

# **Frozen In Time: A Young Earth Book Review**



By Greg Neyman

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The book *Frozen In Time: The Woolly Mammoth, The Ice Age, and the Bible*, is by Michael Oard. The edition being reviewed is a paperback, First Printing, October 2004, ISBN Number 0-89051-418-6.

Intrigued by the apparent problems of uniformitarian scientists to answer questions about the woolly mammoth, Oard set out to write a book to answer most of the questions. The book supports his single Ice Age theory, which in-turn supports the idea that the earth is only 6,000-10,000 years old. The book was published by Master Books, the publishing arm of the young earth movement (Master Books was founded by YECs, because no reputable publishing company would publish young earth books).

As is typical of book reviews on this website, if the material does not have any impact upon the age of the earth issue, it will not be addressed. Hence, there may be sections of the book where multiple pages are skipped. To fully understand the review, one should obtain a book from their church library or a friend.

On the whole, the book provides a lot of good information about the woolly mammoth, and about the problems associated with its extinction. The book also contains much information about the ice ages and glaciations, although due to the young earth bias of the author, much of it is presented in a manner that makes the secular scientists look like they don't have a clue about these issues. In reality, scientists have a very good picture of the multiple ice ages. Sure there are problems, but nothing that would indicate overall that the multiple glaciation theory is incorrect.

As is typical with young earth books, the author uses quotes from scientific sources, which cast doubt upon the secular scientists' solutions to the quoted problems. Oard uses these quotes effectively to set up [straw-man arguments](#), so that when he provides the solution to these so-called problems, the young earth reader will accept them as "gospel." Due to the nature of the young earth culture, readers are expected to blindly accept the words of this so-called expert (Oard is known at Answers in Genesis as "Mr. Ice Age"). This book will no doubt be effective at training young earth creationists in Ice Age arguments. To confront these false arguments, it is necessary for old earth creationists to know the truth behind their claims. This review aims to provide that to the old earth creationist.

## **Chapter 1 Frozen Mammoth Carcasses in Siberia**

There really isn't much to comment on in the first chapter. Oard says in the first paragraph, "Children love stories of frozen carcasses with meat fresh enough to eat." Not really. It's dinosaurs that interest children. Wholly Mammoths come in a distant...far, far, distant second...assuming they come in second at all. Do a search for wholly

mammoth on Google...there are no good mammoth websites...easy evidence that Oard is claiming something that is not true in order to build up the readers interest in mammoths.

The second paragraph contains rapid fire questions. By presenting many seemingly unanswered questions, which Oard will answer, he is setting up his readers to accept his authority in the matter when he addresses these questions. In other words, he is “reeling in” his young earth audience. He continues this in the rest of the chapter, throwing out questions that the secular world apparently does not have answers to.

### **What Is a Wholly Mammoth? (Page 14)**

### **Are There Millions of Mammoths in Siberia? (Page 15)**

There are no issues here for old earth creationists. Yes, there probably are millions of mammoths in Siberia. It is interesting to note that only 39 specimens of frozen mammoths have been studied, and only four of these are nearly complete.<sup>1</sup>

### **Carcass Puzzles (Page 19)**

Oard mentions the standing mammoths, and no doubt he will use this to promote his “quick freeze theory.” However, it is important to realize that the mammoth’s relative, the elephant, sleeps standing up.<sup>2</sup> If it dies in its sleep, there is no need to “quick-freeze” a mammoth to make it stay upright...slow freezing will work just fine.

Next, he mentions several of the specimens apparently died via suffocation. This is observed from the oxygen in the preserved blood. He makes the claim, “For a live animal to die of suffocation, it had to be buried rapidly or drowned.” Actually, for an animal to show signs of oxygen deprivation, his supply of oxygen needs to be cut off, which rapid burial or drowning would do. However, for a dying animal no longer to move, but still breathing, all that is required is for ice to block the air passages for the nostrils. The animal would continue to strive to breath, and the heart would continue to beat, until the oxygen deprivation causes other organs to stop functioning, eventually leading to death. Rapid burial and drowning are not the only reasons for blocking the airways...ice will do the same thing.

He mentions two other puzzles that must be answered. First, some mammoths have broken bones. As animals age, their bones will become more brittle. This is why our elderly people are frequently breaking hips from a simple fall. It is no different for mammoths. Also, a frozen bone would be much more susceptible to breaking. I used to work with liquid oxygen, and we would drop objects in the oxygen for a few seconds to quick freeze them. When you removed them, you could step on them and crush them.

The other puzzle is how the mammoths became entombed in rock-hard permafrost. There will be more on this in Chapter 16.

<sup>1</sup> [http://www.talkorigins.org/indexcc/CC/CC361\\_2.html](http://www.talkorigins.org/indexcc/CC/CC361_2.html)

<sup>2</sup> <http://www.zooschool.ecsd.net/elephant%20information.htm>

## **Chapter 2**

### **Why Live In Siberia?**

A good question! Although I agree with Oard that mammoths probably did not migrate, his reasoning against this migration is flawed. He states, “There likely would be an adequate food supply in southern Siberia or further south. There would be no need to migrate north.” If this reasoning is applied to all migrating animals today, they would all live at southern locations. The birds which migrate north each spring in the United States have no need to do so, since there is adequate food at their winter locations in the tropics. If this were true, then all birds would end up living in the tropics around the equator, and we would have none in northern latitudes.

Oard mentions the bogs, and how they would make it very hard to move around. He goes on to quote another author, “Neither mammoth or bison could exist in the sort of tundra that exists there today.” I agree. So the real question is...what was it like thousands of years ago when the mammoth lived there? The study of past climates is called Paleoclimatology. For Siberia, one study<sup>1</sup> shows that from 60,000 to 55,000 years ago, Siberia had very cold winters. This was followed by a long stable period of cold winters, until about 24,000 years ago. Between 20,000 and 11,000 years ago, global warming is indicated, and more recently, since 4,500 years ago. However, reading Oard, one would assume that it only has one temperature range...very, very cold! In reality, temperatures have varied over thousands of years. Just like today, where we have vast grasslands over Canada (similar in latitude to Siberia), Siberia also has vast grasslands for the mammoth to graze on. It’s not as simple as Oard makes it out to be.

#### **Starving to Death Amidst Abundance (Page 26)**

“There is hardly any food in Siberia today for all those wholly mammoths and other animals.” It doesn’t matter how much food there is in Siberia today...the question is...what types of food were there in the past? Also, if you remember from earlier in the book, the stomachs of the frozen mammoths had plant matter, and in one case, an animal had food in its mouth. Clearly, there were plants there in the past, which the mammoth fed upon! If there were not, their stomachs and mouths would have been empty! He goes on to say a mammoth requires 400 to 650 pounds of food a day, and asks the question “Where is such feed going to come from in Siberia?” Obviously, it was there, since we have direct evidence from their stomachs that they were eating! Again, the issue is not what is in Siberia today (which Oard incessantly refers to), it is what plants were growing in Siberia thousands of years ago. An argument based on current conditions in Siberia is useless, but I’m afraid we will see this faulty argument throughout the book.

#### **The Climate Enigma (Page 27)**

One claim here is that many Ice Age computer simulations indicate an ice sheet in Siberia. Evidence from the field indicates otherwise. In one study, there was no evidence for an ice sheet.<sup>1</sup> (Just because there is no evidence for one, does not mean that it did not exist.) Thus, Oard’s criticism of how the mammoth could survive in an ice

sheet covered Siberia may be unfounded. He goes on to say that glacial debris indicates that only the mountains were glaciated. He basically set up a strawman argument.

Next he mentions that some scientists try to justify their model by claiming that a colder Ice Age climate would help the mammoth, as there would be less melting of the permafrost, hence less bogs. I agree with the scientists. Oard turns this around, saying it would cause a shorter growing season. True, but not a problem given the abundance of food in the tundra, which Oard has previously mentioned. Also, we don't know the animal population...it probably adjusted itself based on the available food. He goes on to say that some of the animals could not endure the cold weather. "Other animals" are not the issue...it is the mammoth we are concerned with. With its winter coat, it's not a problem.

