

January 2016

The Ice Age, Climate Change, and Creation

By Dan Reynolds

Isaiah 45:18 (KJV)

For thus saith the LORD that created the heavens; God himself that formed the earth and made it; he hath established it, he created it not in vain, he formed it to be inhabited: *I am* the LORD; and *there is* none else.

Genesis 8:22 (RSV)

While the earth remains, seedtime and harvest, cold and heat, summer and winter, day and night, shall not cease."

Revelation 20:11 (KJV)

And I saw a great white throne, and him that sat on it, from whose face the earth and the heaven fled away; and there was found no place for them.

Revelation 21:1 (KJV)

And I saw a new heaven and a new earth: for the first heaven and the first earth were passed away; and there was no more sea.

My wife Cassie and I went on a cruise to Alaska in the summer of 2014. During the cruise, we saw spectacular glaciers near Juneau and in Glacier Bay National Park. Geologists tell us that the movement of glaciers can cut U-shaped valleys, leave grooves on rocks called striations, form ridges of rocks called moraines, and are able to displace huge boulders (erratics) hundreds of miles. These evidences for the action of glaciers are found in the northern United States where there are no glaciers today. Apparently, there was a giant ice sheet that extended deep into the United States. The ice sheet obviously must have retreated. Hence, there is field evidence that there was an "ice age" in the past. What can cause an ice age? In this article, we'll discuss the leading secular theory of ice ages and some of its problems and compare it with a creationary explanation consistent with the Flood. We'll see that the creation model better explains how an ice age could occur.

When building models to explain phenomena that occurred in the unobservable past, scientists use abductive reasoning. This approach takes what is known in the present and attempts to make an inference to the best explanation about the past, somewhat like detectives trying to solve a murder. The explanation must provide mechanisms that are causally adequate; the promoted mechanism must be known to be able to produce the

observed effect. Creation scientists always include the biblical data when forming hypotheses.

Secular scientists believe some of the ice sheets in Greenland and Antarctica have been around for hundreds of thousands to millions of years.¹ They think there have been over 50 "ice ages" in the last 2.6 million years alone. How did they arrive at these conclusions? What do they think drives these ice ages, the advancement and retreat of giant ice sheets? They have adopted what is called the Milankovitch or astronomical theory. The astronomical theory holds that slight changes in the amount of sunlight (insolation) that strikes the earth in northern latitudes due to the earth's motion in space over deep time ultimately is responsible for slight changes in temperature that through various feedback mechanisms cause the ice sheets to advance and retreat. Slight temperature changes caused by the earth's motion in space are allegedly amplified by changes in ocean currents, albedo (light reflected by snow), levels of greenhouse gases, and other phenomena leading to significant global temperature changes and ice sheet advancement or retreat. The key to ice sheet advancement is cooler summers. When cool enough, snow from the previous winter will persist through the summer and ice will accumulate over time. Conversely, warmer summers forbid accumulation of ice from year to year. Hence, secular science sees the earth's climate as intrinsically unstable, balanced on a knife's edge, ready to change dramatically as a result of slight variations in incoming sunlight amplified by a cascade of feedback mechanisms. No wonder climate alarmists are so concerned.

The astronomical theory focuses on three major motions of the earth over alleged deep time: changes in the eccentricity (oval shape) of the earth's orbit around the sun, changes in the obliquity or tilt of the earth's axis of rotation, and precession or the changes in the direction the axis of rotation is pointing. Calculations show that the eccentricity of the earth's orbit would cycle about every 100 Ka² (there is also an associated 400 Ka cycle),

¹ Lisiecki LE, Raymo ME (2005) A Pliocene-Pleistocene stack of 57 globally distributed benthic $\delta^{18}O$ records. *Paleoceanography* 20: PA1003. Available at: <<http://onlinelibrary.wiley.com/doi/10.1029/2004PA001071/epdf>>

² Ka, thousands of years

the obliquity every 41 Ka, and the precession every 20 Ka. The expected order of impact on the total solar energy received by the earth in descending order is obliquity, precession, then eccentricity.³

