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The Green Hornet

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Al Gore said the other day that "the future of human civilization" depends on giving up fossil fuels within a decade -- and was acclaimed as a prophet by the political class. Obviously boring reality doesn't count for much these days. Even so, when Barack Obama wheels out an energy agenda nearly as grandiose as Mr. Gore's, shouldn't it receive at least *some* media scrutiny?

On Monday, Mr. Obama said that the U.S. must "end the age of oil in our time," with "real results by the end of my first term in office." This, he said, will "take nothing less than a complete transformation of our economy." Mark that one down as the understatement of the year. Maybe Mr. Obama really is the Green Hornet, or some other superhero of his current political myth.

The Senator calls for $150 billion over 10 years to achieve "energy independence," with elevated subsidies for renewable alternatives and efficiency programs. He also says he'll "leverage billions more in private capital to build a new energy economy," euphemistically referring to his climate plan to tax and regulate greenhouse gases. Every President since Nixon has declared "energy independence," as Mr. Obama noted. But this time, he says, things will change.

They won't. And not because of "the old politics," or whatever. Currently, alternative sources -- wind, solar, biomass, hydroelectric and geothermal -- provide less than 7% of yearly domestic consumption. Throw out hydro and geothermal, and it's only 4%. For the foreseeable future, renewables simply cannot provide the scale and volume of energy needed to meet growing U.S. demand, which is expected to increase by 20% over the next two decades. Even with colossal taxpayer subsidies, renewables probably can't even slow the rate of growth of carbon-based fuel consumption, much less replace it.

Take wind power, which has grown rapidly though still only provides about two-thirds of 1% of all U.S. electricity. The Energy Department optimistically calculates that ramping up merely to 20% by 2030 would require more than $2 trillion and turbines across the Midwest "wind corridor," plus multiple offshore installations. And we'll need a new "transmission superhighway system" of more than 12,000 miles of electric lines to connect the wind system to population centers. A mere $150 billion won't cut it. Mr. Obama also didn't mention that this wind power will be more expensive than traditional sources like coal.

Wind, too, is intermittent: It isn't always blowing and can't be accessed on demand when people need electricity. Since there's no cost-effective way to store large amounts of electricity, wind requires "spinning reserve," or nonalternative baseload power to avoid blackouts. That baseload power is now provided largely by coal, nuclear and natural gas, and wind can't displace much. The same problem afflicts solar energy -- now one-hundredth of 1% of net U.S. electric generation. One of the top uses of solar panels is to heat residential swimming pools.

Mr. Obama also says he wants to *mandate* that all new cars and trucks are "flexible fuel" vehicles, meaning that they can run on higher concentrations of corn ethanol mixed with gasoline, or second-generation biofuels if those ever come onto the market. Like wind and solar, this would present major land use problems: According to credible estimates, land areas larger than the size of Texas would need to be planted with fuel feedstocks to displace just half the oil America imports every day. Meanwhile, the economic distortions caused by corn ethanol -- such as higher food prices -- have been bad enough.

And yet there's more miracle work to do. Mr. Obama promises to put at least one million plug-in electric vehicles on the road by 2015. That's fine if consumers want to buy them. But even if technical battery problems are overcome, this would only lead to "fuel switching" -- if cars don't use gasoline, the energy still has to come from somewhere. And the cap-and-trade program also favored by Mr. Obama would effectively bar new coal plants, while new nuclear plants are only now being planned after a 30-year hiatus thanks to punishing regulations and lawsuits.

Problems like these are the reality of "alternative" energy, and they explain why every "energy independence" plan has faltered since the 1970s. But just because Mr. Obama's plan is wildly unrealistic doesn't mean that a program of vast new taxes, subsidies and mandates wouldn't be destructive. The U.S. has a great deal invested in fossil fuels not because of a political conspiracy or because anyone worships carbon but because other sources of energy are, right now, inferior.

Consumption isn't rising because of wastefulness. The U.S. produces more than twice as much GDP today per unit of energy as it did in the 1950s, yet energy use has risen threefold. That's because energy use is tethered to growth, and the economy continues to innovate and expand. Mr. Obama seems to have other ideas.

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Is "The Science" Really *Settled?*
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We've all heard it in a number of climatic contexts -- *The science is settled* -- meaning that a particular point of view (nearly always that of the world's climate alarmists) of a particular topic is believed by the vast majority of serious students of the subject to be correct, which is presumed to translate into the assumption that what they proclaim about the matter is indeed factual. One of the most important topics to

which this concept has been applied is that of CO_2-induced global warming and its many *predicted* deleterious consequences, not the least of which is the occurrence of more frequent and destructive hurricanes. Hence, we here report the results of a scientific meeting that was convened to consider this important matter.