He then contradicts himself. Earlier, he said we would be surprised by the amount of lush vegetation in the tundra...now he says "Not much edible vegetation would grow in such a climate." Which is it? Yes, colder Ice Age climates would make it worse...but his simplistic model does not account for the up and down cycling temperatures of the most recent Ice Age. There would be hard times during the colder temps, but warmth is just a few years away.

He mentions a paradox in a quote, basically how do you keep a mammoth alive and well in seemingly impossible conditions. Since mammoths obviously were living during the entire extent of the last Ice Age, they did not see it as a problem. Apparently, large numbers did not make it through the Ice Age, but the mammoth species survived the Ice Age...so they found a way. We merely have to strive to understand how.

He goes on to explain that Siberia was apparently a huge grassland during the Ice Age. A bit of a simplistic statement, but apparently true. It presents no issues for an old earth, however. It illustrates a huge strawman argument. He has spent several pages painting a bleak picture, and then gives a simplistic answer that apparently most scientists do not see. Of course, in the mind of the young earth creationist reader, Oard comes over as a genius for solving this dilemma! "Mr. Ice Age" (a nickname for Oard) does it again! (In reality, he is using references from secular science...they have already figured this out before he did.)

He then paints a picture of a long growing season, and lush vegetation. No problems here, as the warmer periods between the individual Ice Age segments, particularly from 20,000 to 11,000 years ago, provide an answer.

Oard is effectively using [strawman arguments](#) to set himself up as an expert, so that young earth creationists accept his statements at face value. Unfortunately, this is part of the young earth sub-culture. People are expected to accept the words of so-called experts, pastors, etc, as the truth, and there is no need to investigate it. When asked, they readily say they are free to investigate it for themselves, but they know that they will rely on young earth sources, and Morton's Demon ([www.answersincreation.org/mortond.htm](http://www.answersincreation.org/mortond.htm)) will keep them from truly examining the evidence.

<sup>1</sup> Paleoclimate Studies on Bykovsky Peninsula, Northern Siberia [http://www.awi-bremerhaven.de/Publications/Mey2002a\\_abstract.html](http://www.awi-bremerhaven.de/Publications/Mey2002a_abstract.html). This study uses ice wedges. For a description of what an Ice Wedge is, see Ice Wedges, Polygons, and Pingos (<http://arctic.fws.gov/permcycl.htm>).

## **Chapter 3**

### **The Mystery of the Ice Age**

Oard starts right in, setting up scientists as unable to answer key questions. He says most scientists believe the wholly mammoth lived during the Ice Age. In reality, the wholly mammoth has been around a long time. The elephant has been around since about 55 million years ago, and there have been more than 500 different kinds of elephants. Today, only two remain, the African and Asian. About two million years ago, the mammoths evolved (or were created) from the Asian elephant. The wholly mammoth has been around for the last 1.5 million years. During this time, Ice Ages have come and gone. To say that the mammoth lived during the Ice Age is only partially true...it also lived outside the Ice Ages. He goes on to say scientists don't know what caused the Ice Age. Funny, when I look it up, it's real easy to find answers. Where is Oard looking...under a rock? He is setting up another strawman.

#### **Was There Really an Ice Age? (Page 33)**

Oard comes to the conclusion there was an Ice Age. The real issue for the age of the earth is...how many were there? More on this later.

#### **Mid and High Latitudes and Tropical Mountains Recently Glaciated (Page 35)**

Not much here. He mentions many of the ice age features, but where he considers them all to be the result of a single Ice Age, it was actually many Ice Ages, as the temperatures fluctuated over hundreds of thousands of years. One sentence highlights a common young earth ploy. Concerning some fresh looking features, he says, "The freshness of glacial features argues for a much younger date." Young earth creationists have a habit of dating something merely on its looks...not a very scientific method. It reminds me of those people at the county fair, who will guess your weight!

#### **How Much Climate Change is Required to Cause the Ice Age? (Page 38)**

This section contains nothing of importance for the age of the earth issue.

#### **Did Ice Invade The United States From Canada? (Page 39)**

Not much here, other than the fact that he continues to set up scientists as being puzzled by the mechanisms that caused the Ice Ages (and his "strawman"). Two things here. First, a "lack of a good model" would not be evidence of a young earth model, and two, scientists do have workable models to explain the causes of the Ice Ages (see [http://en.wikipedia.org/wiki/Ice\\_age#Causes\\_of\\_ice\\_ages](http://en.wikipedia.org/wiki/Ice_age#Causes_of_ice_ages)).

### **Scientists Perplexed (Page 40)**

He goes all the way back to the mid-1800's to show that scientists are perplexed! We've come a long way in scientific research since the mid-1800's! You see the extent he goes to in order to show scientists in a bad light.

Yes, it is still debatable, and one of the mysteries of science...but there are some very good workable theories out there. Science is not ignorant on the subject!

### **Wet Deserts During the Ice Age? (Page 41)**

Oard actually gives a seemingly good argument here. However, when I looked up pluvial lakes, it says they formed during glaciations...just what Oard is proposing! He is probably relying on old research from the 1800's again! References are given for individual facts, but no reference for scientists claiming they formed during interglacial periods is given! (for more, see [http://en.wikipedia.org/wiki/Pluvial\\_lake](http://en.wikipedia.org/wiki/Pluvial_lake))

### **The Puzzle of Coexisting Warm and Cold Climate Animals (Page 44)**

Is this a problem? Not at all. These so-called disharmonious associations does not mean the animals lived together. With rapid changes (every 10,000 years) of alternating Ice Ages and warming periods, the animals range would mix. Cold climate animals would gradually move south during colder periods, and warm climate animals would move north during warmer periods. Since we are only talking about the glacial periods of the Pleistocene (1.8 million years to the present), there would be minimal deposition. Think of it this way...over a period of several hundred years, a colder period starts. Cold animals move south, over the area that warm animals once occupied only a hundred years ago. Their bones would be right there, with the bones of the warm-climate animals, in many cases with little, if any sediment to separate them. Thus, they probably did not live together at all...no more "puzzle!" There is probably no such thing as disharmonious associations.

### **Mass Extinctions at the End of the Ice Age (Page 46)**

True, scientists are puzzled by what caused the extinctions. This does not mean they have not put forth theories, which are viable. For more, see The Pleistocene or Ice Age extinction event.<sup>1</sup> However, a lack of a universally accepted theory is no proof of the young earth theory that Oard proposes. An argument from no evidence is no argument at all.

<sup>1</sup> [http://en.wikipedia.org/wiki/Holocene\\_extinction\\_event#The\\_Pleistocene\\_or\\_Ice\\_Age\\_extinction\\_event](http://en.wikipedia.org/wiki/Holocene_extinction_event#The_Pleistocene_or_Ice_Age_extinction_event)

## **Chapter 4**

### **A Mammoth Number of Mammoth Hypotheses**

Oard will now proceed to show how various hypothesis have been proposed over the years to answer the problems that he presented in the previous chapters...which I have already answered. It doesn't matter that somebody 50 years ago proposed this or that...what matters is the current answer given by scientists. By showing that over the years there have been many varying descriptions, he is setting up scientists as bumbling idiots, unable to offer a decent theory about the various mammoth problems. This straw man argument will later be fulfilled when Oard himself presents an answer to all these questions!

#### **Ancient and Native Beliefs (Page 47)**

This has no bearing upon what scientists actually believe today! It only adds to his strawman argument.

#### **Thoughts From Early Geologists (Page 48)**

The field of geology has come a long way since it started a little over two centuries ago. Our data is much better now.

#### **Astral Catastrophes and Catastrophic Crustal Shifts (Page 49)**

Oard gives a brief summary of these flawed theories. No problems here for old earth belief.

#### **The Quick Freeze (Page 51)**

Nothing of interest, at this time, for this hypothesis. Oard will revisit this later as part of his model.

#### **Mainstream Scientific Hypotheses (Page 51)**

Interestingly, he goes back to 1962 to give an example of the mainstream scientific hypotheses. In fact, he picks someone out of the literature whose beliefs are contrary to some of the evidence Oard has already presented, claiming that there are not millions of mammoths! (When he builds a strawman, it must be a thousand feet tall!). There are no problems with the rest...however, he could have chosen another researcher. But then again, Oard must show something about mainstream science that the reader will pick up on as contrary to the evidence that Oard has already presented. No need to delve into the mainstream science now, as we will see it later.