What evidence do secular scientists point to in support of this astronomical theory? One evidence offered is the variation in the ratio of two isotopes⁴ of oxygen, O18 and O16, with depth in ice cores and deep sea sediments. In the summer, water evaporating from the ocean has a relatively higher O18/O16 ratio than in the winter. Consequently, snow derived from this evaporated water will have a relatively higher O18/O16 ratio in the summer than in the winter. So, the O18/O16 ratio in the accumulated snow on Greenland and Antarctica varies cyclically every year. In principle, then, assuming a more or less constant rate of snowfall, the number of annual cycles of the O18/O16 ratio could be used to determine the age of the ice sheet at a given depth. Secular scientists believe the large timescale patterns (over thousands of years) in changes in the O18/O16 ratio in ice cores match the frequencies of the motions of the earth. They claim that the O18/O16 ratios found in ice cores and deep sea sediments can be “tuned” to the calculated insolation expected from the earth’s motion over deep time.⁵ Hence they believe that a pattern of persistent decrease in the O18/O16 ratio in ice cores corresponds to a prolonged period of lower temperature and hence the advancement of an ice sheet. In this way, they believe they have a proxy for past sea temperatures and the onset and decline of ice ages.

Because the evaporated water in the summer has a relatively higher ¹⁸O/¹⁶O isotope ratio, the source sea water become relatively “depleted” in O18 and its O18/O16 ratio decreases. Conversely, the sea water O18/O16 ratio is relatively larger during the winter. Tiny sea organisms called forams build their shells out of calcium carbonate made in part from ocean water. When these creatures die, they fall to the ocean bottom where, over time, several layers are formed. Hence an annual variation in the O18/O16 ratio is built into the sediments. Then assuming a constant deposition rate, in principle the number of O18/O16 cycles in a sediment core could reveal the core’s age at a specific depth. Again, scientists believe they can match or tune the expected insolation due to earth’s motion with the O18/O16 ratio variation with depth. The O18/O16 ratio variations in ice cores and deep sea sediments are thought to complement each other, together allegedly testifying to the climate history of earth over the last few million years.

³ Imbrie J, Berger A, Boyle EA, Clemens SC, Duffy A, Howard WR, Kukla G, Kutzbach J, et al. (1993) On the structure and origin of major glaciation cycles 2. The 100,000-year cycle. *Paleoceanography*. 8 (6):699-735. Available at: <<http://onlinelibrary.wiley.com/doi/10.1029/93PA02751/full>>

⁴ Isotopes of an element have the same number of protons but differ in the number of neutrons. All oxygen atoms have 8 protons. However, O18 has 10 neutrons while O16 has only 8.

⁵ Raymo ME, Huybers P (2008) Unlocking the mysteries of the ice ages. *Nature*. 451 (7176): 284-5.

Besides layer counting and tuning with the astronomical theory, secular scientists believe there are several independent means they can use to confirm the ages they assign to ice cores and deep sea sediments such as uranium/lead (U/Pb) dating, radiocarbon dating of corals, timings of reversals of the earth’s magnetic field as recorded in ocean ridges, volcanic ash horizons, and others. However, as we shall see, there are several problems with the astronomical theory and the various dating methods cited in its support.⁶

First and perhaps foremost is the weak “solar forcing” problem. This refers to the inadequacy of the slight changes in insolation expected from the earth’s motions in space over deep time to explain the relatively dramatic climate/temperature changes attributed to it. Hence, secular scientists need to invoke various feedback mechanisms to explain the needed temperature changes. But just which feedback mechanisms are involved and how they are set in motion by slight changes in insolation remains unclear:

It is widely accepted that variations in Earth’s orbit affect glaciation, but a better and more detailed understanding of this process is needed. How can the 41,000-year glacial cycles of the early Pleistocene be explained, let alone the ~100,000-year glacial cycles of the late Pleistocene? How do the subtle changes in insolation relate to the massive changes in climate known as glacial cycles? And what are proxy climate records actually measuring? The field now faces these important questions, which are made all the more pressing as the fate of Earth’s climate is inexorably tied to the vestige of Northern Hemisphere glaciation that sits atop Greenland, and to its uncertain counterpart to the south.⁵

The same authors also stated flatly:

Climate scientists still do not understand how the subtle shifts in insolation at the top of the atmosphere are converted into massive changes in the ice volume on the ground.⁵

The next problem is the apparent dominance of the 100 Ka eccentricity cycle over the last 1 million years. The difficulty is that the insolation changes expected from variations in eccentricity are expected to be the weakest of the three motions; how is it that the weakest cause is dominant?

Related is the 400 Ka problem. There is a 400 Ka eccentricity cycle in addition to the 100 Ka cycle, with the two cycles being of comparable strength insofar as insolation is concerned. Yet, the alleged record of Earth’s climate only shows the 100 Ka cycle. Why?

Why did obliquity (41 Ka cycle) dominate from 2.7 to 0.9 Ma? Precession (22 Ka cycle) should have greatest effect.