The *International Summit on Hurricanes and Climate Change* was held in May of 2007 on the Greek island of Crete, where 77 academics and stakeholders from 18 countries participated in a free-ranging discussion of hurricanes and climate change, as reported by Elsner (2008) in the *Bulletin of the American Meteorological Society*. In introducing his synopsis of the four-day meeting, the Florida State University researcher says that certain studies "suggest that tropical cyclones are becoming more powerful with the most dramatic increase in the North Atlantic," and that "the increase is correlated with an increase in ocean temperature." However, he notes there is "a *debate* [our italics] concerning the nature of these increases," with "some studies attributing them to natural fluctuations, and others suggesting climate change related to anthropogenic increases in radiative forcing from greenhouse gases."

Well, a *debate* over something suggests that the subject in question is about as far from being *settled* as it could possibly be; and Elsner rightly reports that "the question of whether we can ascribe a change in tropical cyclone intensity to anthropogenic climate change is still open." And on the question of a warming-induced increase in hurricane *frequency*, the science is even *more* unsettled. Although "most models," in his words, indicate "an overall decrease in the number of storms," he notes that not even all *models* agree on the change in individual basin tropical cyclone numbers, "with some models showing an increase in the Atlantic and others a decrease."

So what should governments conclude -- as well as actually *do* -- about the matter? How about not concluding *anything*, and doing likewise? The first of these two suggestions, in fact, appears to be the strategy of the hurricane researchers themselves, as they plan to hold a *second* summit on the subject sometime in 2009. Until then, at least, it would appear that *the debate will continue*, as it obviously should, while researchers continue to gather more data; for what is at stake is clearly too important for scientists and governments alike to leap to a premature "consensus" on the issue.

In this regard, for example, Elsner says that what he calls *paleotempestology* -- which he defines as the study of prehistoric storms based on geological and biological evidence -- indicates the presence of more hurricanes in the northeastern Caribbean Sea "during the second half of the Little Ice Age when sea temperatures near Puerto Rico were a few degrees (Celsius) cooler than today, which provides some evidence that today's warmth is not needed for increased storminess." Similarly, he reports that "sedimentary ridges in Australia left behind by ancient tropical cyclones indicate that activity from the last century under-represents the continent's stormy past."

On the other hand, Elsner notes that a *spatially-limited* set of hurricane proxies or historical records may be insufficient "to distinguish changes in overall activity from changes in local activity due to shifts in [storm] tracks." As a result, he rightly concludes that in order "to understand how climate influences local changes in tropical cyclone activity, more research is needed to identify factors influencing tropical cyclone tracks," as well, we would add, as more paleotempestology studies from a more diverse set of localities.

Consequently, although people on *both* sides of the climate-change/hurricane debate might like to see their particular views of the subject accepted as things stand *right now*, it would appear that considerably more *real-world data* is needed before a valid consensus on the issue can be reached.

Sherwood, Keith and Craig Idso

Reference

Elsner, J.B. 2008. Hurricanes and climate change. *Bulletin of the American Meteorological Society* **89**: 677-679.Bottom of Form

Little Ice Age (Regional - Europe: Mediterranean) -- Summary

http://co2science.org/subject/e/summaries/europemedlia.php

The 21st century has seen a developing interest in paleoclimate studies, primarily driven by the need to derive a long-term baseline of global temperature variability against which to evaluate the uniqueness of 20th-century warming. Within this context, the Little Ice Age figures prominently, since it was a multi-century period of significantly reduced air temperature that serves as the baseline from which modern warming is computed. In like manner, the preceding Medieval Warm Period serves as the baseline from which the cooling that led to the Little Ice Age is computed. In this summary, we thus report on what has been learned about the Little Ice Age *and the warm periods that preceded and followed it*, based on a number of paleoclimate studies conducted in countries bordering the Mediterranean Sea.

D'Orefice *et al*. (2000) assembled and analyzed a wealth of historical evidence to derive a history of the post-Little Ice Age shrinkage of the surface area of the Ghiacciaio del Calderone, which is the southernmost glacier of Europe. From these materials they determined that from the time of the first available information about the glacier's surface area (AD 1794), there was a slow shrinkage that lasted until 1884, whereupon the glacier's surface area began to experience a more rapid reduction that prevailed, with some irregularities, to 1990, resulting in the loss of a little more than half of the Ghiacciaio's Little Ice Age extent.