## **Chapter 5**

### **The Extinction Wars**

The purpose of this chapter is to show that scientists are divided over what caused the great extinction event at the end of the Ice Age. By portraying them in this way, he is setting himself up as having the solution that these scientists have been ignoring.

#### **Extinction by Climate Change (Page 54)**

Oard does a good job of presenting the problems with this theory. I agree that there are many unanswered questions about the extinction event, and no one theory presents the best possible answer. However, just because a theory has problems, does not mean that it is wrong.

He does give a faulty argument when he claims that the animals examined were in good health when they died. We don't know the time of death of this particular animal (the Columbian mammoth), and one animal cannot be used to characterize the species as a whole. Just because one was healthy, does not mean all were healthy.

#### **Extinction by Man (Page 55)**

The extinction by man theory does sound better than the climatic cause, although it has problems as well.

#### **Can Both Be Correct (Page 58)**

Some people merge both, saying the combination of climate change and man's hunting led to the extinctions.

What is the final answer? Science still debates this topic, and there is no definitive answer. Of course, Oard will provide his answer later on in the book.

Interestingly, he mentions a third theory, that of disease, but he fails to address it or criticize it. Could it be he had no defense for it?

He also fails to mention a fourth theory. I don't know if anyone else has ever thought of this one...I've never heard of it from anyone else, and I've never mentioned it to anyone else before. Throughout the earth's history, there have been several mass extinction events. If you step back and look at the big picture, it may provide an answer to the reason for the extinctions...but it will not provide the "how" of the extinctions. For instance, take the dinosaurs. It is clear that early man and dinosaurs together would be a problem. T-rex, raptors, allosaurs, etc., would all wreak havoc upon early man. Clearly, if there was a God overseeing the creation of these animals, (or evolution of them, if you like), He would recognize this. Realizing that the world was created for man, God decided the dinosaurs had to go. We may not know the reasons which caused the extinction, as this is still debated, but the "why" of the extinction is apparently solved.

The same may be true of each extinction event, including the one that killed the mammoths. Whether it was done by a meteorite, by local floods, by disease, by climate changes, or whether God just said "You're dead" and they fell over...we don't know.



You may be asking, “Why then did God create dinosaurs in the first place?” A good question! For theistic evolutionists, God started the evolutionary process and let it run...occasionally, He had to step in and “tweak” it a little bit. For Progressive Creationists, which I am, it is a bigger problem. If God is all-knowing, He would have known before creating them that He would have to kill them off before He created man. I agree that God is all-knowing, therefore the reasons for God creating them are unclear. I cannot fathom the depths of God’s motives, so this one will have to remain a mystery. That does not mean that this line of reasoning is incorrect...it merely means we don’t know all the answers. If we knew all the answers, we would all be Gods...and we know that is not the case!

## **Chapter 6**

### **The Multiplications of Ice Age Theories**

Oard explains that there are two basic sets of theories concerning what causes an ice age. One is extraterrestrial, the other terrestrial.

#### **Extraterrestrial Theories (Page 61)**

Theories of this sort hinge on a decrease in the amount of solar heat upon the earth. True, we do not have much information on the history of the solar energy being felt on earth. The solar constant, which Oard says is assumed to be reliable, does vary. For instance, average global temperature in recent recorded history shows an increase of almost 0.7 of a degree from 1861 to 1991.<sup>1</sup> If this warming trend has occurred since the end of the last ice age, 11,000 years ago, then at this rate, we are 59 degrees warmer than we were 11,000 years ago. This possibility lends much credence to this theory...the only thing we are missing is observational evidence for temperatures of the last 11,000 years, which is next to impossible to come by. Studies of tree rings are the best method we have now, and they show a 0.2% to 0.6% variance in the sun over many centuries.<sup>2</sup> Oard says that changes in the solar constant have been minimal (referring to changes due to sunspot activity). Over time, however, it may well be a different story. Now, you have “the rest of the story.”

#### **Terrestrial Theories (Page 62)**

The first theory mentioned here is a decrease in carbon dioxide. While it may have a role to play in the overall causes of an ice age, it is probably not the main catalyst, as Mr. Oard points out.

Another idea is that higher altitudes mean colder temperatures. He throws this out without references, and I’ve seen no claims that the land was higher, and caused the colder temperatures of the ice ages.

The next theory mentioned is that the Arctic melted, providing the moisture for increased snowfall over Canada and Eurasia. I agree with Oard on this one.

Next, volcanoes are mentioned, as the ash would block the sunshine. This is shot down because of the duration of the ice ages, some of which last 100,000 years. You

would need a very long period of volcanic eruptions to account for this. Again I agree with Oard.

The West Antarctic theory is also flawed, as Oard points out. Next, he mentions that simple climatic fluctuations are thought to possibly cause the ice ages. He says the plausibility of this option is open to serious questions...and then he fails to list any challenges to this theory! How can a reader decide without the information? However, you must understand the nature of the young earth reader. In their sub-culture, they will accept as truth anything from an authority figure, such as a pastor, young earth scientist, author, etc. There is no need to examine the information further, if Mr. Oard says it, then its true.

### **Summary (Page 64)**

The lack of a universally agreed upon theory for the cause of the Ice Age does not mean that all the theories are wrong. Sure, they have flaws (which Oard calls “fatal”...but are they?). In the next chapter, Oard starts to explain his own theory. The lack of a universally accepted theory provides no proof of his theory...if there were 60 theories, there are now 61...since his cannot be proven also (but it has even more fatal flaws than the other 60 theories).

In the end, he picks out one of the most popular theories and attacks it (Page 65-68). One prominent claim is that a desired date is determined, and then the data is tweaked to match that desired date (just like young earth creationism!). I don't know if this is true in this case. Young earth creationists have had a bad habit of claiming that scientists tweak the data, but most of these claims have turned out to be false.

I suspect that no one theory has the answers, but a combination of factors probably contributes to causing an ice age.

<sup>1</sup> <http://www.agu.org/history/sv/temperature/index.shtml>

<sup>2</sup> [http://science.nasa.gov/headlines/y2003/17jan\\_solcon.htm](http://science.nasa.gov/headlines/y2003/17jan_solcon.htm)

## **Chapter 7**

### **The Genesis Flood Caused the Ice Age**

OK, never mind that there is no geologic evidence for a worldwide flood...the flood caused the ice age! If you believe this, I have some oceanfront property to sell you in Arizona!

Oard claims to understand the mammoth, we need to understand the Ice Age, because it is “a denizen of the ice age.” As stated before, mammoths have been around since 1.8 million years ago...it is not specifically tied to the “ice age.”

He then goes into rapid fire statements in the second paragraph, meant to show that science has utterly failed to answer what causes an ice age (although Oard is about to astound us all with his answer). If Oard's theory is valid, has he submitted it to peer-reviewed journals for publication? He has not, or, if he has, it was rejected. We will see why.

## **The First Requirement – Cooler Summers (Page 71)**

Actually, the first requirement is evidence of a worldwide flood, however Oard's theory fails on this point, and it is the topic of other reviews, so it will not be addressed here.

Oard claims there was "monumental geological and hydrological activity occurred early in the Flood." OK, maybe we will address it here. There is no evidence of monumental geological and hydrological activity occurring only 4,300 years ago. He says the mountains before the flood were fairly low, and the strong currents of the flood would have eroded away those that existed. If that were the case, and the mountains we have now were all built after the flood, then they would all be the same age. However, the world's mountain ranges have varying ages. By the young earth model, they should all look alike, and be dated alike...hmmm, something is fishy here with the young earth model! Let's continue.

Oard mentions that "Interbedded within the sedimentary rocks is evidence of incredible volcanic activity that has no parallel today." Notice it is interbedded...pure beds of ash. If this actually occurred during the flood, what would happen when the ash fell into the ocean, an ocean which he already said a few paragraphs earlier had strong currents, enough to erode mountains? The currents would mix the ash with all the other sediments, hence there would be no individual ash layers. The only way to get a pure ash layer during the flood is to lower the water level, exposing the land, and then have the volcano erupt, depositing the ash. Then, you raise the water level, and deposit some more sedimentary layers, thus "interbedding" them. The young earth theory fails to answer this problem. Hmmm, the fish smell really is strong! Since you cannot have interbedded sedimentary and volcanic layers on a globe full of water, Oard's theory is sunk.

