

U.S. Senate Report

Polar Bear Extinction Fears Debunked



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U.S. Senate Environment and Public Works Committee
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The United States Fish and Wildlife Service is considering listing the polar bear a threatened species under the Endangered Species Act. This report details the scientists debunking polar bear endangerment fears and features a sampling of the latest peer-reviewed science detailing the natural causes of recent Arctic ice changes.

The U.S. Fish & Wildlife Service estimates that the polar bear population is currently at 20,000 to 25,000 bears, up from as low as 5,000-10,000 bears in the 1950s and 1960s. A 2002 U.S. Geological Survey of wildlife in the Arctic Refuge Coastal Plain noted that the polar bear populations “may now be near historic highs.” The alarm about the future of polar bear decline is based on speculative computer model predictions many decades in the future. And the methodology of these computer models is being challenged by many scientists and forecasting experts. ([LINK](#))

Scientists Debunk Fears of Global Warming Related Polar Bear Endangerment:

Canadian biologist Dr. Mitchell Taylor, the director of wildlife research with the Arctic government of Nunavut: “Of the 13 populations of polar bears in Canada, 11 are stable or increasing in number. They are not going extinct, or even appear to be affected at present,” Taylor said. “It is just silly to predict the demise of polar bears in 25 years based on media-assisted hysteria.” ([LINK](#))

Evolutionary Biologist and Paleozoologist Dr. Susan Crockford of University of Victoria in Canada has published a number of papers in peer-reviewed academic journals. “Polar bears, for example, survived several episodes of much warmer climate over the last 10,000 years than exists today,” Crockford wrote. “There is no evidence to suggest that the polar bear or its food supply is in danger of disappearing entirely with increased Arctic warming, regardless of the dire fairy-tale scenarios predicted by computer models.” ([LINK](#))

Award-winning quaternary geologist Dr. Olafur Ingolfsson, a professor from the University of Iceland, has conducted extensive expeditions and field research in both the Arctic and Antarctic. “We have this specimen that confirms the polar bear was a morphologically distinct species at least 100,000 years ago, and this basically means that the polar bear has already survived one interglacial period,” Ingolfsson said. “This is telling us that despite the on-going warming in the Arctic today, maybe we don't have to be quite so worried about the polar bear.” ([LINK](#))

Internationally known forecasting pioneer Dr. Scott Armstrong of the Wharton School at the Ivy League University of Pennsylvania and his colleague, forecasting expert Dr. Kesten Green of Monash University in Australia, co-authored a January 27, 2008 paper with Harvard astrophysicist Dr. Willie Soon which found that polar bear extinction predictions

violate “scientific forecasting procedures.” Excerpt: The study analyzed the methodology behind key polar bear population prediction and found that one of the two key reports in support of listing the bears had “extrapolated nearly 100 years into the future on the basis of only five years data - and data for these years were of doubtful validity.” ([LINK](#))

Biologist Dr. Matthew Cronin, a research professor at the School of Natural Resources and Agricultural Sciences at the University of Alaska Fairbanks: “We don’t know what the future ice conditions will be, as there is apparently considerable uncertainty in the sea ice models regarding the timing and extent of sea ice loss. Also, polar bear populations are generally healthy and have increased worldwide over the last few decades,” Cronin said. ([LINK](#)) & ([LINK](#))

Naturalist Nigel Marven is a trained zoologist, botanist, and a UK wildlife documentary maker who spent three months studying and filming polar bears in Canada's arctic in 2007. “I think climate change is happening, but as far as the polar bear disappearing is concerned, I have never been more convinced that this is just scaremongering. People are deliberately seeking out skinny bears and filming them to show they are dying out. That’s not right,” Marven said. ([LINK](#)) & ([LINK](#))

Biologist Josef Reichholf, who heads the Vertebrates Department at the National Zoological Collection in Munich: “In warmer regions it takes far less effort to ensure survival,” Reichholf said. “How did the polar bear survive the last warm period? ... Look at the polar bear’s close relative, the brown bear. It is found across a broad geographic region, ranging from Europe across the Near East and North Asia, to Canada and the United States. Whether bears survive will depend on human beings, not the climate.” ([LINK](#))