⁶ Herbert J (2014) *The Ice Age and the Flood: Does Science Really Show Millions of Years?*, Institute for Creation Research, Dallas, TX

Then there is what has been deemed the “causality problem” at Devil’s Hole. A warming climate predates the change in insolation by about 10,000 years. In other words, the effect preceded the alleged cause. Additional measurements in other places are in agreement with the Devil’s Hole results^{7,8,9} so this observation is not easily explained away.

Another mystery is why the dominant motion affecting earth’s climate changed from obliquity (41 Ka cycle) to eccentricity (100 Ka cycle) about 1 million years ago.¹⁰

There is evidence that CO₂ levels increase *after* the temperature increases.¹¹ This has implications for the insolation/feedback mechanism and potentially for our understanding of climate change. Again, the record suggests that CO₂ increases are a result of temperature increases and not the primary cause of it. The CO₂ is believed to be released from the oceans as a result of temperature increase. There are apparently time periods in which the temperature increased but CO₂ levels did not. Some secular scientists believe that cosmic rays and not variations in insolation drive temperature changes on the earth over deep time. How the timing of the cosmic ray fluctuations and the expected insolation changes could be the same is unknown.

Similarly, albedo becomes a factor *after* the cooling starts so it can’t explain why the cooling occurs to begin with.¹²

Another problem is understanding the differences of causation and behavior in climate in the northern and southern hemispheres. There are known mismatches of insolation and glacial extent in the southern hemisphere.¹³ Another related problem is that glaciation in the southern hemisphere often tracks with glaciation in the northern hemisphere even though the insolation is opposite in the respective hemispheres.¹⁴ Why is this the case? These results cast doubt on the astronomical theory, at least for the southern hemisphere.

⁷ Karner DB, Muller RA (2000) A causality problem for Milankovitch. *Science*. 288 (5474): 2143-4

⁸ Muller RA, MacDonald GJ (1997) Spectrum of 100-kyr glacial cycle: Orbital inclination, not eccentricity. *Proc. Natl. Acad. Sci.* 94 (16): 8329-34. Available at: <<http://www.pnas.org/content/94/16/8329.full>>

⁹ Oard MJ (1999) Another threat to the Milankovitch theory quelled? *CEN Tech. J.* 13(1):11-3. Available at: <https://creation.com/images/pdfs/tj/j13_1/j13_1_11-13.pdf>

¹⁰ Ehrlich R (2007) Solar resonant diffusion waves as a driver of terrestrial climate change. *J. Atmos. Sol. Terr. Phys.* 69:759-66. Available at: <<http://arxiv.org/pdf/astro-ph/0701117v1.pdf>>

¹¹ Marsh GE (2007) Interglacials, Milankovitch cycles, and carbon dioxide. Available at: <<http://arxiv.org/pdf/1002.0597v2.pdf>>

¹² MJ Oard (2007) Astronomical troubles for the astronomical hypothesis of ice ages. *J. Creation*. 21(3): 19-23. Available at: <<http://creation.com/astronomical-troubles-for-the-astronomical-hypothesis-of-ice-ages>>

¹³ Doughty AM, Schaefer JM, Putnam AE, Denton GH, Kaplan MR, Barrell DJA, Andersen BJ, Kelley SE, et al. (2015) Mismatch of glacier extent and summer insolation in southern hemisphere mid-latitudes. *Geology*. 43: 407-10.

¹⁴ Astrobiology Magazine (2015) International study raises questions about the cause of global ice ages. *Astrobiology Magazine*, March 21, 2015, Source: Dartmouth press release. Available at: <<http://www.astrobio.net/topic/solar-system/earth/climate/international-study-raises-questions-about-cause-of-global-ice-ages/>>

Another problem is known as the Younger Dryas (YD) Event.¹⁵ During the Younger Dryas, glaciation accelerated rapidly starting about 12.8 Ka and suddenly ended 11.5 Ka. Here is what we know about the event:

1. YD was global, sudden, and synchronous. Global temperature changes of 10 to 20°C occurred over 1 to 3 years in evolutionary models.
2. The onset and end were both abrupt and out of phase with insolation. Insolation was at a maximum at northern latitudes when the sudden cooling occurred. Milankovitch has been ruled out.
3. Changes in ocean current behavior were ruled out.
4. C14 and Be10 formation increased during this YD. These radioactive isotopes are formed by cosmic rays, which some secular scientists believe caused the YD event.
5. Current secular explanations focus on solar effects or a large explosion in the atmosphere of some extraterrestrial object.
6. Creationists have suggested an explanation. The YD may be explained by the formation of surface sea ice from fresh water from the melting of ice dams and megafloods during retreat of ice sheets formed during the Ice Age.¹⁶ Fresh water will freeze more easily than sea water. This fresh water ice cap may have slowed ocean current circulation, increased albedo, and cooled the surface. Of course, this would have been on the biblical timescale.