Yes, ash can cool the planet for a few years...no problem here. He uses this to claim the one to three years of lowered temperatures due to the massive amount of ash in the air from the Flood would be enough to cause the ice age. He then says the volcanism would have to continue in order to sustain the ice age. As evidence, he points to signs of Pleistocene volcanic activity. Yes, there was Pleistocene volcanic activity...but we have evidences of volcanic activity throughout the geologic record...not just in the Pleistocene. He quotes a few random volcanic eruptions to support his cause. No references are given. For instance, the New Zealand eruption is one he really likes. Was this the Taupo eruption of 186 A.D.? Only he knows. He says there were 68 different ash falls in the western United States, roughly corresponding to the Ice Age. However, he gives no references. It is my suspicion that he is hiding something. Perhaps it is the sequence of the rock strata, which shows layers of ash, then sedimentary rock, then ash, then sedimentary rock, etc. In order to get this, he must raise and lower the flood waters many times!

For his theory to work, Oard packs all the volcanic activity seen in the rock record into a short time frame of hundreds(?) of years. Interestingly, the vast majority of volcanic activity in the rock record is Precambrian in age. In other words, much of the volcanism that he uses to support his flood theory is located below all of the fossils, with the exception of stromatolites. If this volcanic activity started at the flood, would not the fossils be co-existing with the layers of volcanic ash? The dinosaurs appear around 220

million years ago. How did they survive all this volcanic activity, with the rising and falling of the sea level during the flood to produce the interbedded layering? Every dinosaur in the world must have been an excellent swimmer! The elderly dinosaurs should have died, and would be found early in the rock record...for instance, at the bottom of the rock layers in the Grand Canyon. However, there are no dinosaur fossils in the Grand Canyon rocks. How did they survive the flood, which deposited over a mile of sediment in the Canyon, only to be killed and deposited in the rocks several thousand feet above the Canyon rocks? And why is all trace fossils of dinosaurs, (footprints, droppings, etc) all located in the rock layers that contain the dinosaurs? Apparently, they were leading a normal life...eating, breeding, pooping, walking, right in the middle of Noah's Flood! (For more, see [www.answersincreation.org/poop.htm](http://www.answersincreation.org/poop.htm).) There is much more, but you can check that out in other articles on this web site.

### **The Second Requirement – Heavy Snow (Page 74)**

He correctly states that “cooling alone cannot generate more precipitation, since cold air holds less moisture.” He says this is why uniformitarian ice age theories fail. Not so! Although there is less snowfall from colder temperatures, the uniformitarian model has something the young earth model is lacking...time! When the snow builds up for 10,000 years, you don't need as much snowfall.

Oard gets his moisture for the heavy snowfall from the warm oceans...supposedly the warm water from the “fountains of the deep” and from heating the water by volcanic activity. Thus the warm oceans evaporated much water, and the colder air temperatures caused by the airborne ash kept it cold enough to snow.

Based on this model, there was a continual supply of volcanic ash, in order to maintain this condition. We should be able to see this in the layers of ice cores that have been drilled. There should be layers of ash indicating eruptions, but the periods in between eruptions would also contain ash. Is this the case, or are the ice cores pure ice?

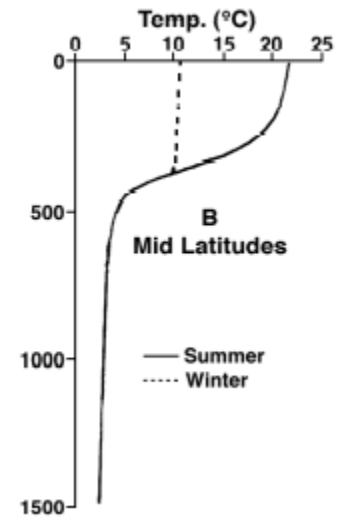
Anyway, on to other problems with Oard's theory. The whole thing driving the moisture content which provides for his snowfall is evaporation. As evaporation occurs, the temperature of the remaining liquid is cooled, thus leading to less evaporation. Sure, Oard can get a few months, or perhaps a year, of increased snowfall, but at some point the temperature of the water will be lowered, not only from the evaporation, but also from the climate.

Since the volcanic ash is blocking out the sunshine, the main heat source for Oard's ocean is the oceanic volcanism. Where are these oceanic volcanoes located? Over 99 percent are located at the rift zones in the Atlantic and Pacific oceans. Since these rift zones are still active, the oceans should reflect this today in their warm temperatures from pole to pole. Oard claims there would have been no polar ice in his model...yet we have polar ice today...under virtually the same conditions which Oard proposes for his model during the flood. Why are the oceans still not warm?

Then there is the matter of ocean cooling potential that Oard has not discussed. The difference in mid-latitude ocean temperature, from summer to winter, is about 12 degrees Celsius (to a depth of ~500m). Keep in mind this is under normal conditions, with the ocean receiving vast amounts of sunlight to warm the water. These temperature

differences are constantly being distributed across the ocean via the currents. In Oard's model, with sunlight blocked, the oceans would cool off much quicker.

However, the real killer to Oard's idea of a Flood-caused Ice Age is carbon dioxide. You see, volcanic activity also emits large volumes of carbon dioxide. Using the lava flows that are supposedly Flood related, it is a simple matter to calculate how much carbon dioxide was emitted. In our current atmosphere, we have about 400 parts per million CO<sub>2</sub>. Scientists are very concerned about this approaching 600 PPM, as CO<sub>2</sub> is a strong greenhouse gas, which contributes to global warming. Glenn Morton has calculated the amount of CO<sub>2</sub> in Oard's post-flood Ice age, and it is a staggering 58,615 PPM (this is a "minimum!"). In reality, Oard's post-Flood world would be boiling, not ice-covered. Noah would have been roasted!<sup>1</sup>



<sup>1</sup> Carbon Dioxide and the Flood (<http://home.entouch.net/dmd/co2.htm>)

## Chapter 8 The Snowblitz

In this chapter, Oard presents the pattern of storms that could lead to the ice sheets formed during his single Ice Age. However, now that we know Oard's theory will not work, this chapter is a pointless discussion. As such, we can approach it in a light-hearted manner.

### Rapid Accumulation of Snow and Ice (Page 77)

He briefly touches on the problem of ocean cooling by evaporation, and he keeps the oceans warm through the currents. Since we have ocean sea-floor spreading today, and it has minimal effect on ocean temperature, one can only assume this model will not work. The mass of the water is too much to heat compared with the heat output at the mid-oceanic ridges.

Concerning his nor'easter theory, he proposes these storms continuing for 200 years. Such a level of volcanism to keep this process going that long would kill Noah, because of the sulfuric acid and carbon dioxide released by the volcanoes. For more on this, see Carbon Dioxide and the Flood (<http://home.entouch.net/dmd/co2.htm>).

### The Early Ice Sheets (Page 81)

His model has all the answers for the formation of ice sheets...except that the observational evidence does not support his single ice age theory. He mentions that his model solves the problem of the Keewatin portion of the Laurentide ice sheet. He goes back to 1968 for a reference to this problem in the secular literature, and ignores more modern research. Sure...I can prove aliens landed and abducted all the mammoths...If I pull quotes out of context.

He proposes that the Great Lakes would be warm bodies of water, and snow would not accumulate close to them. However, these lakes have no source of volcanic heat in order to stay warm...they would cool off very quickly, and be frozen over the first year after the flood.

He paints a picture of Siberia being warm, and the mammoths would be living there...sure, that's why they developed these thick coats adapted for cold weather...so that they could enjoy the tropics of Siberia!

### **The Wet Deserts (Page 83)**

Again he goes back to his mystery of a wet desert...but we already know that this is no mystery for scientists, from the discussions in Chapter Three (Mr. Oard, try using some more up-to-date research!). Researchers today do not need Oard's Flood Ice Age theory to account for the wet deserts. At the end he says "It is important to note: a post-Flood Ice Age has the potential to explain wet deserts, while the uniformitarian model with cold Ice Ages has great difficulty." Again...update your research!