Polar bear expert Dennis Compayre, formerly of the conservation group Polar Bears International, has studied the bears for almost 30 years in their natural habitat and is working on a new UK documentary about the bears. “I tell you there are as many bears here now as there were when I was a kid,” Compayre said. “Churchill [in Northern Canada] is full of these scientists going on about vanishing bears and thinner bears. They come here preaching doom, but I question whether some of them really have the bears’ best interests at heart.” ([LINK](#))

Botanist Dr. David Bellamy, a famed UK environmental campaigner, former lecturer at Durham University, and host of a popular UK TV series on wildlife: “Why scare the families of the world with tales that polar bears are heading for extinction when there is good evidence that there are now twice as many of these iconic animals, most doing well in the Arctic than there were 20 years ago?” ([LINK](#))

Scientists and Recent Studies Cast Doubt on Man-Made Melting Of Arctic:

A NASA study published in the peer-reviewed journal *Geophysical Research Letters* on October 4, 2007 found “unusual winds” in the Arctic blew “older thicker” ice to warmer southern waters. Despite the media's hyping of global warming, Ignatius Rigor, a co-author of the NASA study, explained, “While the total [Arctic] area of ice cover in recent winters has

remained about the same, during the past two years an increased amount of older, thicker perennial sea ice was swept by winds out of the Arctic Ocean into the Greenland Sea. What grew in its place in the winters between 2005 and 2007 was a thin veneer of first-year sea ice, which simply has less mass to survive the summer melt.”[...] “Unusual atmospheric conditions set up wind patterns that compressed the sea ice, loaded it into the Transpolar Drift Stream and then sped its flow out of the Arctic,” said Son Nghiem of NASA’s Jet Propulsion Laboratory and leader of the study. ([LINK](#))

A November 2007 peer-reviewed study in the journal *Nature* found natural cause for rapid Arctic warming. Excerpt: [The study] identifies a natural, cyclical flow of atmospheric energy around the Arctic Circle. A team of researchers, led by Rune Graversen of Stockholm University, conclude this energy flow may be responsible for the majority of recent Arctic warming. The study specifically rules out global warming or albedo changes from snow and ice loss as the cause, due to the “vertical structure” of the warming ... the observed warming has been much too weak near the ground, and too high in the stratosphere and upper troposphere. This study follows hot on the heels of research by NASA, which identified “unusual winds” for rapid Arctic ice retreat. The wind patterns, set up by atmospheric conditions from the Arctic Oscillation, began rapidly pushing ice into the Transpolar Drift Stream, a current which quickly sped the ice into warmer waters. A second NASA team, using data from the GRACE (Gravity Recovery and Climate Experiment) satellite, recently concluded that changes in the Arctic Oscillation were, “mostly decadal in nature,” rather than driven by global warming. ([LINK](#)) & ([LINK](#)) & ([LINK](#))

A January 2008 study in the peer-reviewed journal *Science* found North Atlantic warming tied to natural variability. Excerpt: A Duke University-led analysis of available records shows that while the North Atlantic Ocean’s surface waters warmed in the 50 years between 1950 and 2000, the change was not uniform. In fact, the sub-polar regions cooled at the same time that subtropical and tropical waters warmed. This striking pattern can be explained largely by the influence of a natural and cyclical wind circulation pattern called the North Atlantic Oscillation (NAO), wrote authors of a study published Thursday, January 3 in *Science Express*, the online edition of the journal *Science*. Winds that power the NAO are driven by atmospheric pressure differences between areas around Iceland and the Azores. “The winds have a tremendous impact on the underlying ocean,” said Susan Lozier, a professor of physical oceanography at Duke’s Nicholas School of the Environment and Earth Sciences who is the study’s first author. [...] “It is premature to conclusively attribute these regional patterns of heat gain to greenhouse warming,” they wrote. ([LINK](#))

