, two University of Alberta scientists say." This sort of speculative alarmism appears regularly in press without acknowledgement of real climate and polar bear history. The world has cooled since 1998, the IPCC predictions are already incorrect, and polar bears have survived thousands of years of warmer conditions including the recent past.

Environmentalists, media and government exploit the public's lack of basic science literacy by finding scientists to quote to lend credibility to the side of the story they want accepted. The scientists cited rarely see how their quotes are to be used and so do not have a chance to correct and clarify before the story is published. In this case, the experts quoted acknowledged the basis of their "prediction" is the official science of the Intergovernmental Panel on Climate Change (IPCC) and used the standard conditional phrasing that escapes public attention because they only remember the headline. "Bleak future for polar bears" is not what the U of A scientists warned of. They speculated that it is a "likely" outcome, "if" the IPCC predictions are correct.

There are several problems with this shallow story beyond its bias and imbalance. The quotes indicate that the scientists simply accept the IPCC



Fig. 2: Polar projection of the Arctic Ocean





stance despite extensive research revealing it's inadequacy. Regardless, the IPCC does not make "*predictions*". They produce a range of scenarios and even the most moderate of these has been wrong for at least the last ten years. This implies the scientists cited in Struzik's article are not staying current. Their comments suggest that they are unaware that polar bears survived far higher temperatures for prolonged periods in the past.

Public knowledge about all this is abysmal. For most, the Arctic Ocean is just a thin blue line across the top of a world map. Every year approximately 16 million square kilometers of sea ice covers the area and slightly beyond.

Most people don't know that every summer 10 million square kilometers of this sea ice melts and every winter it refreezes. They don't know there are three different types of ice: land based glaciers; ice shelves formed when the land ice pushes out into the ocean; and sea ice that is either permanent or seasonal. Many incorrectly think sea level changes when the sea ice melts. This lack of knowledge or understanding is partly why the polar bear became the focus and symbol of global warming. It was also chosen because it fits the emotional aspects of threats of extinction. Animals that are furry, cuddly, and have large eyes, especially their young, draw concern. Few people want to support the idea that pigeons, coyotes, snakes, rats and many other species are proliferating and they are equally unperturbed if they are threatened with extinction.



Historical Background

Any theory, speculation, hypothesis, projection, prognostication, prediction, scenario or forecast is totally dependent on the accuracy of the assumptions on which it is based. The claims about polar bear demise assume the temperature projections of the IPCC are correct. They are not, because they are based on incorrect assumptions, primarily the assumption that an increase in CO₂ causes an temperature increase. It is necessary to understand how this came about to put the polar bear story in context. It's also a blueprint for all other global warming and climate change speculations.

Environmentalism was a necessary new paradigm when it first appeared. Unfortunately, a few used the idea to achieve a political agenda embodied in this comment from the Club of Rome, a global think tank and a major consultant to the United Nations (U.N.):

"In searching for a new enemy to unite us, we came up with the idea that ... the threat of global warming ... would fit the bill ... the real enemy, then, is humanity itself ... we believe humanity requires a common motivation, namely a common adversary in order to realize world government. It does not matter if this common enemy is a real one or ... one invented for the purpose."

Canadian billionaire entrepreneur Maurice Strong was the member of the Club of Rome who put this agenda into operation through his position as former under-secretary general of the U.N. In her book *Cloak of Green* (Page 330) Elaine Dewar wrote, "Strong was using the U.N. as a platform to sell a global environment crisis and the Global Governance Agenda." He set up the U.N. Environment Program (UNEP) that established the goals and the rules for the 1992 Earth Summit or "Rio 92", more formally known as the U.N. Conference on Environment and Development (UNCED). Strong became the conference Secretary-General.

It was at Rio 92 that the principles for Agenda 21, a template for achieving global governance in the 21st century, were established. Included in the 1992 Rio Declaration, the official UNCED was Principle 15 that effectively waives the need for science:

"In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

Principle 15 highlights the highly political nature of Agenda 21. It essentially enshrines the Precautionary Principle, a favorite tool of environmentalists to bypass the need for facts as the basis of decision making. It says if you're not sure, act anyway. This is reinforced by the phrase "*lack of full certainty*." All that was required to make Principle 15 the governing mantra for international agreements was some arbitrarily defined threat. Enter global warming and the supposed risk to polar bears.

Much of this evolved as a result of the neo-Malthusian view of the Club of Rome that over-population fueled by fossil fuels would result in exhaustion of all resources, including the food supply. Strong told a reporter in 1990:

"What if a small group of these world leaders were to conclude that the principal risk to the Earth comes from the actions of the rich countries? In order to save the planet, the group decides: Isn't the only hope for the planet that the industrialized civilizations collapse? Isn't it our responsibility to bring this about?"

Strong claims that his comment was only intended to indicate an extreme scenario of what might happen if we failed to act (Ref.). Nevertheless, it is revealing of the anti-civilization bias of many activists, even those at the top of the U.N.

To bring about their agenda, the global governance cabal needed to show that CO₂, as a product of fossil fuel combustion, was causing dangerous global warming. This explains why CO₂, which is less than four percent of the greenhouse gases, became the sole focus. The problem is that it isn't the cause of temperature rise, as scientists have come to understand in the last decade. Even though CO₂ levels continue to increase, Figure 3 demonstrates that temperatures have declined.



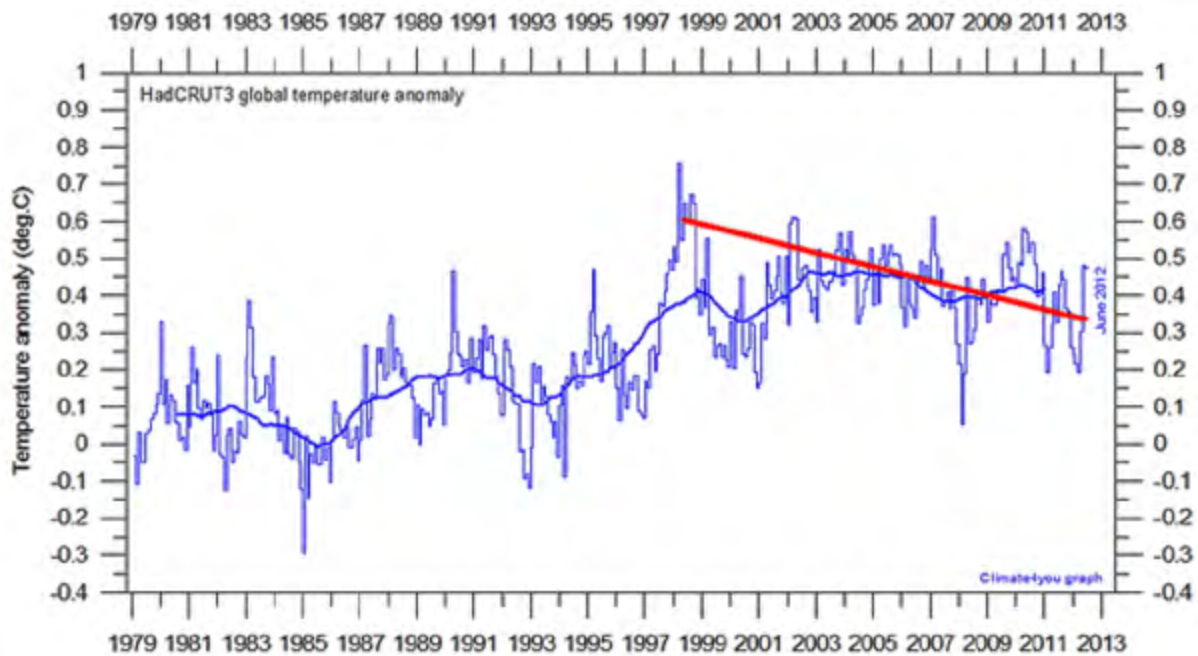


Fig. 3: Official global temperature 1979 to June 2012. Red trend line added.