## **Chapter 9 The Peak of the Ice Age**

Again, this is a useless chapter, and you may skip it if you wish. With Oard's single ice age theory debunked, it is useless referring to the conditions during a fictitious event.

### **Glacial Maximum (Page 87)**

Oard throws out some supposed facts that the reader is supposed to take as the truth (note there are no references in this section). For example, "A 3,000-foot lower snow level was about the same for other high mountains of the tropics." Where's the proof in the references? It appears to be an off-hand statement meant to be taken as fact by young earth creationists. Unfortunately, this is part of the young earth "culture," as supposed experts are taken as 100 percent truthful in their statements, whether or not the facts back up those statements.

### **Does Glaciation Take a Long Time? (Page 88)**

Yes it does. He correctly notes that an ice age cycle is thought to be 100,000 years. Of course this can vary somewhat depending on the conditions. His claim for a rapid ice age fails, from the standpoint of observational evidence for the multiple ice ages, and on the basis of carbon dioxide gasses required to sustain his rapid ice age. The release of the carbon dioxide by the world's volcanoes would literally roast Noah, and we would not be here today! Since I am here typing this, my existence is solid proof against Oard's theory. For more, see Carbon Dioxide and the Flood (<http://home.entouch.net/dmd/co2.htm>).

His model shows a roughly 700 year Ice Age. This Ice Age would have extended from roughly 2,300 B.C. till about 1,600 B.C. you would think that a 700 year long ice age would be mentioned in the Bible...but no such references exist.

Another thing I have not seen so far is any references to carbon-dating. Overall, young earth creationists accept the principles of carbon dating. They argue it cannot prove an old earth, and I agree, since it is useless beyond 50,000 years. Frozen mammoths have been carbon dated to 44,000 years old. That's a lot older than the Flood Ice Age!

Mr. Kent Hovind has made a point of arguing that the same mammoth was dated at both 29,500 and 44,000 years...but he mishandles the evidence, as usual.<sup>1</sup>

### **Ice Sheet Thickness (Page 89)**

We have plenty of ice sheet thickness estimates from true scientists. Sections such as this are only meant to throw out data, in an effort to bolster the young earth readers' impression that Oard is an expert. I agree, Oard probably knows more about Ice Ages than any other young earth expert, even though he is wrong in his conclusions. Much knowledge does not make one right!

### **Uniformitarian Ice Thickness Estimates Exaggerated (Page 91)**

An ice thickness estimate is exactly that...an "estimate." It is no problem to find that estimates vary widely...so what? He says of uniformitarian estimates "These ice depths are much thicker than the depths calculated for the post-Flood model. Which estimate comes closest to the actual depths?" In order for Oard to know the "actual depths" he would have had to observe the ice thickness in person. I had no idea Oard was that old!

He goes on to state, "There is some recent evidence, however, that the past ice sheet thicknesses were significantly lower than uniformitarian scientists expected." What is the source of these claims that Oard refers to...in uniformitarian scientific studies! He is merely playing one uniformitarian study against others to prove his model. Remember that an estimate is exactly that...an "estimate." They vary widely. You can find some to prove your own theory, while disproving others, and vice versa. Nice trick!

<sup>1</sup> The Same Mammoth Lived 29,500 and 44,000 years ago?  
(<http://members.cox.net/ardipithecus/evol/lies/lie001.html>.)

## **Chapter 10 Catastrophic Melting**

### **Warmer Summers, Colder Winters (Page 95)**

### **How Fast Would the Ice Sheets Melt? (Page 97)**

Not much of interest here, although it would sound impressive to a young earth creationist! One statement highlights the major problems of young earth creationism. To calculate the melting rate of the ice, he says he "made several reasonable assumptions."

Young earth creationists start with one huge assumption...that the earth is young...and then they try to bend and twist the data to match this assumption. Unfortunately, this is not how science works, and it is the main reason why their science fails to provide any believable answers. For more on what a true scientist is, see Creation Scientist? ([www.answersincreation.org/scientist.htm](http://www.answersincreation.org/scientist.htm)).

In the end, it doesn't matter how many assumptions Oard makes...the theory is still unworkable.

### **Catastrophic Flooding (Page 101)**

By its very nature, there would have been floods after many an ice age. This is not new, and has been accepted by uniformitarian geologists. It is interesting how Oard plays geologists against each other. At the bottom of page 101, he states, "Mounting evidence is convincing many mainstream scientists that the Ice Age was very different from uniformitarian expectations." First, uniformitarians accept multiple Ice Ages, and this is in no danger of being overturned. Second, this is nothing more than science in action. When new evidence is examined, new theories are postulated, and expectations change...but they are all still uniformitarianists. Oard gives the impression that mainstream scientists are slowly coming over to a young earth view because of the evidence...nothing could be further from the truth!

Young earth creationists are led to believe this on many fronts...mainstream science is confirming young earth creationism, but the uniformitarian scientists refuse to acknowledge it. YECs are quick to point to the demise of the Big Bang, evolution, and other theories. In reality, the evidence for the Big Bang and evolution are stronger than ever, and are becoming more so every year. YECs can point to minor problems in these theories, but nothing that is a "show-stopper."

At the end of this chapter, Oard includes a four page discussion of Lake Missoula, which has no bearing upon proving his theory or a young earth. As he notes, geologists accept this lake and flood event.

## **Chapter 11 Only One Ice Age**

In short, ice ages in the geologic past, millions of years ago, presents problems for the young earth model. They must disprove this to prove their model. However, the arguments fall short...way short. I'll address minor issues, and then give a link to a thorough rebuttal for Oard's claims.

### **Why Multiple Ice Ages? (Page 107)**

Enough is enough! On page 108, Oard says "...if there was one ice age, why not many? Multiple ice ages, to many scientists, was a more satisfying idea because the idea conformed to their assumption of uniformitarianism..." Oard has been doing this throughout the book, saying that scientists are looking for evidences to support their old age theories. This is bunk. Scientists report on the evidence. The evidence is what it



is...no tweaking of it to obtain more favorable results for an old earth is necessary. Oard paints a picture of evil scientists out to disprove the young age of the earth. If there was a conspiracy against the young earth evidence, then why is Oard so easily able to quote works by secular scientists, which casts doubt upon old earth theories? Clearly, these doubts and problems are being discussed in the open. There is no “conspiracy theory” in action here...only the paranoid concerns of the young earth community.

Perhaps they would not feel this way if they at least had some evidence for a young earth...but there is none. They are completely ignored by the scientific community...and rightly so.

In the following paragraphs, he paints a picture of scientists first believing in one ice age, then four ice ages, and now 30 ice ages. He says “History indicates that the number of glaciations has never been on a solid footing. It has changed according to the popular ideas of the time.” This explanation is very simplistic. Yes, it has changed, but based on much more than “the popular idea of the time.” Scientific observations, rather than the whims of scientists, drive the number of ice ages. What are the evidences for these 30 ice ages? Oard does not list them!

Scientists, by their very nature, are skeptical. The “bandwagon” approach which Oard explains is much less likely to happen in the scientific community, where your research comes under peer-review.

### **One Recent Ice Age? (Page 109)**

“There is strong evidence there was only one fairly recent ice age.” This is Oard, quoting his own reference. How is the reader to decide this, since Oard did not list the evidences for the 30 ice ages?

Oard starts his evidence with the claim that glacial debris, known as till, was deposited mostly in the last ice age (of the 30). Oard fails to mention that the 30 ice age periods are unique and have different levels of ice accumulation. For instance, only 3 of the 30 brought ice down to Ohio.<sup>1</sup> Distinct layers of till can be identified for these 3 instances. Although there is not evidence for all 30 in Ohio, evidence for three distinct events is enough to disprove Oard’s single ice age theory.

Next, Oard claims the till comes from the bedrock below, and thus it was not transported a great distance. However, geologic formations can stretch for hundreds of miles. A rock 300 miles away may look exactly like the rock under your foot. All that can be proven is that the source bedrock is the same. Oard claims that successive ice ages would “bulldoze” the debris farther from the source. This oversimplification will work, but only partially. Material is not “bulldozed” out in front of the advancing ice sheet. As the snow and ice accumulates, the underlying rock is trapped, and then as the ice advances, it captures material and drags it along. There is no “dozer blade” on the front of glaciers.