Schilman *et al*. (2002) analyzed high-resolution $\delta^{18}O$ values from a speleothem in Soreq Cave, central Israel (31°45'N, 35°03'E), as well as from planktonic foraminifera in two marine sediment cores retrieved just off the Ashdod coast (31°56.41'N, 34°22.13'E and 31°56.61'N, 34°19.79'E), to obtain a record of climate in this region over the past 3600 years. The $\delta^{18}O$ values of the speleothem and marine cores showed "striking similarity" over the period of study, according to Schilman *et al*., and they were found to be primarily representative of historic changes in *precipitation*. Interpreted in this light, six major precipitation intervals were found to have occurred over the course of the 3600-year record, including three that were relatively wet and three that were relatively dry. The peaks of the humid events occurred at 3200, 1300 and 700 years BP, the latter of which was said by the researchers to be "associated with the global Medieval Warm Period humid event," which association is supported by additional evidence from the surrounding region in the form of (1) high Nile floods (Bell and Menzel, 1972; Hassan, 1981), (2) high Saharan lake levels (Nicholson, 1980), and (3) high water levels in the Dead Sea and Sea of Galilee (Frumkin *et al*., 1991). The peaks of the dry events occurred at 2100, 900 and 300 years BP, the last of which, in the words Schilman *et al*., "coincides with the Little Ice Age." These observations provide strong evidence for the *natural* climatic oscillation that was responsible for bringing the world the Little Ice Age, Medieval Warm Period, Dark Ages Cold Period, Roman Warm Period and the numerous sets of cold and warm periods that occurred before that. Hence, it is highly likely that this phenomenon also produced the majority of the temperature increase associated with the development of the Current Warm Period.

Sousa and Garcia-Murillo (2003) studied proxy indicators of climatic change in Doñana Natural Park in the Andalusia region of southwest Spain, comparing their results with those of several other such studies conducted in neighboring regions. They determined that the Little Ice Age was by no means uniform in their region of study, including periods of both wetter and drier conditions. Nevertheless, the two scientists cite Rodrigo *et al*. (2000) as indicating that "the Little Ice Age was characterized in the southern Iberian Peninsula by increased rainfall." Their own work complements this assessment by indicating "an aridization of the climatic conditions after the last peak of the Little Ice Age (1830-1870)." Therefore, although there was in increase in temperature on the order of 0.7°C since the end of the Little Ice Age in various parts of Spain (Lampre, 1994; Garcia Barron, 2000), Sousa and Garcia-Murillo conclude that precipitation differences were more significant in delineating the Little Ice Age in this part of the world than were temperature differences.

Desprat *et al*. (2003) studied the climatic variability of the last three millennia in northwest Iberia via a high-resolution pollen analysis of a sediment core retrieved from the central axis of the Ria de Vigo in the

south of Galicia. This work revealed that over the past 3000 years there was "an alternation of three relatively cold periods with three relatively warm episodes." In order of their occurrence, these periods are described by Desprat *et al*. as the "first cold phase of the Subatlantic period (975-250 BC)," which was "followed by the Roman Warm Period (250 BC-450 AD)," which was followed by "a successive cold period (450-950 AD), the Dark Ages," which "was terminated by the onset of the Medieval Warm Period (950-1400 AD)," which was followed by "the Little Ice Age (1400-1850 AD), including the Maunder Minimum (at around 1700 AD)," which "was succeeded by the recent warming (1850 AD to the present)." Desprat *et al*. additionally state that "solar radiative budget and oceanic circulation seem to be the main mechanisms forcing this cyclicity in NW Iberia."

For a site on the northwest coast of Sicily near Capo Gallo promontory, Silenzi *et al*. (2004) "present new data on sea climate trend fluctuations that could be interpreted as Sea Surface Temperature (SST) variations, recorded on Vermetid reefs, by means of [oxygen] isotopic analysis." Their data depict the existence of the Little Ice Age, with a "temperature variation of about delta T = 1.99 ± 0.37°C between the Little Ice Age and present day." Following the Little Ice Age was what they call "the warming trend that characterized the last century," which according to their findings "ended around the years 1930-1940 AD, and was followed by a relatively cold period between the years 1940 and 1995." Their results thus disagree with the Northern Hemispheric temperature history of Mann *et al*. (1999) in two different ways: they indicate that the Little Ice Age was significantly colder than what Mann *et al*. suggest, and they do not find any sign of the dramatic late-20th century warming claimed by Mann *et al*.

Pla and Catalan (2005) analyzed chrysophyte cyst data collected from 105 lakes in the Central and Eastern Pyrenees of northeast Spain to produce a history of winter/spring temperature in which the region's climate alternated between warm and cold phases over the past several thousand years. Of particular note were the Little Ice Age, Medieval Warm Period, Dark Ages Cold Period and Roman Warm Period, the warmest of which intervals was the Medieval Warm Period, which started around 900 AD and was about 0.25°C warmer than it is currently. Following the Medieval Warm Period, temperatures fell to their lowest values of the entire record (about 1.0°C below present), whereupon they began to warm, but remained below present-day values until the early 19th and 20th centuries, except between 1350 and 1400, when temperatures rose a full degree Celsius to a value about 0.15°C warmer than at present. Further examination of Pla and Catalan's data reveals that modern temperatures peaked in the 1970s-80s and declined throughout the 1990s.