A November 2007 peer-reviewed study conducted by a team of NASA and university experts found cyclical changes in ocean currents impacting the Arctic. Excerpt: “Our study confirms many changes seen in upper Arctic Ocean circulation in the 1990s were mostly decadal in nature, rather than trends caused by global warming,” said James Morison of the University of Washington’s Polar Science Center Applied Physics Laboratory in Seattle, according to a November 13, 2007 NASA release. Morison led the team of scientists using data from an Earth-observing satellite and from deep-sea pressure gauges to monitor Arctic Ocean circulation from 2002 to 2006. [...] A team of NASA and university scientists has detected an ongoing reversal in Arctic Ocean circulation triggered by atmospheric circulation changes that vary on decade-long

time scales. The results suggest not all the large changes seen in Arctic climate in recent years are a result of long-term trends associated with global warming. [...] The team of scientists found a 10-millibar decrease in water pressure at the bottom of the ocean at the North Pole between 2002 and 2006, equal to removing the weight of four inches of water from the ocean. The distribution and size of the decrease suggest that Arctic Ocean circulation changed from the counterclockwise pattern it exhibited in the 1990s to the clockwise pattern that was dominant prior to 1990. Reporting in *Geophysical Research Letters*, the authors attribute the reversal to a weakened Arctic Oscillation, a major atmospheric circulation pattern in the northern hemisphere. The weakening reduced the salinity of the upper ocean near the North Pole, decreasing its weight and changing its circulation. [...] “While some 1990s climate trends, such as declines in Arctic sea ice extent, have continued, these results suggest at least for the 'wet' part of the Arctic – the Arctic Ocean – circulation reverted to conditions like those prevalent before the 1990s,” Morison added. ([LINK](#))

NASA Study Blames Natural High Pressure Leading to More Sunny Days for Arctic Ice Reduction Excerpt: But experts say it was the peculiar weather Mother Nature offered up last summer - whatever caused it - that is largely to blame for the recent unusual events. There was a high-pressure system that sat over the Arctic for much of the summer. It shooed away clouds, leaving the sun alone to beat down. That created higher ocean temperatures, which in turn accelerated the melt. Son Nghiem, who led that NASA study on sea ice released this week, also pointed to unusual winds, which compressed sea ice, pushing it into the Transpolar Drift Stream and into warmer water where melting happened more quickly. ([LINK](#))

A July 2007 analysis of peer-reviewed literature thoroughly debunks fears of Greenland and the Arctic melting and predictions of a frightening sea level rise. Excerpt: “Research in 2006 found that Greenland has been warming since the 1880s, but since 1955, temperature averages at Greenland stations have been colder than the period between 1881-1955. A 2006 study found Greenland has cooled since the 1930s and 1940s, with 1941 being the warmest year on record. Another 2006 study concluded Greenland was as warm or warmer in the 1930s and 40s and the rate of warming from 1920-1930 was about 50% higher than the warming from 1995-2005. One 2005 study found Greenland gaining ice in the interior higher elevations and thinning ice at the lower elevations. In addition, the often media promoted fears of Greenland’s ice completely melting and a subsequent catastrophic sea level rise are directly at odds with the latest scientific studies.” [See July 30, 2007 Report - Latest Scientific Studies Refute Fears of Greenland Melt – ([LINK](#))]

In September 2007, it was announced that a soon to be released survey finds Polar Bear population rising in warmer part of the Arctic. Excerpt: Fears that two-thirds of the world’s polar bears will die off in the next 50 years are overblown, says [Arctic biologist] Mitchell Taylor, the Government of Nunavut’s director of wildlife research. “I think it’s naïve and presumptuous,” Taylor said. [...] The Government of Nunavut is conducting a study of the [southern less ice region of the] Davis Strait bear population. Results of the study won’t be released until 2008, but Taylor says it appears there are some 3,000 bears in an area - a big jump from the current estimate of about 850 bears. “That’s not theory. That’s not based on a model. That’s observation of reality,” he says. And despite the fact that some of the most dramatic changes to sea ice are seen in seasonal ice areas such as Davis Strait, seven or eight of the bears

measured and weighed for the study this summer are among the biggest on record, Taylor said. “Davis Strait is crawling with polar bears. It’s not safe to camp there. They’re fat. The mothers have cubs. The cubs are in good shape,” Taylor said, according to a September 14, 2007 article. ([LINK](#))