His next argument is the driftless areas, or areas of no glaciation. The picture shows some sandstone spires in Wisconsin, which he claims would have been planed flat. The problem here is his assumption that these are normal glaciers. Remember from earlier, they are ice sheets, not glaciers. Ice sheets do not move like glaciers. It is not necessary to plane the entire area flat, as the movement is minimal. For instance, in Antarctica, the Transantarctic Mountains protrude above the 4,200 meter thick ice sheet...they are not

planed flat.<sup>2</sup>

Next Oard mentions that with Canada's many glaciations, the bedrock should be heavily eroded. True...if these were glaciers, and not ice sheets. This argument fails for the same reasons mentioned in the preceding paragraph.

Oard then argues that the lack of supposed animal evolution during the two million year ice age period better fits his one ice age theory. Here he is arguing based on a lack of evidence. The lack of one piece of evidence does not validate other pieces of evidence. There were evolutionary processes at work, hominids most notably. They did not stop showing signs of evolution. He also argues that the mass extinctions better fit his theory. The truth is...we don't know what caused the extinctions, and neither does Oard...without the causal agent of the extinctions, he cannot claim to be in a better position than we are.

Next, he says that if there were interglacial periods, the animals would repopulate previously frozen areas. He says the bones are found mainly at non-glaciated areas and at the edges of the ice sheets. Two points...this is exactly what one would expect. First, there are evidences of fossils with disharmonious associations (previously discussed in Chapter 3, page 44). They give evidence of animals repopulating. Second, as animals die and ice waters melt, the bones would stand a much greater chance, through the movement of the melt waters, to wind up at the edges of the ice sheets.

His last argument is that at least one of the thirty ice ages should have affected the lowlands of Siberia, Alaska, and the Yukon. Why? There are no problems if not even one ice age affected these areas. Again, he is arguing from a lack of evidence to support his theory.

He sums it up by saying, "...the uniformitarian scientists actually assume there were multiple ice ages." This is a huge oversimplification. There are multiple evidences for multiple ice ages. For instance, as I write this, I'm at home in Ohio...my house sits on ground moraine from the Wisconsin glaciation (24,000-14,000 years ago). A short drive takes me into glacial deposits with the Illinoian glaciation (130,000-300,000 years ago). A little further and there is glacial deposits from pre-Illinoian glaciation. Ohio has three distinct glacial deposits, proof positive against Oard's single Ice Age theory. He uses a quote to show that scientists assume a multiple-glaciation hypothesis...that's because the evidence supports it!

### **How Can One Ice Age Explain Evidence for Multiple Ice Ages? (Page 112)**

None of the arguments Oard gives supports a one ice age theory, for the reasons previously mentioned. His model for depositing sand layers between till layers, and thus giving the "appearance" of multiple glaciations, only works over small geographic ranges. When you consider that these small fluctuations in the ice sheet cannot account for sand layers spread over large geographic areas, his theory fails. The secular world recognizes these fluctuations (as evidenced by Oard's quotation of them), and their deposition of inter-till layers, and explains them quite well, without the need of resorting to a young earth hypothesis.

Let's take this a step further...let's suppose that Oard is right, and there was only one ice age. Does this prove that the earth is young? Absolutely not! Although there may have been one ice age, the duration of this ice age lasted via various dating methods, for

two million years. Add to that other evidences, such as starlight from distant stars, the geologic column, the fossils, (coupled with the failure of the young earth model to explain these features). It is apparent, through millions of scientific observations (data points) that the earth is old. The addition of a few data points which indicate a young earth is overwhelmed by these millions. In essence, YECs are grasping at a few straws...and ignoring the millions of straws in the fifty-foot tall haystack at their feet.

The formulation of the single ice age theory proves one thing...you can make the evidence support anything that you want. If you start with the assumption that the earth is young, you will twist the data to match your assumptions. When it comes to science, secular scientists are much more reliable than young earth creation scientists, because they have no religious assumptions.

Oard goes on to list several other issues, using quotes from secular scientists to make his point. Scientists know all about these issues he is bringing up (as he quotes from them), and he gives no evidence that would cause them to doubt the multiple-glaciation theory, nor the old age of the earth.

### **Is the Next Ice Age Due Soon? (Page 114)**

Oard argues against a book which claims another ice age is coming. Here's my take on the issue.....who cares? If one comes, OK, if not, that's OK too. Scientists don't need another ice age in order to prove their multiple ice age theory.

### **Were There Ancient Ice Ages? (Page 116)**

This three page section argues that ancient till deposits are not glacial in origin, but instead come from submarine landslides. For a thorough rebuttal of this claim, read geologist Dr. Kevin Henke's expose on Oard's theory (Oard is a meteorologist). ([http://home.austarnet.com.au/stear/henke\\_oard1.htm](http://home.austarnet.com.au/stear/henke_oard1.htm))

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<sup>1</sup> <http://www.dnr.state.oh.us/news/apr04/0405glacialmap.htm>

<sup>2</sup> <http://www.solcomhouse.com/icecap.htm>

## **Chapter 12**

### **Do Ice Cores Show Many Tens of Thousands of Years?**

Ice cores give solid evidence for the existence of the Antarctic and Greenland ice sheets existence over the last 160,000+ years. In this chapter, Oard tries to explain away this data. First, for an explanation of the processes used to examine ice cores, you may wish to read Ice Core Dating (<http://www.talkorigins.org/faq/icecores.html>).

## **Are There 110,000 Annual Layers in the Greenland Ice Sheet? (Page 120)**

Oard's main complaint here is that scientists must make assumptions as to the thickness of the annual layers when you go deep into the ice core. This is true...however, it is not the problem Oard makes it out to be.

First, Oard claims that the main assumption we make is that the earth is billions of years old. Oard approaches this from the other direction, assuming the earth is only 6,000-10,000 years old. We both have assumptions...Oard's based on an inaccurate interpretation of the Bible, and ours based on solid scientific facts, with the Bible supporting an old earth.

Oard's model is that the lower ice layers are quite thick, due to the intense storms at the end of the flood, and these layers thin as you come up the column. To attack the old earth version, he mentions the oxygen isotope method. For instance, at one mile deep, the annual layers are four inches thick, leading to eight isotope measurements per four inches. He says that since the "creationist model" would expect an estimate of 12 inches thick, then the old earthers are measuring three times as often as they need to. What he fails to mention is that in this method, the indicators that we are looking for match exactly what they should be within the four inches. In his model, there would be three distinct sequences within the 12 inches...but there is not. If there were, the scientists would notice this and adjust for it.

He claims the annual layers may be over counted by as much as 100:1 for the deepest layers. This estimation is not supported by any data other than Oard's words.

Throughout this chapter, Oard fails to mention volcanic ash. Recorded history of volcanic eruptions for the past several thousand years, provides a perfect match for the ice cores upper thousands of annual layers. Therefore, the top 4,000 layers must be annual layers. As most young earth creationists date the flood at about 4,300 years ago, this leaves 300 years for the remaining 156,000 years (other ice cores go back 160,000 years). There is nothing to indicate the layers below the 4,000 year point are anything other than annual layers. It is also interesting to note that the Antarctic and Greenland cores validate each other. In other words, the results of annual layering in Antarctic match the results of layering in Greenland.

Also of interest is Oard's need for volcanism to drive his Ice Age mechanism. As you recall, his ice age must be maintained by a large number of volcanic eruptions. If Oard's model is correct, there would be increased volcanic activity as you proceed down the ice cores. However, I have seen no published studies indicating an increase in volcanic activity the further you go down the ice cores.