Giraudi (2005) studied various properties of alternating layers of organic-matter-rich soils and alluvial, glacial and periglacial sediments on higher Apennine massifs in Italy, reconstructing a history of relative changes in temperature for this region over the past 6000 years. This work revealed that organic-matter-rich soils formed on slopes currently subject to periglacial and glacial processes around 5740-5590, 1560-1370 and 1300-970 cal yr BP. Based upon current relationships between elevation and soil periglacial and glacial processes, Giraudi estimated that the mean *annual* temperature during these three periods "must therefore have been higher than at present," and that *winter* temperatures were at least 0.9-1.2°C higher than those of today. In addition, it was determined that the lowest wintertime temperatures, which were reached during the Little Ice Age (ca. 790-150 cal yr B.P.), were as much as 3.0°C colder than at present.

Cini Castagnoli *et al*. (2005) produced a high-precision record of climate variability over the past two millennia based on a $\delta^{13}C$ profile of *Globigerinoides rubber* that was extracted from a shallow-water core in the Gulf of Taranto (39°45'53"N, 17°53'33"E). This high-precision record was statistically analyzed, together with a second two-millennia-long tree-ring record obtained from Japanese cedars (Kitagawa and Matsumoto, 1995), for evidence of recurring cycles using Singular Spectrum Analysis and Wavelet Transform, after which both records were compared with a 300-year record of sunspots. Plots of the two two-thousand-year series revealed the existence of the Dark Ages Cold Period (~400-800 AD), Medieval Warm Period (~800-1200 AD), Little Ice Age (~1500-1800 AD), and Current Warm Period, the roots of which can be traced to an upswing in temperature that began in the depths of the Little Ice Age "about 1700 AD." Results of the statistical analyses also showed a common 11-year oscillation in phase with the Schwabe cycle of solar activity, plus a second multi-decadal oscillation (of about 93 years for the shallow-

water *G. rubber* series and 87 years for the tree-ring series) in phase with the amplitude modulation of the sunspot number series over the last 300 years.

According to the three researchers, the overall phase agreement between the two climate reconstructions and the variations in the sunspot number series "favors the hypothesis that the [multi-decadal] oscillation revealed in $\delta^{13}C$ from the two different environments is connected to the solar activity," which further suggests that a solar forcing was at work in both terrestrial and oceanic domains over the past two millennia. Thus, and once again, we have additional evidence for solar forcing of climate at decadal and multi-decadal time scales, as well as for the millennial-scale oscillation of climate that likely has been responsible for the 20th-century warming of the globe that led to the demise of the Little Ice Age and ushered in the Current Warm Period.

Robert *et al*. (2006) analyzed assemblages of minerals and microfossils from a sediment core taken from the Berre coastal lagoon in southeast France in an effort to reconstruct environmental changes in that region over the past 1500 years. The results of their analyses revealed three distinct climatic intervals: (1) a cold period that extended from about AD 400 to 900, (2) a warm interval between about AD 980 and 1370, and (3) a cold interval that peaked during the 16th and 17th centuries. These climatic intervals correspond, respectively, to the well-known Dark Ages Cold Period, Medieval Warm Period (MWP) and Little Ice Age; and with respect the MWP, the eight-member research team found evidence of a higher kaolinite content in the sediment core during that period, which suggests, in their words, the occurrence of "increased chemical weathering in relation to higher temperatures and/or precipitation." In addition, they report that the concentration of microfossils of the thermophilic taxon *Spiniferites bentorii* also peaked during the same time interval; and this finding provides additional evidence that the temperatures of that period were higher than those of the recent past.

In a contemporaneous study, Eiriksson *et al*. (2006) reconstructed the near-shore thermal history of the North Atlantic Current along the western coast of Europe over the last two millennia, based on measurements of stable isotopes, benthic and planktonic foraminifera, diatoms and dinoflagellates, as well as geochemical and sedimentological parameters, which they acquired on the Iberian margin and at several other locations. In addition to identifying the Roman Warm Period (nominally 50 BC- AD 400), which exhibited the *warmest sea surface temperatures of the last two millennia* on the Iberian margin, they too found evidence of the subsequent Dark Ages Cold Period (AD 400-800), Medieval Warm Period (AD 800-1300) and Little Ice Age (AD 1300-1900), which was followed by 20th-century warming that they say "does not appear to be unusual when the proxy records spanning the last two millennia are examined."

In introducing their analysis of the subject, Garcia *et al*. (2007) state that "despite many studies that have pointed to ... the validity of the classical climatic oscillations described for the Late Holocene (Medieval Warm Period, Little Ice Age, etc.), there is a research line that suggests the non-global signature of these periods (IPCC, 2001; Jones and Mann, 2004)." Noting that "the best way to solve this controversy would be to increase the number of high-resolution records covering the last millennia and to increase the spatial coverage of these records," they proceed to do just that.