Temperature peaked in 1998 as high solar activity coincided with a major La Niña event. Some argued that 1998 was an anomaly so it was inappropriate to start a trend line there. They conceded that temperatures had stopped rising, but they had a bigger problem: CO₂ continued to rise, in contradiction to the assumption. Initial and almost immediate reaction was to move the goalposts by talking about climate change instead of global warming.

This diverted attention from failure of official Intergovernmental Panel on Climate Change (IPCC) forecasts. Unknown to most of the public, media and politicians is that the IPCC don't actually do forecasts. Instead they create "scenarios" based upon estimates of economic development linked to the production of CO₂. Compare the scenarios with the HadCrut temperature (Figure 3) shown in blue in Figure 4. Even the lowest scenario is wrong after only ten years has passed.

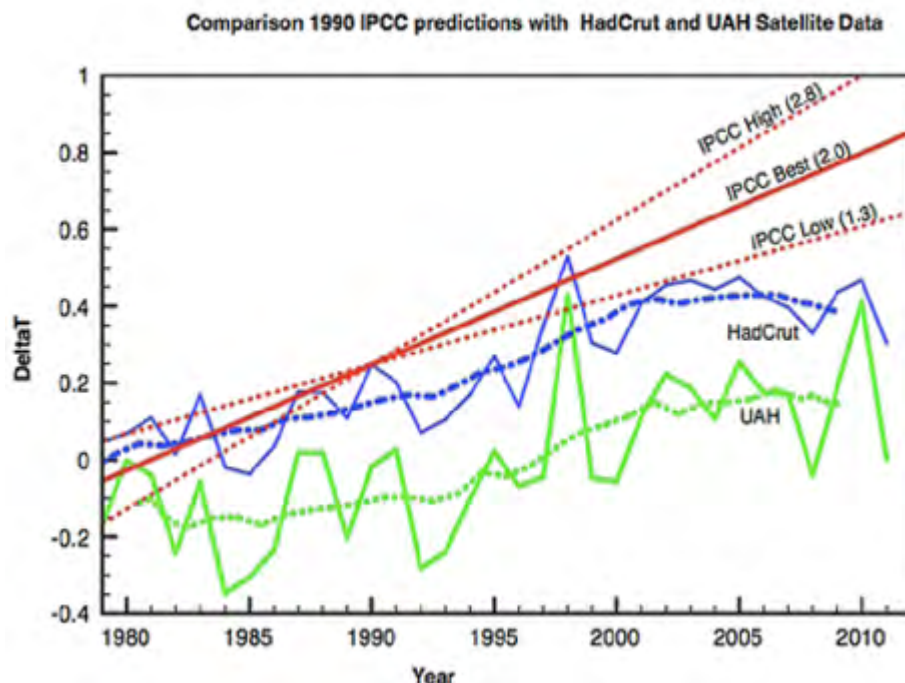


Fig. 4: The divergence of IPCC scenarios from actual trends from the HadCrut surface record and the University of Alabama at Huntsville (UAH) manipulation of the satellite measures.

Superimpose the CO₂ trend on top of the temperature trends and it is evident what is driving the scenarios and why they are wrong (Figure 5).

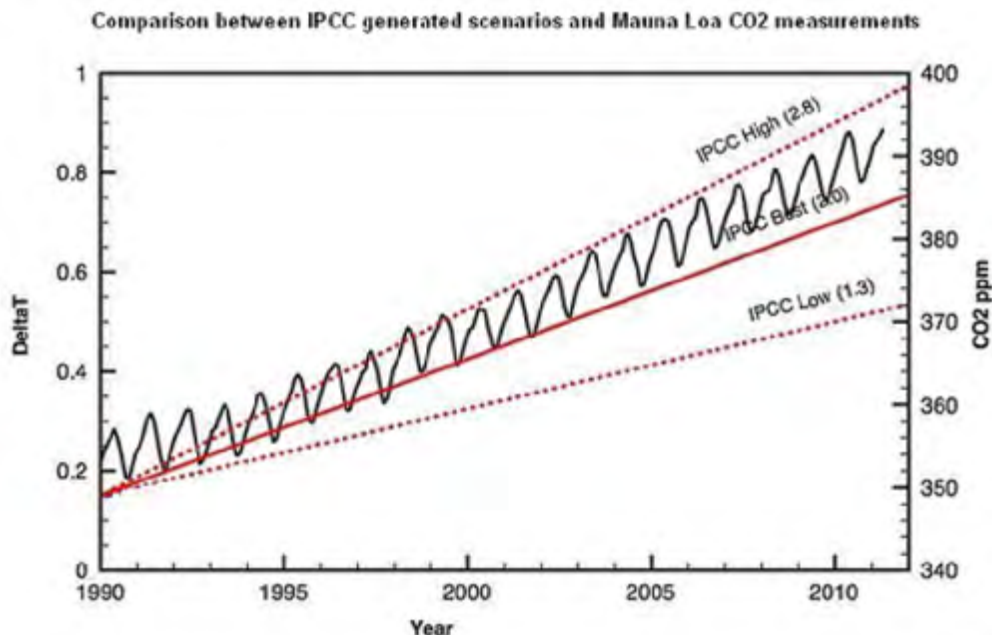


Fig. 5: Correlation between IPCC scenarios and measured CO₂ levels.

The computer models are programmed so that a CO₂ increase always causes a temperature increase. Yet, every record of any significant duration in any time period shows temperature increases before CO₂. Proponents of Agenda 21 appear to have anticipated this, suggesting they knew the science was false from the start. In 1993 former U.S. Senator Tim Wirth said, *"We've got to ride the global warming issue. Even if the theory of global warming is wrong, we will be doing the right thing..."*



Philosophical Context

The western view of science and the world has a philosophical underpinning called uniformitarianism. It assumes that change is gradual over long periods of time. It replaced Neptunism, the quasi-religious view that all rocks in the Earth's crust were crystalized out of, or deposited from water, with types varying depending on whether they were formed before or after the biblical Flood.

This was followed by a brief flirtation with Chaos theory in the 1970s when evidence that an asteroid had wiped out the dinosaurs 65 million years ago was first recognized. Stephen Jay Gould proposed a compromise, "punctuated equilibrium", to accommodate catastrophic events like asteroids, but the concept of little change over time predominated.

It explains why climate alarmists were able to convince people that climate change is something new. In reality, change is occurring all the time in relatively short time periods. Another practice devolved from this situation: any natural change could be presented as if it was unnatural.

Historical Development of Arctic Climatology

When people are asked why global warming is a problem they usually pause and then say that glaciers will melt and sea level will rise. There is considerable disagreement about the amount of rise, but that is not the concern here. It's sufficient to know that sea levels have risen significantly over the last 18,000 years as the Earth emerged from the last Ice Age. Most of the rise occurred between 18,000 and 8,000 years ago and since then it has risen very slowly (Figure 6).