Hence the data clearly show the YD event can’t be explained by astronomical theory.

Then there is the Stage 11 problem. Here the changes in temperature as recorded by the O18/O16 ratio are disproportionate to the expected insolation changes.³

“Tuning” the O18/O16 ratio to the insolation variance predicted by the astronomical theory involves significant data processing. “Tuning” often results in desired results as an artifact instead of real data. Indeed, even white noise can be “tuned” to give signals:

To demonstrate that tuning probably overestimates the variance attributable to Milankovitch forcing, I tune white noise to the orbital parameters. *I show that tuning can routinely generate multiple spectral peaks, high coherencies, and precession like amplitude modulated bands where none previously existed.* This indicates that tuning assumes an unverifiable relationship between astronomical forcing and the delta ¹⁸O climate proxy [O18/O16 ratio] and

¹⁵ Watts A (2012) The intriguing problem of the younger dryas—What does it mean and what caused it? *Watts Up With That?* Available at: <<http://wattsupwiththat.com/2012/06/19/the-intriguing-problem-of-the-younger-dryas-what-does-it-mean-and-what-caused-it/>>

¹⁶ Oard MJ (2011) Two more late Ice Age megafloods discovered. *J. Creation*. 25(1):4-6. Available at: <<http://creation.com/two-more-megafloods>>

calls into question the accuracy of tuned chronologies.¹⁷

Measured data can be indistinguishable from noise.^{18,19}

The simulations used a cyclic Milankovitch driver to produce cyclic stratigraphy, but the lithofacies thickness frequencies and autocorrelation methods used to analyze the resultant rock successions found that these records often appeared independent of periodic orbital forcing. This indicates that the factors involved in depositing cyclic sedimentary layers, as simulated in the model, tend to mask the original periodic signal (such as Milankovitch orbital forcing) and produce the appearance of independence or stochasticity. The hypothesis is that the rocks are independent of extrabasinal forcing, and these simulations indicate how difficult it is to disprove such independence. Real rock successions are very likely to have been historically more complex than our simulations governed by merely a few basic parameters. This poses a challenge to even most cleverly designed quantitative methods used to test for stratigraphic patterns, with their statistical outcomes being inherently ambiguous: does a given outcome indicate that the record was not formed in a cyclic fashion, or does it merely reflect the fact that an original cyclic driver has been masked by the complexity of depositional processes?

The last problems I'll mention involve dating ice cores and deep sea sediments. First, scripture limits the age of the earth to about 6000 years, so deep time is not possible. The RATE (Radioisotopes and the Age of The Earth) group showed that the fossil record contains residual C14 throughout as would be expected if most sedimentary strata were formed as a result of a recent global Flood.²⁰ The RATE group also demonstrated that standard radioisotopic dating methods are probably flawed because they assume the rate of nuclear decay has always been constant. RATE provided evidence for accelerated nuclear decay in the past²¹ during creation week and the Flood. Hence, use of U/Pb and related dating techniques are suspect. Hence the astronomical theory must be incorrect since the earth has not been in existence long enough for it to have had any effect. And as we have seen, there are many problems with the astronomical theory even if deep time is assumed.

¹⁷ Huybers P (2001) Milankovitch and tuning. Harvard University, Available at: <<http://www.mit.edu/~phuybers/General/>>

¹⁸ Creation-Evolution Headlines (2009) Milankovitch cycles indistinguishable from randomness. Available at: <http://crev.info/2009/06/milankovitch_cycles_indistinguishable_from_randomness/>

¹⁹ Dexter TA, Kowalewski M, Read JF (2009) Distinguishing Milankovitch-driven processes in the rock record from stochasticity using computer-simulated stratigraphy. *J. Geology*. **117**: 349-61

²⁰ Baumgardner J (2005) Carbon-14 evidence for a recent global flood and a young earth. Available at: <<http://www.icr.org/article/carbon-14-evidence-for-recent-global/>>

²¹ Humphreys DR (2005) Young helium diffusion age of zircons supports accelerated nuclear decay. Available at: <<http://www.icr.org/article/young-helium-diffusion-age-zircons/>>