Working with a number of sediment cores retrieved from a river-fed wetland that is flooded for approximately seven months of each year in Las Tablas de Daimiel National Park (39.4°N, 3.8°W, south central Iberian Peninsula, Spain), Garcia *et al*. employed "a high resolution pollen record in combination with geochemical data from sediments composed mainly of layers of charophytes alternating with layers of vegetal remains plus some detrital beds" to reconstruct "the environmental evolution of the last 3000 years." This work enabled them to identify five distinct climatic stages: "a cold and arid phase during the Subatlantic (Late Iron Cold Period, < BC 150), a warmer and wetter phase (Roman Warm Period, BC 150-AD 270), a new colder and drier period coinciding with the Dark Ages (AD 270-900), the warmer and wetter Medieval Warm Period (AD 900-1400), and finally a cooling phase (Little Ice Age, >AD 1400)."

Noting that "the Iberian Peninsula is unique, as it is located at the intersection between the Mediterranean and the Atlantic, Europe and Africa, and is consequently affected by all of them," Garcia *et al*. significantly advance the likelihood that "the classical climatic oscillations described for the Late Holocene (Medieval

Warm Period, Little Ice Age, etc.)" were indeed both real and global in scope, as becomes ever more evident each and every week with our posting of the results of a new Medieval Warm Period study on our website. In addition, Garcia *et al*. state that the Medieval Warm Period "is identified at about a similar date all around the world (China: Chu *et al*., 2002; Arabia, Fleitmann *et al*., 2004; Africa: Filippi and Talbot, 2005; Iceland: Doner, 2003; central Europe: Filippi *et al*., 1999; New Guinea: Haberle and David, 2004; USA: Cabaniss Pederson *et al*., 2005: Argentina: Mauquoy *et al*., 2004; etc.," and that "comparable changes are described by Desprat *et al*. (2003), Julia *et al*. (1998) and Riera *et al*. (2004) in northwest, central and northeast Spain."

Truly, the evidence for the global scope of the Little Ice Age, Medieval Warm Period, Dark Ages Cold Period, Roman Warm Period, and etc., going back in time *ad inifinitum*, is *overwhelming*. And this, of course, suggests that 20th-century global warming was likely nothing more than the logical progression of this natural millennial-scale climatic oscillation, which fostered the Little Ice Age-to-Current Warm Period transition.

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Surface Air Temperatures Over the Arctic Ocean

http://co2science.org/articles/V11/N32/C1.php

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Liu, J., Zhang, Z., Hu, Y., Chen, L., Dai, Y. and Ren, X. 2008. Assessment of surface air temperature over the Arctic Ocean in reanalysis and IPCC AR4 model simulations with IABP/POLES observations. *Journal of Geophysical Research* **113**: 10.1029/2007JD009380.

What was done

The authors "assessed how well the current day state-of-the-art reanalyses and CGCMs [coupled global climate models] are reproducing the annual mean, seasonal cycle, variability and trend of the observed SAT [surface air temperature] over the Arctic Ocean for the late 20th century (where sea ice changes are largest)."

What was learned

Lin *et al*. report that "large uncertainties are still found in simulating the climate of the 20th century," noting that on an annual basis, "almost two thirds of the IPCC AR4 [Fourth Assessment Report] models have biases that [are] greater than the standard deviation of the observed SAT variability," additionally noting that the models "can not capture the observed dominant SAT mode variability in winter and seasonality of SAT trends." They also state that "the majority of the models show an out-of-phase relationship between the sea ice area and SAT biases," and that "there is no obvious improvement since the IPCC Third Assessment Report."

What it means

Not only does it appear that state-of-the-art climate models have a long way to go before they can adequately simulate even the *past* climate of the Arctic Ocean (much less predict its *future*), we have the word of the six scientists who evaluated them in this study that their creators have made "no obvious improvement" in the models' simulation ability since the time of the Third Assessment Report several years earlier. Does that make what has transpired in the interim something akin to *beating a dead horse*? Or has it

been more like attempting to steer a ship that is *dead in the water*? However one characterizes the activity, it has apparently gotten us nowhere.

Reviewed 6 August 2008

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A Holocene History of Changes in Northern Russian Treelines

http://co2science.org/articles/V11/N32/C2.php

Reference

MacDonald, G.M., Kremenetski, K.V. and Beilman, D.W. 2008. Climate change and the northern Russian treeline zone. *Philosophical Transactions of the Royal Society B* **363**: 2285-2299.