An August 2007 peer-reviewed study finds global warming over last century linked to natural causes: Published in *Geophysical Research Letters*: Excerpt: “Tsonis et al. investigate the collective behavior of known climate cycles such as the Pacific Decadal Oscillation, the North Atlantic Oscillation, the El Niño/Southern Oscillation, and the North Pacific Oscillation. By studying the last 100 years of these cycles' patterns, they find that the systems synchronized several times. Further, in cases where the synchronous state was followed by an increase in the coupling strength among the cycles, the synchronous state was destroyed. Then a new climate state emerged, associated with global temperature changes and El Niño/Southern Oscillation variability. The authors show that this mechanism explains all global temperature tendency changes and El Niño variability in the 20th century.” Authors: Anastasios A. Tsonis, Kyle Swanson, and Sergey Kravtsov: Atmospheric Sciences Group, Department of Mathematical Sciences, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin, U.S.A. See August 2, 2007 *Science Daily* – “Synchronized Chaos: Mechanisms For Major Climate Shifts” ([LINK](#))

According to a 2005 peer-reviewed study in *Geophysical Research Letters* by astrophysicist Dr. Willie Soon, solar irradiance appears to be the key to Arctic temperatures. The study found Arctic temperatures follow the pattern of increasing or decreasing energy received from the sun. Excerpt: Solar forcing explains well over 75% of the variance for the decadal-smoothed Arctic annual-mean or spring SATs (surface air temperatures). [...] In contrast, a CO₂-dominated forcing of Arctic SATs is inconsistent with both the large multidecadal warming and cooling signals and the similar amplitude of warming trends between cold (winter) and relatively warmer (spring and autumn) seasons found in the Arctic-wide SAT records. ([LINK](#))

Meteorologist Craig James Debunks Myths about Northwest Passage Excerpt: The headline in this press release from the European Space Agency reads “Satellites witness lowest Arctic ice coverage in History.” ([LINK](#)) In history! That sounds like a long time. However, when you read the article you find “history” only goes back to 28 years, to 1979. That is when satellites began monitoring Arctic Sea ice. The article also says “the Northwest Passage - a long-sought short cut between Europe and Asia that has been historically impassable.” I guess these people flunked history class. It has been open several times in history without ice breakers. ([LINK](#)) The first known successful navigation by ship was in 1905. This is all very similar to the story on the NBC Nightly News Friday, 14 September 2007 where the story on water levels in Lake Superior never mentioned that the lowest recorded water level on the lake occurred in March and April 1926, when the lake was about 5 inches lower than it is now. Instead, NBC interviewed several people who could never remember seeing it this low and blamed most of the problem on global warming. Never mind that the area has seen below normal precipitation for several years and for most of this year has been classified as being in an extreme to exceptional drought. ([LINK](#))

History of Northwest Passage - Navigated in 1905 and multiple times in 1940s (Note: 80% of man-made CO₂ came after 1940) Excerpt: 2. ROALD AMUNDSEN: First Navigation by Ship 1905: In mid August, Amundsen sailed from Gjøahaven (today: Gjoa Haven, Nunavut) in

the vessel Gjøa ([LINK](#)) [...] On August 26 they encountered a ship bearing down on them from the west, and with that they were through the passage. From Amundsen's diary: The North West Passage was done. My boyhood dream - at that moment it was accomplished. A strange feeling welled up in my throat; I was somewhat over-strained and worn - it was weakness in me - but I felt tears in my eyes. 'Vessel in sight' ... Vessel in sight. 3. ST. ROCH: First West-East Crossing 1940-1942: The St. Roch was given the task of demonstrating Canadian sovereignty in the Arctic. It was ordered to sail from Vancouver to Halifax by way of the Northwest Passage. The St. Roch left Vancouver in June 1940 and on October 11, 1942, it docked at Halifax - the first ship to travel from the Pacific to the Atlantic via the Northwest Passage. The journey had taken almost 28 months. 4. ST. ROCH: Northern Deep-Water Route (East-West) 1944: The St. Roch was the first ship to travel the Northwest Passage through the northern, deep-water route and the first to sail the Passage in both directions. ([LINK](#))

In a 2005 study published in *the Journal of Climate*, Brian Hartmann and Gerd Wendler linked the 1976 Pacific climate shift to a very significant one-time shift upward in Alaskan temperatures.

According to a 2003 study by Arctic scientist Igor Polyakov, the warmest period in the Arctic during the 20th Century was the late 1930s through early 1940s. Excerpt: Our results suggest that the decadal AO (Arctic Oscillation) and multidecadal LFO (low-frequency oscillation) drive large amplitude natural variability in the Arctic making detection of possible long-term trends induced by greenhouse gas warming most difficult. ([LINK](#))

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