## **Antarctic Ice Sheet to 700,000 years ago? (Page 123)**

His argument here is solely based on the Astronomical theory talked about on page 65. Oard is merely "blowing smoke" in the readers eyes. I'm surprised he uses such a weak argument. If you want to read more on the methods used for the Dome C ice core, see the Ice Core Gateway EPICA Dome C Ice Core Data ([http://www.ncdc.noaa.gov/paleo/icecore/antarctica/domeca\\_epica\\_data.html](http://www.ncdc.noaa.gov/paleo/icecore/antarctica/domeca_epica_data.html)). In reality, they use data analysis from the following:

Deuterium  
Insoluble Dust  
Grain Radius  
Dielectric Profiling  
Atmospheric N<sub>2</sub>O, CO<sub>2</sub>, CH<sub>4</sub>  
CO<sub>2</sub> Synchronization  
Na, Ca, and Deuterium  
Snowpit NO<sub>3</sub>  
Na, Cl, NO<sub>3</sub>, and Deuterium

As you can see, they rely on scientific measurements...not on some “theory.” Why does Oard use some vague claim that they date using assumptions from the “Astronomical Theory?” He must not be able to provide a solid rebuttal for the Dome C ice core, so he glosses over it. What is really sad is that the young earth reader will usually accept the word of this supposed expert (Oard) without ever examining the data.

### **Greenland and Antarctica Ice Sheets (Page 124)**

Oard gives numbers which sound impressive, but are based on his flawed one ice age theory. The young earth reader will be impressed.

On page 125 he mentions the aircraft argument from Greenland (<http://www.answersingenesis.org/creation/v19/i3/squadron.asp>). He uses this as proof that you can bury an aircraft within a short time period (under 260 feet of snow and ice in 57 years). Does this often used young earth argument prove anything...yes, it does!

There is a competing story that appeared on CNN’s website recently (<http://www.cnn.com/2004/TECH/science/08/23/us.searchforr.ap/index.html>). It tells the story of an aircraft crash in Greenland in 1962. In 1995, 33 years later, you could still see the wreckage and human remains on the surface. What does the young earth claim about the buried planes prove? It proves that it snowed more in that location than it did in the 1962 crash location. Young earth creationists have proved what we already know...that snowfall rates in Greenland vary by location! It has absolutely no bearing on the age of the earth, or the ice ages.

He says his model can explain the ice sheets. It can only do so if you blatantly ignore the scientific evidence against it. In reality, his model is junk science.

### **Wild Ice Core Interpretations (Page 126)**

He mentions rapid oscillations of temperatures during the deepest ice cores as proof that his model more accurately fits the evidence. That’s true...but only if the rest of the evidence supports Oard’s theory, which it does not. Just because scientists do not have an adequate explanation does not mean the young earth explanation is right. Given the young earth habit of taking quotes out of context, the same articles Oard uses to show the problems may in fact provide the solution. Taking a quote from a source and using it to show a problem, when in fact the source solves the problem, is a documented young earth tactic. I don’t know if that is the case here, nor does it matter, since Oard’s theory as a whole is unworkable.

## **Chapter 13**

### **Where Was Man During the Ice Age?**

I think the more important question is, “Does the Bible mention the ice age?” It does not...there is no Biblical evidence for it. Oard claims there would not be any, since man was still living in the Middle East, which was not affected by the Ice Age. However, it should have been! Even if it didn't have an ice sheet, it would have been colder, and the volcanic ash in the atmosphere would have cooled the Middle East also. Plants would not be as prosperous, and animals would suffer.

Oard mentions Job, who probably lived at this time. We all know God blessed Job, with thousands of cattle, sheep, etc. Apparently, this was a time the land could support such vast herds of animals...it doesn't sound like the Ice Age affected Job! Even in Oard's ice age model, the plants would not have been there in such lush conditions as to permit such vast herds. Thus, Job did not live through an ice age.

#### **Dispersion South (Page 128)**

Not much of interest here.

#### **Dispersion Northwest (Page 128)**

In his model, Neanderthal moved from Babel to the caves of Europe, and he was a normal human. Unfortunately, scientific DNA analysis of Neanderthal shows they were distinct from modern humans, and did not contribute to today's gene pool. If the young earth theory were correct, modern Europeans were descended in-part from Neanderthal. DNA studies disprove this. For more, see [www.answersincreation.org/neanderthal.htm](http://www.answersincreation.org/neanderthal.htm) and <http://www.nature.com/nsu/000330/000330-8.html>.

Oard actually claims on page 129, “The Cro-Magnon and Neanderthals very likely intermarried and are included within the European and Asians of today.” DNA flat-out disproves this.

#### **Origins of the Native Americans (Page 130)**

Interestingly, his theory is they walked across a dry Bering Strait, as opposed to a land bridge made by ice. Other than this, there is not much of interest here. His model of spreading from the Tower of Babel is rough around the edges, but since progressive creationists also accept Babel, we also believe in this spreading of mankind.

#### **Was There a Purpose to the Ice Age (Page 132)**

Oard mentions nothing of significance related to the age of the earth. At the end of the chapter, he uses a text box to discuss missing links between man and apes. Since progressive creationists do not believe in evolution, it presents no problems. If you are a theistic evolutionist, it still presents no problems, since evolutionists have a fairly accurate description through many fossils of the transition. True, more fossils would be better, but the model is fleshed-out well enough with the current fossils to provide a

workable solution. Oard mentions the young earth book *Bones of Contention*. You can check out a rebuttal for this book at [http://www.talkorigins.org/faqs/homs/a\\_lubenow.html](http://www.talkorigins.org/faqs/homs/a_lubenow.html).

## **Chapter 14**

### **Mammoths Thrive Early in the Post-Flood Ice Age**

#### **Why Were the Lowlands of Siberia, Alaska, and the Yukon Unglaciaded? (Page 138)**

He refers back to page 28, and his previous discussion on the topic. However, just because we don't have evidence for it, does not mean that it did not happen. The thinner the ice sheet, the less evidence, and 11,000 years of erosional forces since the end of the last ice age could give plenty of time to erode away the evidence. It can only be proven that it did not snow as much at these locations, thus there is not a lot of evidence for the ice sheets.

#### **Mammoth's Spread over Northern Hemisphere Early in the Ice Age (Page 138)**

Oard gives a model for this based on his young earth theory. Such fanciful, imaginative explanations are not necessary for the old earth model, which recognizes a local flood event. We don't have to explain how to produce 10 million mammoths in the 700 years after the flood! The question is not if they could do this within the young earth model...the question is whether or not the young earth model is correct. Since it is unworkable, this theory of mammoth reproduction and spreading is pointless.

#### **The Ice Age Environment of Siberia (Page 140)**

Oard gives a laundry list of evidences why Siberian winters were mild in the "ice age." Oard has given no overwhelming reason to doubt that interglacial periods cannot account for these evidences.

He paints a picture of forests, changing to grassland. It's all surreal, providing the young earth reader with a believable sight-picture of Oard's claims. Oard is good at weaving a whole picture that is believable to the young earth reader.

#### **No Permafrost at the Beginning (Page 143)**

He uses the apparent abundance of certain animal fossils to indicate that there was no permafrost at the beginning of the ice age. He says scientists believe the ground was permanently frozen permafrost, allowing the animals to live there. Another possibility is that it could have warmed significantly enough to dry the landscape and eliminate the bog conditions. Also, animals are not the brightest. Some no doubt tried to move northwards, and made it a ways before getting bogged down (literally!). Again, although secular scientists may not have all the answers, their lack of evidence is no proof of the young earth model, which has significantly more "lack of evidences."

## **Hippos Associated with Woolly Mammoths and Reindeer (Page 145)**

Although a so-called mystery to uniformitarian scientists, it presents no problems overall for old earth belief. Obviously, the hippos spread north as it grew warm during the interglacial periods. If you had a rapidly expanding hippo population, you would expect it to eventually overlap with other animals.

Another thing that nobody has mentioned...if you have long-haired elephants adapted to cold weather (mammoth), and long haired rhinoceros, why not long-hair hippos adapted to cold weather? Since we have no hair evidence from the hippos in England, we cannot make this claim, but it is something to think about.

## **Chapter 15 Were Siberian Mammoths Quick Frozen?**

This is nothing more than a side issue to the age of the earth debate. In the first section, Oard lists the difficulties with the quick freeze theory. There are no issues here for old earth believers. In the other two sections, Oard gives a good explanation of how the stomach could contain undigested material. No issues here for old earth belief.

## **Chapter 16 Extinction of the Woolly Mammoth**

What caused the extinction of the woolly mammoth is really a side issue. Neither secular scientists nor creationists have solid evidence to claim they have the definitive answer.