What was done

Noting that the location of the northern Russian treeline "is largely controlled by summer temperatures and growing season length," the authors conducted an analysis of past changes in the treeline of this region -- as reconstructed from tree-ring data and radiocarbon-dated subfossil wood -- in an attempt to answer the question: "Has the pattern of recent warming over the late nineteenth and the twentieth centuries caused significant changes in the density of trees at the treeline and/or an extension of the geographical location of the treeline?"

What was learned

MacDonald *et al*. report that "temperature increases over the past century are already producing demonstrable changes in the population density of trees, but these changes have not yet generated an extension of conifer species' limits to or beyond the former positions occupied during the Medieval Warm Period (MWP: *ca* AD 800-1300) or the Holocene Thermal Maximum treeline extension (HTM: broadly taken here to be *ca* 10,000-3,000 years ago)."

Of the Khibiny uplands of the central Kola Peninsula, for example, they write that "the treeline was located 100-140 m higher in elevation than today during the MWP," and that "forest has yet to recolonize these elevations (Kremenetski *et al*., 2004)." Likewise, of the northern Polar Urals they say "the treeline was at its highest elevation during the MWP between *ca* AD 900 and 1300 when it reached 340 m," after which it "descended to approximately 270 m during the Little Ice Age and then ascended to its present elevation of approximately 310 m during the recent warming of the late nineteenth and twentieth centuries."

What it means

The three researchers conclude that "at the Russian sites studied, the impact of twentieth century warming has not yet compensated fully for the mortality and range constriction caused by the cold temperatures of the Little Ice Age," and they note that "these results are similar to observations in some other northern treeline regions such as uplands in eastern Quebec and interior Labrador where *Picea mariana* (P. Mill.) B.S.P. and *Picea glauca* (Moench) Voss trees remain below their pre-Little Ice Age limits despite recent warming (Gamache and Payette,2005; Payette, 2007)," which warming has likely not yet equaled that of the MWP in either magnitude or duration … or possibly even both.

References

Gamache, I. and Payette, S. 2005. Latitudinal response of subarctic tree lines to recent climate change in Eastern Canada. *Journal of Biogeography* **32**: 849-862.

Kremenetski, K.V., Boettger, T., MacDonald, G.M., Vaschalova, T., Sulerzhitsky, L. and Hiller, A. 2004. Medieval climate warming and aridity as indicated by multiproxy evidence from the Kola Peninsula, Russia. *Palaeogeography and Palaeoclimate* **209**: 113-125.

Payette, S. 2007. Contrasted dynamics of northern Labrador tree lines caused by climate change and migrational lag. *Ecology* **88**: 770-780.

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Birds and Global Warming: Reed Warblers

http://co2science.org/articles/V11/N32/B2.php

Reference

Halupka, L., Dyrcz, A. and Borowiec, M. 2008. Climate change affects breeding of reed warblers *Acrocephalus scirpaceus*. *Journal of Avian Biology* **39**: 95-100.

What was done

The authors documented various breeding parameters of reed warblers -- long-lived passerine birds that spend their winters in Africa but breed in reed beds of marshlands in the Palaearctic, with some of them nesting in fishponds of the Stawy Milickie Reserve in southwest Poland -- during twelve breeding seasons (1970-73, 1980-83, 1994, 2003 and 2005-06) that encompassed the period 1970-2006, after which they compared trends in what they measured with concomitant trends in mean monthly temperatures.

What was learned

Halupka *et al*. report that mean breeding season (April-August) temperatures increased significantly between 1970 and 2006, as did the mean temperatures of each individual month of the breeding season, with average temperatures for the May-July period rising by 2°C. In response to these changes, they found that in 2005 and 2006, egg-laying (measured by the first egg date of the earliest pair of breeding birds) started three weeks earlier than in 1970, and that the median first egg date shifted forward in time by eighteen days. The *end* of egg-laying, however, did *not* change significantly in either direction, so there was a corresponding increase in the total length of the egg-laying period.

With the longer laying period available to them, more birds were able to rear second broods. In the 1970s and 1980s, for example, the Polish researchers report that "only about 0-15% of individuals laid second clutches," but that "between 1994 and 2006 up to 35% of birds reared second broods." In addition, they report that "during seasons with warm springs, early nests were better protected by being hidden in newly emerged reeds," and that "as a result, these nests suffered fewer losses from predation."

What it means

As stated by the researchers in their concluding paragraph, "it would appear that the studied population of reed warblers benefits from climate warming," which is something we probably won't read about any time soon in the popular literature ... which is a matter of some significance in and of itself!!!