Beyond this, there is much circular reasoning involved in the dating of ice cores and deep sea sediments.^{6,22} Circular reasoning occurs when one assumes a premise he is trying to prove. Many sediments are "dated" by tuning the O18/O16 record with the astronomical theory. But to do this, deep time must be assumed beforehand. And as we have seen, there are many problems with the astronomical theory, so it is unclear that it could be used to date sediments even if deep time was real. Fossils, paleomagnetic reversals, and radiometric dating are used to avoid circular reasoning, but radiometric dates are sometimes adjusted with orbital tuning. In addition, there are examples where dates based on the astronomical theory and U/Pb dating are in serious conflict. Consider the Ladinian Latemar Limestone of northern Italy dating problem:

Two principal techniques for high resolution dating of the stratigraphic record, namely, U/Pb dating of single zircons in volcanoclastic interbeds and statistical analysis of orbitally forced sediments, were recently applied to the Anisian Ladinian Latemar Limestone of northern Italy, a succession of more than 500 meter scale platform cycles, each of which records a low amplitude sea level oscillation. Unfortunately, the results of the two techniques are in serious conflict. Evidence for strong Milankovitch forcing of the cyclic succession indicates a depositional duration for the Latemar Limestone of 10 to 12 million years, whereas U/Pb dated zircons from volcanoclastics in coeval basinal Buchenstein beds indicate only 2 to 4 million years. This conflict has led to a scientific impasse: either the approach used to determine a Milankovitch origin for the cycles is wrong, or the interpretation of the results from the zircon dating is wrong, or both are wrong.²³

Hence, not only are the dating techniques calibrated by each other assuming deep time, they often are in serious disagreement.

Another example of the circular reasoning involves ice flow models.²⁴ As the depth of snow increases, the weight begins to compress and compact the snow at depth. This means that a simple linear relationship between ice depth and age is lost because the lower ice layers become compressed and thin out. Hence to estimate how to count the annual layers in an ice core, one must use flow models that predict how much compress-

²² Hebert J (2014) Circular reasoning in the dating of deep seafloor sediments and ice cores: The orbital tuning method. *Answers Research Journal*. **7**:297-309. Available at: <https://assets.answersingenesis.org/doc/articles/pdf-versions/arj/v7/dating_seafloor_sediments_ice_cores_orbital_tuning_method.pdf>

²³ Hinnov LA (2014) Discussion of "Magnetostratigraphic confirmation of a much faster tempo for sea-level change for the Middle Triassic Latemar platform carbonates" by D.V. Kent, G. Muttoni and P. Brack (2004) [*Earth Planet. Sci. Lett.* **228**: 369-77], *Earth Planet. Sci. Lett.* **243**: 841-6

²⁴ Hebert J (2014) Ice cores, seafloor sediments, and the age of the earth: Part 1. *Acts & Facts*. **43** (6): 1214. Available at: <<http://www.icr.org/article/8130/>>

sion of ice will have occurred as a function of depth and age; the deeper and longer ice has been in place, the more it will have been compressed. But, in order to use the ice flow model, one must assume an age of the ice, hence the circular reasoning.

This brings us to the question of what is a better explanation for the Ice Age if not the astronomical theory? The answer: conditions following the Flood! We know from scripture that the Flood was recent, global, and cataclysmic:

Genesis 7:11-12 (KJV)

In the six hundredth year of Noah's life, in the second month, the seventeenth day of the month, the same day were *all the fountains of the great deep broken up*, and the windows of heaven were opened. And the rain was upon the earth forty days and forty nights.

One problem with many secular theories of ice sheet advancement is that as the temperature decreases, so does the humidity and evaporation rate and hence the likelihood of precipitation; the air above Antarctica is some of the driest on earth. However, rapid ice sheet formation will occur with warm oceans and a cool atmosphere. The conditions following the Flood uniquely provided these. Here is a list of what we would expect as a result of the Flood:

1. There was only one ice age. It occurred after and because of the Flood starting about 4500 years ago.
2. There would have been warm oceans due to ocean floor volcanoes ("all the fountains of the great deep broken up," Gen 7:11) and the heat generated by rapid continental drift and accelerated nuclear decay.
3. There would have been a cooler atmosphere due to the reflection of sunlight by the aerosols and dust provided by the simultaneous eruption of volcanoes worldwide over an extended period. The increased evaporation of water from the warmer oceans coupled with a cooler atmosphere would have provided an adequate mechanism for rapid ice sheet formation.
4. As a result of the heavy precipitation and flooding, there would have been rapid deposition of sea floor sediments.
5. There would have been much dust and sulfates (acidity) in the lower part of ice cores as would be expected from increased volcanism during and after the Flood. Indeed, this is exactly what is found.^{Error!}