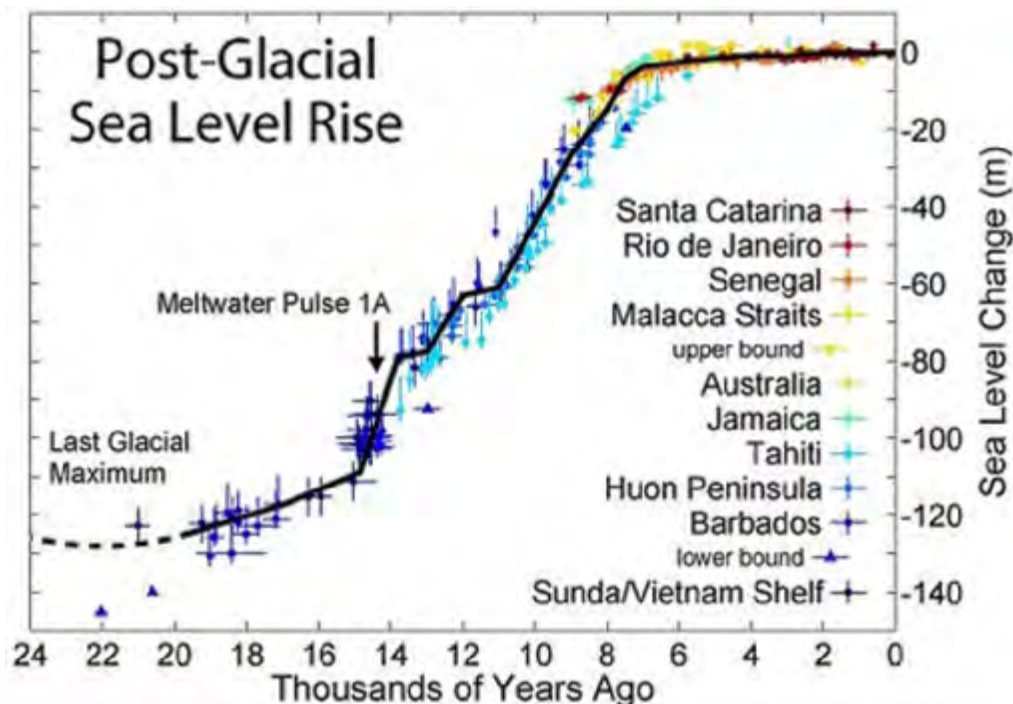


Figure 6: Compilation of sea level rise showing result of post glacial melt.

This concern about sea level rise was the reason Al Gore made computer-generated images of Florida and other regions flooding a major part of his documentary, *An Inconvenient Truth*. Lack of knowledge or understanding mean people are easily misled, but it also means that they don't relate well to an area or a concern. As a politician, Gore knew better than most the need for a symbol or analogy to capture public attention. Melting ice, flooding and drowning and starving polar bears were perfect candidates.

For most people the Arctic Ocean is a line along the top of a Mercator map giving the North Pole, a single point, the same length as the equator. The Arctic ocean is literally off the map for the vast majority of the public, media and politicians.

Species Extinction Fears Typical of Uninformed Environmental Hysteria That Drives Polar Bear Misinformation

British writer H.H. Munro, writing under the pen name Saki, said, "*A little inaccuracy sometimes saves tons of explanation.*" Today's information age is more aptly called the age of misinformation, a period during which we have tons of inaccuracy and very little explanation. Most inaccuracies originate with claims based on non-existent or inadequate historical data, extremely crude estimates, computer model projections, or deliberate misinformation. The problem is rife in environmental issues but especially with climate change and animal extinctions. They're the most politicized, which automatically takes them further from reality. American journalist Henry Adams put it well, "*Practical politics consists of ignoring the truth.*" Environmentalists consider they are in a war and, as the ancient Greek playwright Aeschylus, said, "*In war, truth is the first casualty.*"

A 2008 World Wildlife Fund report claimed, "*Human activity is wiping out close to one per cent of every other species on Earth every year.*" They can't substantiate this claim because:

- we don't know how many species there are.
- we are finding new species all the time.
- we don't have even crude estimates of populations.
- we don't know how much population numbers vary.
- the phrase "every other" implies that only humans are increasing in numbers, which isn't true.

A few years ago David Suzuki, an environmentalist who specialized in fruitfly genetics, crossed Canada claiming an extinction rate of three species an hour. He couldn't name any of them because it's a false claim. It originated with E.O. Wilson, ant specialist who is an Honorary Board Member of the David Suzuki Foundation.

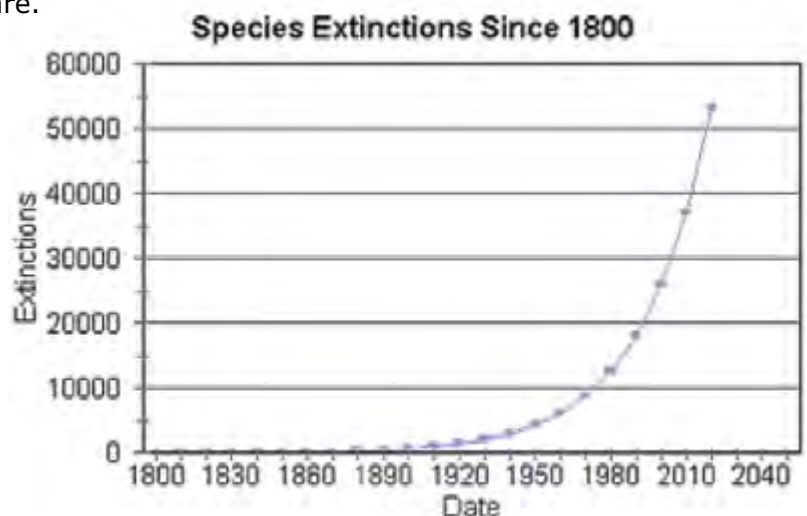


Figure 7: Exponential increase of extinctions according to E. O. Wilson. Source: <http://www.whole-systems.org/extinctions.html>.



Most of the false claims about species extinction originate with Wilson.

Wilson estimated the number of species in an acre of rain forest, the rate of forest lost and came up with a figure of 27,000 species lost per year, 72 per day or 3 per hour. He produced a ludicrous graph (Figure 7) to match the claim.

There are serious problems with Wilson's approach:

- There are no measures of the number of species per square mile of rainforest, only estimates.
- It's incorrect to assume the same species density for other ecozones.
- Estimates of the rate of rainforest change are also very questionable.
- Wilson made no allowance for the steady and significant discovery of new species.

In fact, we don't actually know how many species or numbers exist now or in the past. Recently, scientists working in Papua New Guinea announced the discovery of some 200 species previously unknown to science. It included 24 frog species and amazing animals like the Fruit Bat, as seen in Figure 8.

Research team leader Stephen Richards said, *"They tell us how little we still know about the world. Hey—we don't even know what bio-diversity is out there."* That's an understatement and disturbing from someone who, so the public would think, should know.

It's estimated that we've only found and identified about 35 percent of all the species on the planet, although the number may in fact be much less. The situation is especially problematic for the oceans where the increase in the number of known species is greatest. An April 2010 press release from the International Census of Marine Microbes (IcoMM) said,

"Biologists worldwide may have to start re-evaluating their estimates of the number of species on Earth, since expeditions documenting the oceans' tiniest species have revealed shocking diversity: in the tens of millions of species, at least, and according to one researcher "closer to a billion".



Figure 8: Newly discovered Fruit Bat.