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Pelosi: Save the Planet, Let Someone Else Drill

http://www.washingtonpost.com/wp-dyn/content/article/2008/07/31/AR2008073102824_pf.html

By Charles Krauthammer
Friday, August 1, 2008; A17

House Speaker Nancy Pelosi opposes lifting the moratorium on drilling in the Arctic National Wildlife Refuge and on the Outer Continental Shelf. She won't even allow it to come to a vote. With $4 gas having massively shifted public opinion in favor of domestic production, she wants to protect her Democratic members from having to cast an anti-drilling election-year vote. Moreover, given the public mood, she might even lose. This cannot be permitted. Why? Because, as she explained to Politico: "I'm trying to save the planet; I'm trying to save the planet."

A lovely sentiment. But has Pelosi actually thought through the moratorium's effects on the planet?

Consider: 25 years ago, nearly 60 percent of U.S. petroleum was produced domestically. Today it's 25 percent. From its peak in 1970, U.S. production has declined a staggering 47 percent. The world consumes 86 million barrels a day, the United States, roughly 20 million. We need the stuff to run our cars and planes and economy. Where does it come from?

Places such as Nigeria, where chronic corruption, environmental neglect and the resulting unrest and instability lead to pipeline explosions, oil spills and illegal siphoning by the poverty-stricken population -- which leads to more spills and explosions. Just this week, two Royal Dutch Shell pipelines had to be shut down because bombings by local militants were causing leaks into the ground.

Compare the Niger Delta to the Gulf of Mexico, where deep-sea U.S. oil rigs withstood Hurricanes Katrina and Rita without a single undersea well suffering a significant spill.

The United States has the highest technology to ensure the safest drilling. Today, directional drilling -- essentially drilling down, then sideways -- allows access to oil that in 1970 would have required a surface footprint more than three times as large. Additionally, the United States has one of the most extensive and least corrupt regulatory systems on the planet.

Does Pelosi imagine that with so much of America declared off-lim*its*, the planet is less injured as drilling shifts to Kazakhstan and Venezuela and Equatorial Guinea? That Russia will be more environmentally scrupulous than we in drilling in its Arctic?

The net environmental effect of Pelosi's no-drilling willfulness is *negative*. Outsourcing U.S. oil production does nothing to lessen worldwide environmental despoliation. It simply exports it to more corrupt, less efficient, more unstable parts of the world -- thereby increasing net planetary damage.

Democrats want no oil from the American OCS or ANWR. But of course they do want more oil. From OPEC. From where Americans don't vote. From places Democratic legislators can't see. On May 13 Sen. Chuck Schumer -- deeply committed to saving just those pieces of the planet that might have huge reserves of American oil -- demanded that the Saudis increase production by a million barrels a day. It doesn't occur to him that by

eschewing the slightest disturbance of the mating habits of the Arctic caribou, he is calling for the further exploitation of the pristine deserts of Arabia. In the name of the planet, mind you.

The other panacea, yesterday's rage, is biofuels: We can't drill our way out of the crisis, it seems, but we can greenly grow our way out. By now, however, it is blindingly obvious even to Democrats that biofuels are a devastating force for environmental degradation. It has led to the rape of "lungs of the world" rain forests in Indonesia and Brazil as huge tracts have been destroyed to make room for palm oil and sugar plantations.

Here in the United States, one out of every three ears of corn is stuffed into a gas tank (by way of ethanol), causing not just food shortages abroad and high prices at home but intensive increases in farming, with all of the attendant environmental problems (soil erosion, insecticide pollution, water consumption, etc.).

This to prevent drilling on an area in the Arctic one-sixth the size of Dulles Airport that leaves undisturbed a refuge one-third the size of Britain.

There are a dizzying number of economic and national security arguments for drilling at home: a $700 billion oil balance-of-payments deficit, a gas tax (equivalent) levied on the paychecks of American workers and poured into the treasuries of enemy and terror-supporting regimes, growing dependence on unstable states of the Persian Gulf and Caspian basin. Pelosi and the Democrats stand athwart, shouting: We don't care. We come to save the planet!

They seem blissfully unaware that the argument for their drill-there-not-here policy collapses on its own environmental terms.

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RSC Urges President Bush to
Call Special Session of Congress to Address Gas Prices

http://www.house.gov/list/press/tx05_hensarling/rsc/080108SpecialEnergySession.html

Washington D.C.- Congressman Jeb Hensarling (R-TX), Chairman of the House Republican Study Committee (RSC), and Congressman Mike Pence (R-IN), former Chairman of RSC, today urged President Bush to call for a special session of Congress after the House adjourned without allowing a vote on comprehensive legislation to develop more American energy and help the millions of Americans currently feeling pain at the gas pump.

The text of their letter is below:

The President

The White House

Washington, D.C. 20500

Dear Mr. President,

The House of Representatives has not taken a vote since January 2007 that would expand domestic energy production. All the while, Americans are hurting. Every time they go to fill up their cars, trucks or tractors they feel the pain at the pump. High gas prices are harming the vitality of our families, the elderly, small businesses, and family farms. Each and every American is affected.