### **How Did the Woolly Mammoth Die in Siberia? (Page 157)**

Oard finally gets around to mentioning possible scenarios for how the mammoths became frozen in the permafrost. The standard argument is that they became trapped in the bogs. Oard dismisses this, saying that "large animals likely are strong enough to pull themselves out of a shallow bog." Earlier in the book, he argued that the bogs of Siberia would be considered inhospitable to the mammoth, yet here he says they could easily get out of them, rendering his previous argument useless (see pages 25-26).

Aside from this, he mentions several other scenarios for their death, such as floods and lakes. Overall, nothing of significance is mentioned by Oard.

### **Mammoths Mostly Buried in Wind-Blown Silt (Page 159)**

Oard explains that most mammoths are found buried under wind-blown silt, known as loess. He uses three pages to develop this idea, impressing the young earth reader.



### **How Did Ice Develop in the Loess? (Page 162)**

Oard uses secular research to explain this, and does not dispute it. Nothing of significance here for old earth believers.

### **How Does the Post-Flood Ice Age Explain the Animals Buried In Loess? (Page 163)**

Oard gives an explanation of how his model could produce dust storms to bury the mammoths. If his theory of a single, Flood-related Ice Age were true, this explanation may work, but since the theory is flawed and unworkable, so is this solution. A dry, dusty scenario within the uniformitarian understanding of earth's history also fits the bill, without the excess baggage of the one ice age theory.

Looking at his explanation, you see words like "likely," "would have been," "could have," "probably." His model is built purely on conjecture, and not on actual observational evidence of the actual conditions. Granted, uniformitarian models are also built on conjectures, to an extent, but they accept the raw scientific data, and don't have to twist it as young earth creationists do, to make it fit their model.

### **Gigantic Dust Storms Explain the Carcass Puzzles (Page 165)**

He uses his model to explain that it answers the puzzles mentioned earlier in Chapter 1, such as carcasses in a standing position, suffocated carcasses, animals entombed in permafrost, and broken bones. The strange thing is that since uniformitarian scientists recognize these animals are in the wind-blown loess deposits. There is no difference in the young earth/old earth models (both have wind-blown loess), other than Oard ties his into his failed one ice age theory.

He compares this to the dust bowl era in the United States in the 1930s, and provides a couple of photographs as proof. These reinforce the idea in the young earth readers' mind that Oard is correct. I do not know if a dusty death claim has been proposed by uniformitarian scientists. It does sound logical. Oard says that they are "blind to the possibility of death during a dust storm." I don't know if this is true, and Oard doesn't hint that any secular researchers have come to this conclusion (it would damage the force of his argument if he presented it).

However, one must also remember that we are talking about a relatively small number of mammoths. Only 39 mammoths have been found frozen in permafrost, and only four of those have most of their body parts.<sup>1</sup> This is out of approximately ten million fossil mammoths. Sure there are probably more, but you cannot characterize the extinction of the species on such sketchy evidence.

In the end, whether it was death in a bog, which became permafrost, or death by burial, it makes no difference, since the end result is the same. Either way can be explained by the uniformitarian model.

### **Time is Not a Side Issue (Page 168)**

Oard faults the uniformitarian model for saying the accumulation of loess was slow, at one inch a year (see the quote). He turns around to say that his model reduces this time to a few hundred years or less.

If you recall from page 161, the loess is mostly 30-115 feet thick (but gets up to 160 feet thick near the central Siberia). At an inch a year, you only need 390 years to account for the thin sections, and at 115 feet thick, you only need 1,380 years. This is not a large difference from Oard's model ("several hundred years"). By comparison, with Oard's model, assuming 200 years (page 173), you could get 115 feet by accumulating 6.9 inches per year...not far off the uniformitarian accumulation rate of one inch per year. Oard's model would take 17.39 years to cover a ten foot tall standing frozen mammoth. This does not solve the problem any more than the uniformitarian model, which would take 120 years at one inch per year.

### **The Explanation for the Broken Bones (Page 168)**

Nobody knows why, but it really doesn't matter. We are talking about explaining why two specimens have broken bones. Sure, they could have broken them while trying to free themselves. That's nice to know. That information and a dollar will get you a cup of coffee at McDonalds...

### **Mass Extinctions at the End of the Ice Age (Page 169)**

Oard mostly blames the massive dust storms and drought at the end of his ice age for the extinctions. Sure, dust storms may have played a part, but we will never know. Such data should be proposed by Oard to the secular journals, and peer-review can decide if his evidence is sufficient. It does sound logical that the dust may have been a factor. However, since uniformitarian scientists recognize the loess as wind-blown, it is obvious to them that there were dust storms at the end of the ice age, and they can incorporate this into the uniformitarian model without resorting to a one Ice Age model. It works just fine with multiple glaciations over the last two million years.

<sup>1</sup> [http://www.talkorigins.org/indexcc/CC/CC361\\_2.html](http://www.talkorigins.org/indexcc/CC/CC361_2.html)

## **Appendices**

### **Appendix 1**

#### **Confusion of Elephant and Mammoth Classification**

This appendix discusses the classification of mammoths and elephants, and their possibility of interbreeding. This argument stems from the young earth requirement to have the "elephant kind" on the ark, with the elephant and mammoths splitting sometime after disembarkation from the ark. It also gives the picture of the young earth acceptance

of rapid evolutionary processes, in order to develop separate species within a hundred years. Aside from this amusing concept, there is nothing in this section that impacts the age of the earth debate.

## **Appendix 2**

### **Possible Explanations for Disharmonious Associations**

In short, there are no problems with the old earth theory for explaining disharmonious associations. He specifically argues against the glacial/interglacial mixing. He says there should be evidence of sediment mixing. While this would provide solid evidence, it does not rule out anything. When you consider the transition periods for the glacial/interglacial interchanges, the time frame is unknown, but is probably as little as hundreds of years. If you have lived for 80 years, you can go outside and see zero deposition in locations around your house. As animals died over this time frame, their bones would be in the exact same stratigraphic location. If Oard could tie this argument to the deposition rate, then he may have an argument, but as it is, with deposition rates unknown, it is useless.

Secondly, he argues that the mixing hypothesis assumes warm-loving animals could migrate beyond their climatic limits. This is actually a mixing of two theories...one being the glacial/interglacial mixing, and one being the migratory behavior. In the glacial/interglacial mixing, the transition occurs over several hundred years. In migrations, it occurs annually. What is at stake here is the glacial/interglacial, not migration.

Third, he says the mixing should have carried over into the Holocene (today). Not true. He says the “Why would the supposed frequent mixing of sediments suddenly stop at the end of the Ice Age?” The key word is “supposed.” As you see above from the deposition argument, if you don’t know the deposition rate, you cannot “suppose” how much sediment is mixed, if any at all.

Fourth, Oard says the disharmonious associations are found within the glacial and interglacial periods. Again, this ties directly into deposition. As territories change based on climate, there would appear to be constant disharmonious associations. Locations with high deposition rates would be the only locations where this could be distinguished. Yes, there are many evidences for disharmonious associations, but there are also many evidences for the opposite.

## **Appendix 3**

### **The Elephant Kind**

This argument is a continuation from Appendix 1. It stems from the requirement to fit all the animals on the ark, and is not based on actual fact. The size of the ark makes this a requirement, not the scientific data.

## **Appendix 4**

### **Woolly Mammoths – Flood or Ice Age?**

In this section, he mentions the division among young earth creationists. Some believe the Flood killed the mammoths, while Oard and others believe it is the Ice Age. Naturally, Oard is trying to convince other young earth creationists to rally around his model. There is nothing of significance for old earth creationists here.

### **Summary**

Overall, this book has presented some good information about the difficulties of interpreting the mammoth. Despite this wealth of information which will impress the young earth reader, there is nothing of significance which would cause one to pause and consider that the young earth model is correct. The uniformitarian model does have answers for these problems. The answers may be debated, and not universally agreed upon by all, but that does not make them wrong.

We have clear evidence from ice cores of multiple glaciations, and over 700,000 years' worth of ice accumulation. When you combine this with other geological evidences, and astronomical evidences, there is no possible way that the earth can be only 6,000-10,000 years old. The only way a person can believe in a young earth is to accept make-believe theories based on twisted scientific data. For anyone who truly investigates this matter, the solution is obvious.