Biodiversity is a continuation of the extinction debate; the prevailing view that humans are reducing biodiversity by increasing the rate of extinction. As Wikipedia says, *"The fact that we do not currently know the total number of species, in the past nor the present, makes it very difficult to accurately calculate the non-anthropogenicly (sic) influenced extinction rates."*

Reality: Boom or Bust Cycles of Animal Populations

Animal populations vary a great deal in numbers, but they also vary in form as they adapt to constantly changing conditions. Both are evidence of concepts lost in uniformitarianism. Rate of adaptation and change is much faster than current science allows and most people understand. One of the myths promoted by environmentalists is that climate change is happening faster because of human actions pushing it beyond the ability of animals to adapt.

Several factors can cause distortion in the data, but the most dangerous is the narrow selection of information for an argument. Most measures are snapshots taken at a single point in time of numbers that vary considerably. They vary because of actual change in the total or because the species moves to another area. For example, a July 4, 2009 letter to the English magazine *The Spectator* complained about the disappearance of swifts, the most aerial of birds, in London. A week later a letter said, *"I think they may have come to north-east London. This year the skies above Hackney have been filled with them as never before."* In the 1990s we heard about collapse of salmon populations on the west coast of North America because of overfishing. This year there are record runs as salmon that moved to better environmental conditions in streams in southern Alaska return.

None of this would surprise Hudson's Bay Company (HBC) fur traders because they knew how much animal populations varied. Moses Norton's journal for January 14, 1771 reads, *"Ever since I knew the country I never experienced so great a scarcity of partridge."* On January 1, 1810, William Cook wrote in his journal, *"Indians complain of scarcity of food."* Then on the 12th he notes, *"Scarcity of partridge and rabbits."* A year later he writes, *"Thus are we receiving supplies from one party and witnessing the most abject poverty in another but it is perfectly consistent with the nature of the country that it being not at all uncommon for one set of Indians to be absolutely starving while another party at the distance of 40 miles are living in the utmost profusion."*

HBC records provided data for one of the first ecology studies on natural fluctuation of populations by English zoologist and animal ecologist Charles Elton. His publication with Nicholson in 1942 shows variations in Lynx numbers in a very long record (Figure 9).

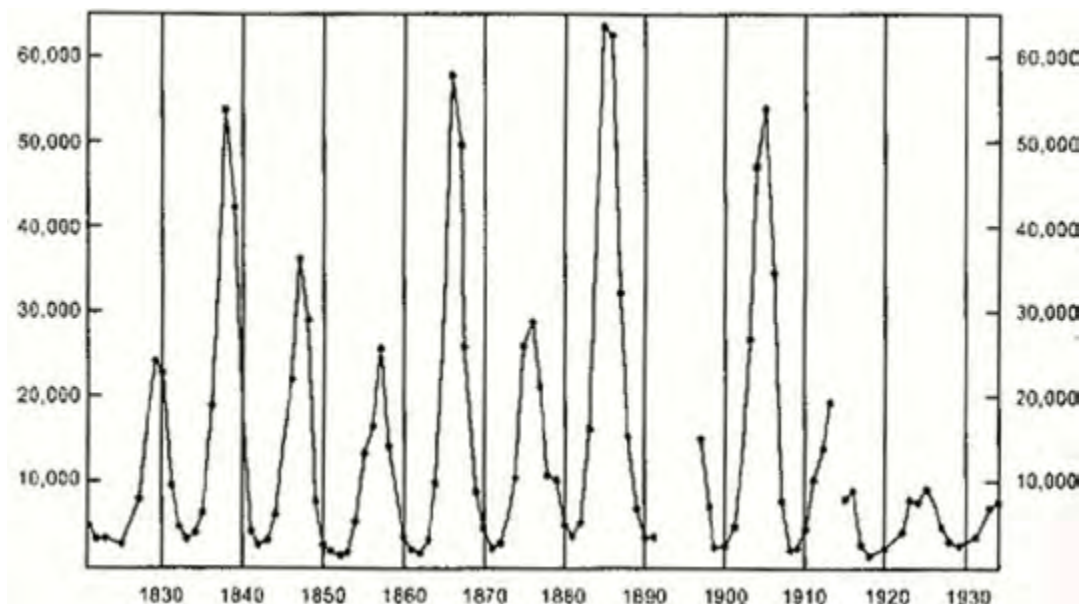


Figure 9: Plot of Lynx fur returns 1820 - 1935
Source: Elton and Nicholson, 1942.



The study shows the predator prey relationship because Snowshoe Hare are the major food source for Lynx.

The Hare was a fundamental food source for people through the winter so both human and Lynx populations declined when their numbers declined. Periods of human starvation obtained from the HBCA records are plotted for the period 1786 to 1880 in Figure 10. The peaks coincide with periods of drought, which reduces grasses, a basic food supply for hares. Figure 11 shows the annual cycle of food supply, the dominance of hares and periods of scarcity. Equally important is the lack of snow because droughts occur in winter too. Biologist William Pruitt of the University of Manitoba and other have done extensive work on the importance of snow cover for winter survival.

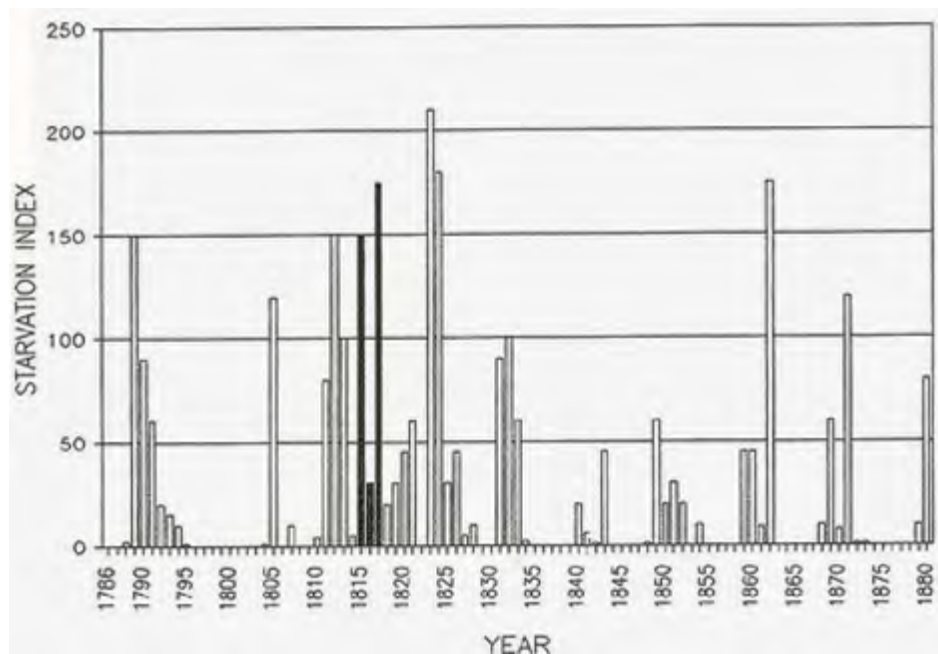


Figure 10: Plot of references to human starvation in the HBC records 1785 -1880.