Today the Democrat controlled Congress adjourned for a five-week vacation without taking a vote on bipartisan measures that would lessen our dependence on foreign oil by allowing more domestic drilling on the Outer Continental Shelf. In fact, they adjourned without even allowing time for debate on the subject of drilling.

On July 14, 2008, you took the strong action of lifting the executive order that had banned offshore drilling. In so doing, you said that allowing offshore oil drilling is "one of the most important steps we can take" to reduce the burden of high gas prices. Now, all it would take is an act of Congress for that drilling to begin.

Since Speaker Pelosi has decided not to keep the House in session to allow this vote to take place, we urge you to use the power vested in you by the Constitution to convene an immediate energy special session of Congress. Under Article II, Section 3 of the Constitution, you have the power 'on extraordinary occasions' to convene the Congress.

We believe that the energy emergency that has increased the pain felt by Americans when they purchase $4 per gallon gasoline is an extraordinary occasion. We urge you to immediately bring the Congress back into session to do its job and give the bipartisan, pro-drilling majority a vote.

Thank you for your consideration of our request.

Sincerely,

Mike Pence Jeb Hensarling

Member of Congress Member of Congress

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COMMENTARY:

Kyoto's airy promises

http://www.washingtontimes.com/news/2008/jul/31/kyotos-airy-promises/

Ed Feulner

Next month, the greatest athletes in the world will visit Beijing for the Olympic Games. Undoubtedly they'll set new records in plenty of sports.

But after the stars go home, China (which has cut back industrial output in an effort to clear the air ahead of the Olympics) will go back to setting a dubious record of its own: It's the greatest emitter of carbon dioxide on Earth.

China's CO2 emissions rose 8 percent last year, after jumping more than 11 percent in each of the two previous years. According to a Dutch study, China alone accounted for two-thirds of the growth in global greenhouse-gas emissions in 2007, and its current lead over the United States in such emissions is only expected to grow.

Contrast that with our environmental record. The U.S. government estimates that energy-related carbon dioxide emissions increased by just 1.6 percent in 2007, after dropping 1.5 percent the year before. The growth in our emissions is less than the growth of our gross domestic product, meaning we've improved the economy while reducing the growth in our emissions. And we're doing that without being part of the Kyoto treaty.

That 1997 agreement requires the 37 countries that signed it to slash emissions by a combined 5.2 percent below 1990 levels by 2012. But the treaty is a pipedream. The United Nations reported that, instead of falling, such emissions are nearing "an all-time high." Greenhouse gas emissions from the Kyoto signers increased 2.6 percent between 2000 and 2005.

Signing Kyoto may allow a country to claim it's a good "global citizen," but many of those citizens aren't keeping their promises. The U.N. reports Kyoto signers Austria, New Zealand and Canada have all increased their emissions over 1990 levels - by 14, 23 and 54 percent, respectively.

In fact, the U.N. admits the only reason the world might meet Kyoto's goal (a 5 percent reduction from 1990 emissions levels by 2012) is that the economies of so many Eastern European economies collapsed when the Iron Curtain fell. In other words, only a domestic recession will allow the planet to hit Kyoto's target.

Lawmakers understand this point, too. The Senate recently considered the Lieberman-Warner climate-change bill, which would have set a limit on the emissions of greenhouse gases, mostly CO2 from burning coal, oil and natural gas.

The bill would have mandated that emissions freeze at 2005 levels in 2012, then plunge. It demanded an unreasonable - and probably impossible - 70 percent reduction by 2050.

As energy analyst Ben Lieberman - no relation to the author of the bill - noted, "It is hard to think of any economic activity that does not involve energy, and there is not one that would not be made more expensive by Lieberman-Warner." An assessment of the bill by Heritage Foundation experts showed it would slash our national GDP by at least $1.7 trillion by the year 2030.

Killing the economy for an - at best - 0.07 degrees Celsius reduction in global temperatures by 2050 (what Kyoto promises) makes no sense. Economic growth has lifted millions of people out of poverty. That's why developing countries, including China and India, are scrambling to increase their growth rates, not diminish them. The United States can't afford to cut our growth, either.

The United Nations is pressing all countries to approve a new Kyoto agreement. That pact is supposed to be signed in Denmark next year. But what's the point of a new Kyoto, when the old one is useless?

Instead of making vague promises, we should focus on proven policies. We can reduce pollution by generating growth. No one wants to live on a dirty planet, but only people with high enough standards of living have the leisure time to worry about the environment. We also need to build more nuclear power plants, to generate electricity with zero CO2 emissions.

The world doesn't need a new Kyoto - the treaty that accomplished nothing but takes the gold medal for uselessness and hypocrisy.

Ed Feulner is president of the Heritage Foundation.