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We know from the eruption of Mount Saint Helens that formation of sedimentary layers can be very rapid.²⁵ Im-

²⁵ Austin SA (1986) Mt. St. Helens and catastrophism. *Acts & Facts*. 15(7). Available at: <<http://www.icr.org/article/mt-st-helens-catastrophism/>>

agine what hundreds of similar and larger volcanoes erupting simultaneously worldwide could do! Evidence for rapid deposition of deep sea sediments has been found in the form of manganese nodules on the ocean floor.²⁶ These nodules take several years to form. Interestingly, large nodules are only found at or near the surface of the ocean floor with few found below. This suggests rapid burial for most sea sediments with slow deposition only recently.

Storms can rapidly deposit multiple layers that look like annual layers in ice cores.^{27,28} Dramatic evidence for rapid snow fall was found 50 years after World War 2 near the coast of Greenland where two B17 Flying Fortresses and six P38 Lightning fighters were discovered under an estimated 250 feet of ice.²⁹

The volcanism associated with the Flood continued but slowly decreased for 500 to 700 years.³⁰ Over time, volcanism decreased, the oceans cooled, precipitation waned, albedo decreased, the temperature rose, the atmosphere cleared and the ice sheets regressed to their present locations.

Lastly, what does all this have to say about the issue of climate change? I'll give you my opinion. Secular scientists base much of their concern about anthropomorphic global warming on the alleged climate history of the earth assuming the astronomical theory and deep time. But as we have seen, scripture and much good science cast doubt on both the astronomical theory and deep time. Secular scientists are concerned that the increase in greenhouse gases, primarily CO₂, will upset the delicate balance of the earth's climate and cause catastrophic melting of the ice. However, as we have seen, even if one assumes deep time and the astronomical theory, the evidence suggests temperature augmentation can precede or be unassociated with CO₂ levels.³¹ And despite what the media claims, there is not an overwhelming consensus in the science community about this topic. There are many uncertainties. We know from scripture that God created the earth to be inhabited (Isa 45:18) and that normal seasonal cycles with associated agriculture will continue until the end of the age (Gen 8:22). The earth was created for humans to use. To be sure, we should be good stewards of our planet minimizing pollution, re-

²⁶ Hebert J (2015) Manganese nodule discovery points to Genesis flood. Available at: <<http://www.icr.org/article/8650/>>

²⁷ Thomas B, Herbert J (2014) Do ice cores disprove recent creation? *Acts & Facts*. 43 (4). Available at: <<http://www.icr.org/article/8026/385/>>

²⁸ Vardiman L (1997) Rapid changes in oxygen isotope content of ice cores caused by fractionation and trajectory dispersion near the edge of an ice shelf. *J Creation*. 11 (part 1), 52-60. Available at: <<http://static.icr.org/i/pdf/technical/Rapid-Changes-in-Oxygen-Isotope-Content-of-Ice-Cores-.pdf>>

²⁹ Vardiman L (1992) Ice cores and the age of the earth. *Acts & Facts*. 21 (4). Available at: <<http://www.icr.org/article/ice-cores-age-earth/>>

³⁰ Oard MJ (2002) Wild ice-core interpretations by uniformitarian scientists. *J Creation*. 16(1): 45-7. Available at: <<http://creation.com/wild-ice-core-interpretations-by-uniformitarian-scientists>>

³¹ Marine Isotope Stage 11, Wikipedia. Available at: <http://en.wikipedia.org/wiki/Marine_Isotope_Stage_11>

planting forests, and developing renewable energy sources. But we should not be afraid or ashamed to responsibly use the resources God has given to us. We need not regress to a primitive way of life to save our planet. The welfare of people should be put first in all considerations. ☒

COMING EVENTS

Thursday, January 14, 7:00 pm, Providence Baptist Church, 6339 Glenwood Ave., Raleigh, Room 240

Dinosaurs! Paleontology! Missing links? We will look at the fossil record and at what leading evolutionists have to say about it. The types of fossils will be examined, transitional fossils will be looked for, and the famous whale evolutionary series will be examined. We will look at what the evidence from fossils says to us today about the past and how this has been interpreted and possibly misinterpreted. Be sure not to miss this meeting!