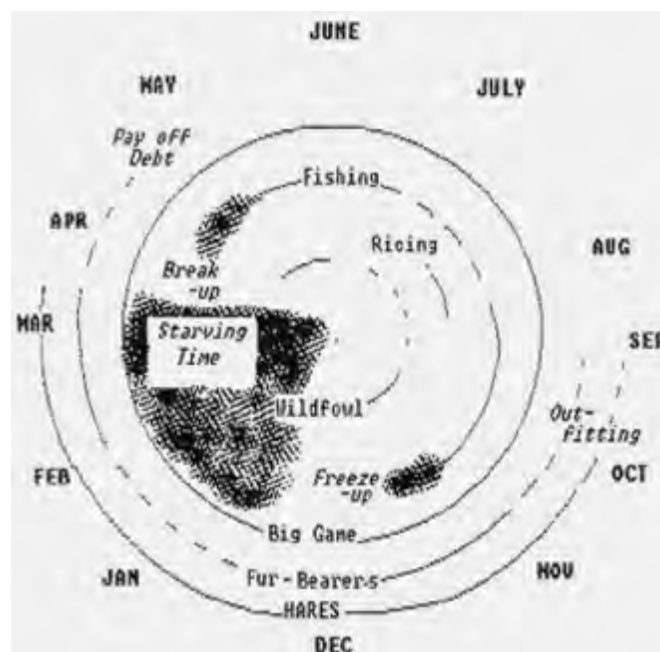


Figure 11: Annual pattern of food economy for Ojibway in north central Canada; Roger Suffling.

In summary, animal populations fluctuate widely as a natural response to changing climate and environmental conditions. Because of the unfortunate influence of uniformitarianism, the public, media, government and even many scientists assume populations are relatively constant. They assumed this about the polar bear as well.

2007: A Pivotal Year

Concern about polar bears began in the 1950s and various regulations were introduced to control hunting. Generally things were working and a surprising degree of international cooperation occurred considering the Cold War was going on.

All that changed in 2007. Al Gore's movie was released placing emphasis on Arctic ice melting, sea level rising and polar bear habitat disappearing. The global campaign he pursued suppressed mainstream media reporting on some 36 significant errors in the movie. Unabashed and despite the contradictory evidence he continued with the Climate Reality Project. Reports from polar bear experts and aboriginal people that numbers of polar bears were not decreasing received little attention.

Stories appeared about declining Arctic sea ice including ridiculous claims that summer sea ice would be gone completely in five years. In 2007 Waleed Abdalati, NASA's chief of cryospheric sciences said, *"I don't pay much attention to one year ... but this year the change is so big, particularly in the Arctic sea ice, that you've got to stop and say, 'What is going on here?' You can't look away from what's happening here," "This is going to be a watershed year."*

The BBC reported in 2007 *"Summer melting this year reduced the ice cover to 4.13 million sq. km, the smallest ever extent in modern times."* This is false. Ice cover was undoubtedly much less in the warmer years of the 1930s and more so during the even warmer period of the Holocene Optimum from 9,000 to 3,000 years ago. Wieslaw Maslowski of the Naval Postgraduate School in Monterey, California had earlier predicted all summer ice gone by 2013, but said that, with the 2007 conditions, it was a conservative estimate. Al Gore was quick to promote the claim that all summer ice would be gone by 2013. By 2010, Maslowski had revised his estimate for an ice free summer to 2016.

Arctic sea ice reached the lowest summer amount in the record in 2007. But that record only started in 1980. Generally, despite the low of 2012, it has recovered since.

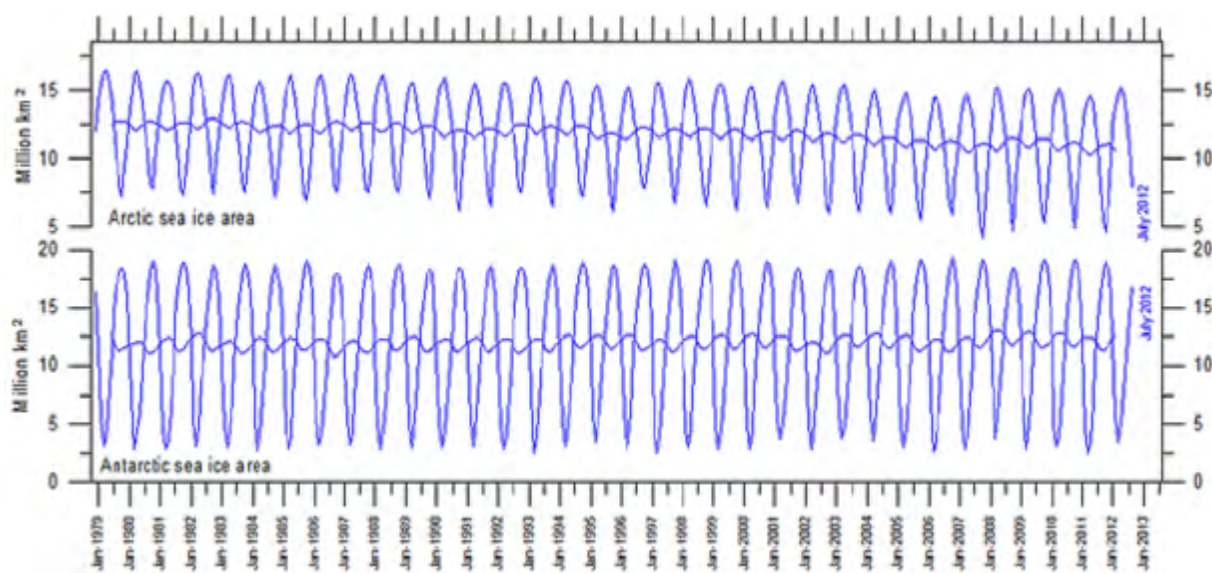


Figure 12: Seasonal variation in sea ice extent for Arctic and Antarctic.



Two important factors have been ignored in the hysteria:

- First, the seasonal variability of ice cover increased. Notice the slight increase in winter ice since, including 2007/2008.
- Second, the changes in 2007 and since are caused by changes in wind patterns.

Waves in the Jet Stream (Figure 13) were identified in 1940 by Carl Rossby. They're named after him, but are also called planetary waves. They take two general patterns identified as Zonal and Meridional (Figure 14), which induce different weather especially in the middle and high latitudes.

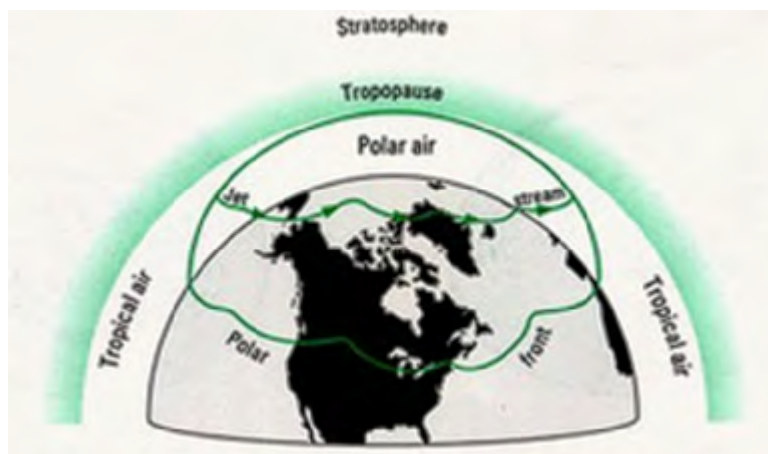


Figure 13: Simple diagram of Northern Hemisphere air masses. Source: Author..

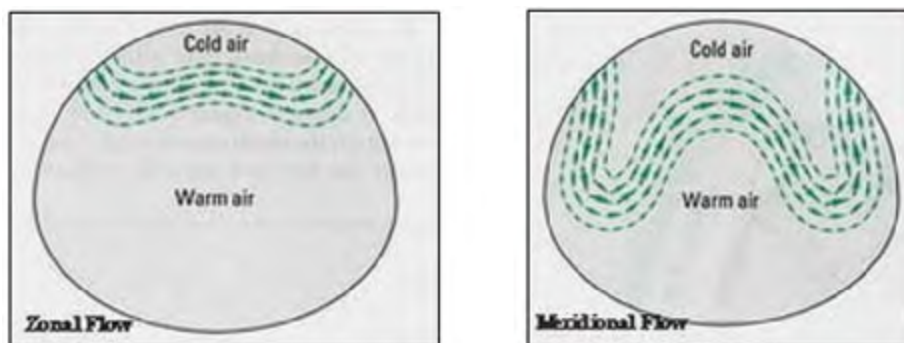


Figure 14: Two general patterns of Upper Level Air Flow (Circumpolar Vortex). Source: Author.

Zonal winds create relatively stable weather patterns with wind flows from the northwest in the winter and southwest in the summer. Meridional flow has unstable weather patterns, increased temperature extremes with predominantly north and south winds summer and winter.

As global cooling began in 1998 the polar dome began to expand. Historically, with cooling the Jet stream flow changes from Zonal to Meridional with accompanying weather changes. These include more severe storms, greater extremes of hot and cold temperatures, prolonged periods of drought and heavy rain. Instead of changing on a 4 to 6 week cycle, as is usually the case, the Wave pattern stalls in what is called blocking and the weather configuration in place at the time persists. This is precisely what has occurred in the last few years. Of course, promoters of the human caused warming hypothesis claim these events are evidence of warming. The reverse is the case. It is evidence of global cooling.

The Bering Sea conditions in 2012 illustrate the pattern. OurAmazingPlanet website explains:

"Arctic sea ice waxes and wanes throughout the year, and conditions fluctuate each season and year—including conditions in the Bering Sea. Although sea ice extent in mid-January 2012 was not at

a record high, it was the highest ice extent in several years, according to the National Snow and Ice Data Center."

Figure 15 shows the pattern of Bering Sea ice and the record level in 2012. As a media outlet in the United Kingdom reported, *"The amount of floating ice in the Arctic's Bering Sea—which had long been expected to retreat disastrously by climate-Cassandra organizations such as Greenpeace—reached all-time record high levels last month, according to US researchers monitoring the area using satellites."*

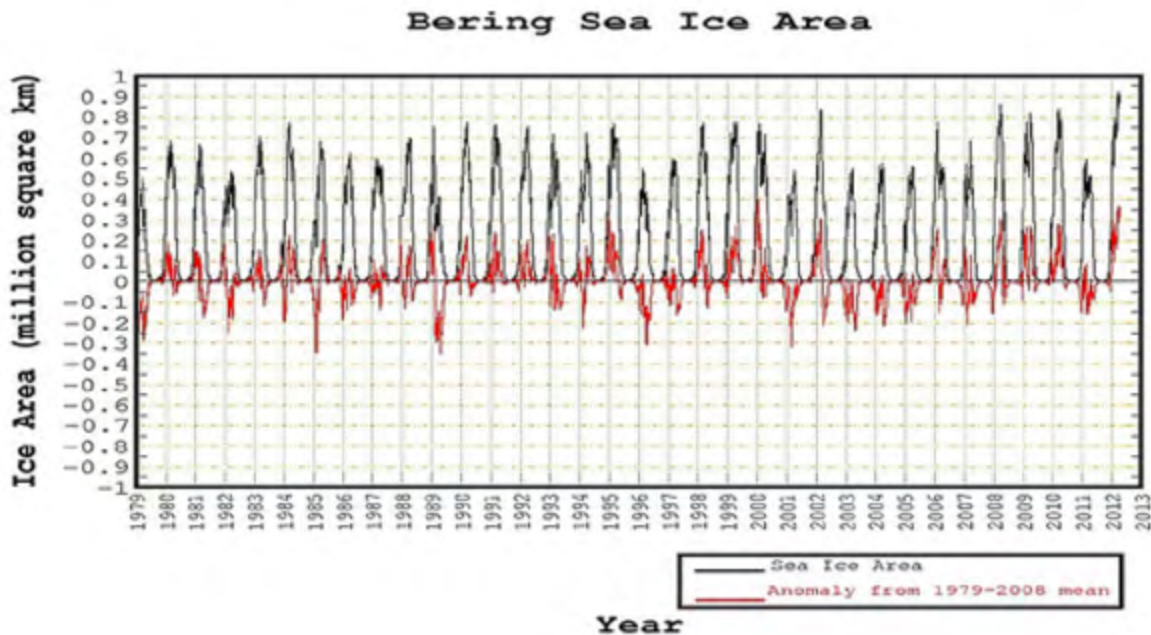


Figure 15: Plot of Sea Ice 1979 to 2012.

The official explanation identified the wind pattern as the cause. *"As winds from the north pushed Arctic ice southward through the Bering Strait, the ice locked together and formed a structurally continuous band known as an ice arch, which acts a bit like a keystone arch in a building."*

A similar pattern has been occurring at the South Pole, reports *The Antarctic Sun*, part of the U.S. Antarctic Program, *"It's no secret that the South Pole in Antarctica is one of the coldest places on Earth. But this year it got really cold faster than ever, breaking a 30-year-old record for the earliest the temperature has dropped below minus 100 degrees Fahrenheit (minus 73.3 degrees Celsius)... Just last September, another significant record fell when the peak wind speed was clocked at 58 miles per hour (mph), or 50 knots—the strongest ever at the South Pole."*

The claim popular among climate campaigners and their allies in the media and governments is recent weather patterns, especially temperature increase, are causing Arctic ice melting and potential demise of the polar bear. The implication is that this has never happened previously. It was a problem that confronted the IPCC before. They claimed 20th century temperatures were the highest on record, even though it has been extensively documented that it was warmer for a prolonged period 1,000 years ago during the Medieval Warm Period (MWP).

They handled this problem in the 2001 Third IPCC Report (AR3) through the use of two fabrications to support the claim that the 20th century was the warmest ever and that it was due to human production of CO₂. First was the "hockey stick" graph, used to show that today's temperatures surpassed those of the MWP. Second was the claim that global temperatures had risen 0.6°C in the last 120 years and that that was beyond any natural increase.

The hockey stick was broken when the corrupted construction was exposed and the author refused to provide his data and the data manipulation processes he used.



In fact, the temperature data was meaningless from the start because the error of the estimate was $\pm 0.2^{\circ}\text{C}$. To make matters worse, we learned later that much of the original data was lost. This left the MWP temperatures intact and warmer than today.

How did polar bears survive the MWP or even warmer eras in the past? Apparently nobody in government, or those advising government, knows enough about climate history to even ask the question. For example, the US Fish and Wildlife Service (FWS) supported by the Center for Biological Diversity in the legal brief, "In Re Polar Bear Endangered Species Act Listing and 4(d) Rule Litigation" (USCA Case #11-5219), makes the following incorrect statements:

"Two findings were most critical to FWS's listing determination: (1) extensive declines in Arctic sea ice extent already have occurred and are projected to continue; and (2) the polar bear depends on sea ice for its continued survival as a species. Appellants do not contest either of those findings." (page 17-18).

These findings and the first sentence in the next section, which says, *"There has been an unprecedented decline in Arctic sea ice over the past several decades"*, are false. There are no accurate sea ice records that cover the "past several decades". The first useable record began in 1980, two years after a satellite was launched.

Regardless, the declines are not unprecedented. A slight decline in summer ice extent is appropriate for the warming that occurred from 1980 to 2000. Since 2000, sea ice extent and variance have increased due to cooling and changing wind and ocean flows as the U.S. National Oceanic and Atmospheric Administration (NOAA) attest.

It is crucial to recognize that polar bears have survived much warmer periods in the past, including most of the Holocene Optimum (the warmest interval since the continental glaciers retreated).

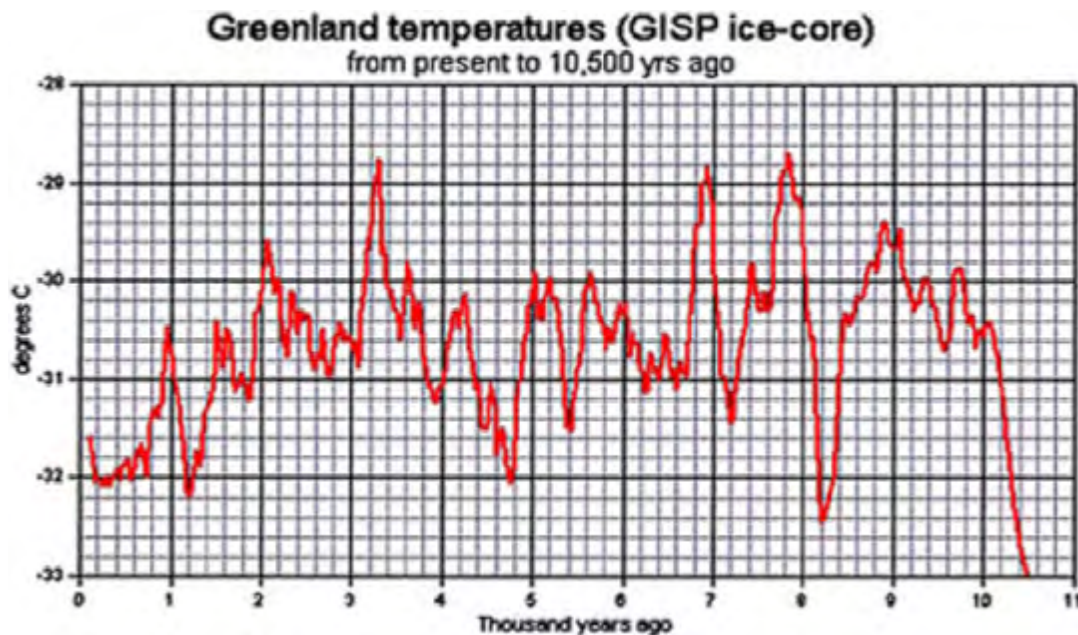


Figure 16: Present day temperatures on the left.

Figure 16 shows the range of temperatures determined in Greenland ice cores. On the right side of the graph, 10,000 years ago, the temperature rises as the Earth emerges from the Ice Age. For most of the next 9,000 years the world was warmer than today. Research reported in *Science Daily* confirms the lack of ice; *"Recent mapping of a number of raised beach ridges on the north coast of Greenland suggests that the ice cover in the Arctic Ocean was greatly reduced some 6000-7000 years ago. The Arctic Ocean may have been periodically ice free."*

Physical evidence of how much warmer it was during the mid-Holocene than today is a fossilized tree shown in Figure 17. It is far too cold for trees to grow in this part of Canada today. This is just one piece of evidence that supports the 2 to 3 °C warmer than today ice core record. How did the polar bears survive these conditions?



Figure 17: White Spruce radiocarbon dated 4940 years (± 140) B.P. Located 80 to 100 km north of the current tree line in the Delta of the Mackenzie River. Source: Professor Ritchie in H.H Lamb, Volume 2; *Climate Past, Present and Future* (1977).

It is reasonable to argue based on the Greenland ice core record the world has cooled in the last 3000 years. Despite that trend there were still three periods warmer than today, the Minoan, Roman and previously identified MWP (Figure 18).

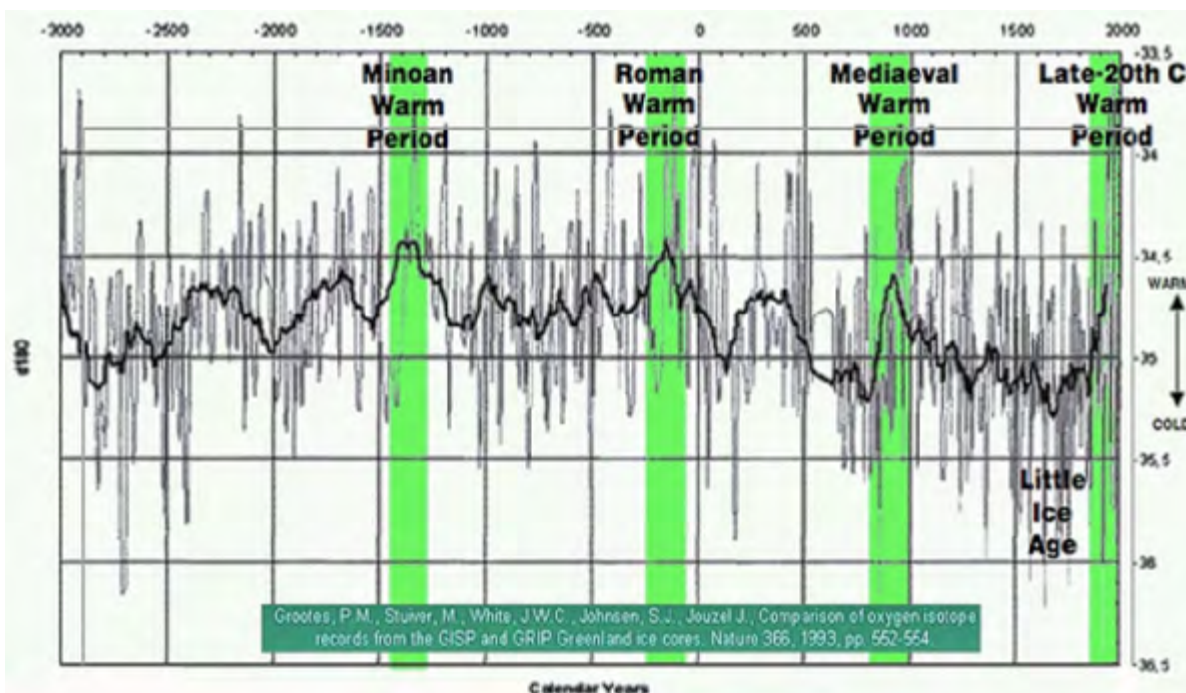


Figure 18: Three distinct warm periods of the last 3000 years. Source: Identified on diagram.



In 2007 two positions on polar bear policy were formally presented at a hearing in Anchorage, Alaska. The U.S. government position was that they should be listed as threatened under the *Endangered Species Act*. Sea ice reduction due to global warming was the primary basis for the proposed listing. As the Associated Press reported at the time:

"The U.S. Fish and Wildlife Service has been vague about what a recovery plan might entail if polar bears are listed as threatened. But the law requires federal agencies to evaluate their regulatory actions with respect to any threatened species if habitat, in this case, sea ice, is designated as critical. Supporters of the listing want the federal government to declare global warming as the direct cause of harm to polar bear habitat, sea ice, and consider limits on utilities and industry producing greenhouse gasses, not only in Alaska but throughout the country."

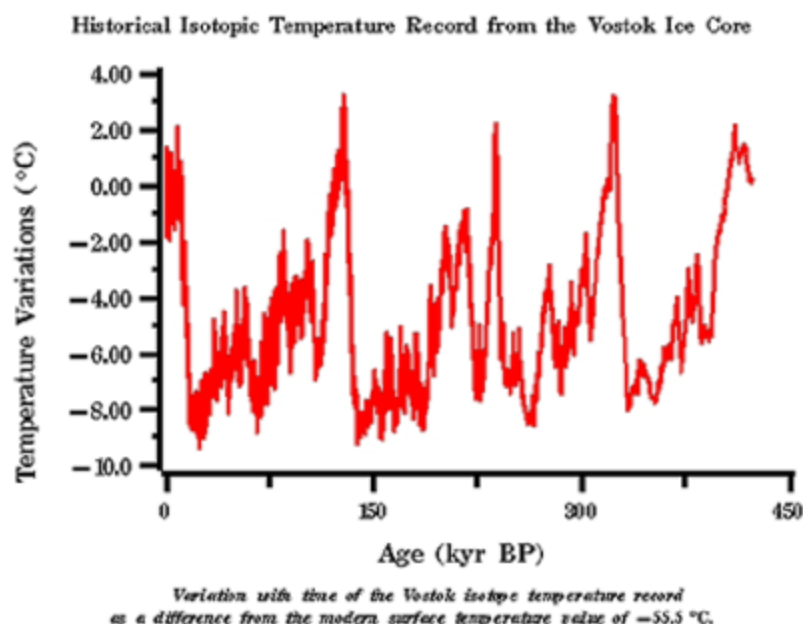
The countervailing position was based on the expertise of Tina Cunnings, biologist and a special assistant to the commissioner of the Alaskan Department of Fish and Game and presented by Alaskan Governor Sarah Palin:

"In her testimony, Cunnings (sic) questioned whether federal experts were correctly interpreting scientific data, such as climate projection models. They disagree, she said, over when the Arctic Ocean could be virtually ice free in summers. Some say 40 years, some say 100 years, she said."

Cunnings challenged some of the arguments made by those in favor of listing when she,

"questioned whether polar bears really need sea ice to survive. She said polar bears are adaptable to use land for hunting, and though their preferred food, ice seals, may be declining, bears are adapting to alternative food sources."

Cunning's statements are representative of part of the current debate about the rate of evolution from Southeast Alaskan Brown Bears to Polar Bears. Estimates of the date of emergence range from 70,000 years to one million, but DNA research indicates it was between 110,000 and 130,000 years ago. This suggests the transition was coincident with, and triggered by, the onset of the last Ice Age. Figure 19 shows temperature as determined from an Antarctic ice core. Notice that the peak of the last interglacial was approximately 130,000 years ago when it was warmer than today. The larger pattern of warming and cooling is primarily caused by the changing orbit of the Earth around the Sun. This cycle of orbital change is one part of the Milankovitch Effect, which is not included in the climate models cited by the IPCC.



Source: Petit et al.

Figure 19: Pattern of cooling (glacials) and warming (interglacials) is clearly demonstrated in the data from this ice core sample.

Temperatures declined until 20,000 years ago when ice sheets reached their maximum. The drop was over 10°C in the location of today's Vostok Antarctic station. Further evidence of the recent evolution of the polar bear is found in the existence of hybrids (Figure 20.)



Figure 20.

As Wikipedia explains:

"The polar bear was previously considered to be in its own genus, Thalarctos. However, evidence of hybrids between polar bears and brown bears and of the recent evolutionary divergence of the two species, does not support the establishment of this separate genus, and the accepted scientific name is now therefore Ursus maritimus, as Phipps originally proposed."

Normally, hybrids cannot produce viable offspring, but apparently that is not the case with polar bears and their hybrid offspring.

Governor Palin summarized the situation:

"The driving force in the concern over polar bears," she said, "is the decline in sea ice. Listing bears as threatened, she said, would not cause sea water to freeze. When a species' habitat, in this case, sea ice, is declining due to climate change, but there are no discrete human activities that can be regulated or modified to effect change, what do you do?"

In just five years the evidence shows that Cunnings and Palin were correct. More importantly, the evidence demonstrates that the hypothesis and predictions about warming and sea ice decline were completely wrong. Global temperature has declined despite continued increase in CO₂. This totally contradicts the IPCC prediction of continued warming and undermines their hypothesis that CO₂ is the cause. Arctic sea ice extent has increased. Tim, do you still want to say this considering the latest data? Understanding of the mechanisms of ice formation and movement have evolved, particularly the role of wind and currents.

In April 2012, a report on polar bear numbers by the Government of Nunavut confounded the experts:

"...the bear population is not in crisis as people believed," said Drikus Gissing, Nunavut's director of wildlife management. "There is no doom and gloom." Mr. Gissing added that the government isn't dismissing concerns about climate change, but he said Nunavut wants to base bear-management practices on current information, "and not predictions about what might happen."

In another report, Nunavut Tunngavik Inc. (NTI) Vice-president James Eetoolook said:

"We have reported for many years that we are seeing more and more bears on the land and in communities, which raises public safety concerns. Inuit were told by scientists the reason there are more bears in communities is due to a decline in the condition of the population, but Inuit disagreed with this interpretation. This is not about climate change, this is about how polar bears were used to draw attention to climate change. Changes were not made to reduce the causes or impact of climate change, but changes were made to the harvesting quotas."



He is talking about legal limits for trophy hunting, a valuable commerce in the North. As Arctic researchers Freeman and Wenzel wrote:

"Although polar bear hides taken in the subsistence hunt have commercial value, revenues from nonresident trophy hunting provide a much greater economic return to the Inuit. Research suggests that these greater cash returns and the increased local interest by native hunters in outfitting and guiding do not threaten community cultural values, which continue to emphasize subsistence and the conservation of local wildlife resources. These outcomes suggest that community-based polar bear trophy hunts provide an example of a successful conservation-hunting program that contributes to wildlife management and sustainable economic and community development in the Canadian Arctic."

NTI's James Eetoolook is correct. The government and environmentalists are wrong. Climate will change and animal populations will fluctuate, as they always have. Their survival and numbers are not directly dependent on temperature or ice conditions, but on the food supply. Clearly, polar bears have adapted to land survival many times in the past as Cummings indicated.

It was more convenient with the new environmental paradigm and attribution of all change to humans to claim global warming causing melting ice was killing the polar bears. It was wrong and policy based on it is unnecessary and unjustified. The Inuit are victims of what Paul Drissen wrote about in his book *EcoImperialism*, the forceful imposition of western environmental values on other cultures, usually to their detriment.

Nobel Physicist Richard Feynman said, *"Reality must take precedence over public relations, for nature cannot be fooled."*

Polar bears have successfully adapted to nature for eons before civilization began. That must be the basis for policy, not data severely limited and distorted by emotional, anthropomorphic, political agendas presented under the guise of the precautionary principle.





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Further Reading

March 2008

Questioning the Global Warming Science

By Madhav L. Khandekar

<http://www.fcpp.org/publication.php/2108>

February 2011

Getting Society Off the Climate Change Bandwagon

By Tom Harris

<http://www.fcpp.org/publication.php/3602>

www.fcpp.org For more see