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Creation Answers

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Who does this newsletter?

This newsletter is produced by Wayne Spencer on a Quarterly basis. Its purpose is to bring creation research within the reach of Christians and provide up-to-date reliable information on creation issues. Wayne Spencer is a creation author and former teacher who has presented papers at the International Conference on Creationism and has published in various creation publications, such as the Creation Research Society Quarterly, Creation Ex Nihilo, TJ, and Origins (from the Biblical Creation Society, UK).

This newsletter is meant to help people plug into creation resources and get informed about creation and evolution. It is provided free of charge on request. Using the free Adobe Acrobat Reader is necessary for viewing the newsletter. There are no restrictions in copying this newsletter or passing it on to others. To request to be placed on the e-mail list, send a request to Wayne at **wayne@creationanswers.net**.

More information on Wayne Spencer's education and publications can be found on the **creationanswers.net** web site. You'll also find many other resources. http://creationanswers.net

In this issue...

A Personal Note from Wayne Spencer

The *Thousands Not Billions* conference in Dallas was a great success. I wish that everyone getting this newsletter would have an opportunity to attend such a conference. The results of the RATE research project on radioisotope dating methods give Christians reason to have great confidence in Scripture. I would recommend the *Thousands Not Billions* books and videos and the RATE Premier Conference DVD set as well.

This issue contains an article summarizing information published in several papers and articles that I have written. Some of these papers are available from my website. The article below addresses how we can understand the issue of impacts from space from a young age creation perspective.

This newsletter is slightly late because of pressing matters that have demanded my time and attention. One was the *Thousands Not Billions* conference September 30th. The other was the death of my Mother, Alma Spencer. My Mother was 92 when she went to be with the Lord. She had lived a long life and was a good Christian example to the family. She raised three kids during the great depression in the 1930's and saw many changes in technology in her lifetime. To my Mother, there was no origins controversy, because she just believed the Bible. My mother never seemed to understand evolution when I tried to explain it to her. It was just too foreign to her Biblical mind set. Perhaps that is how we all should be.

Wayne Spencer, M.S., Physics

Craters and Noah's Flood

by Wayne Spencer

Some think that eventually civilization as we know it will meet its end from a giant impact from space. For some years now scientists have been tracking small asteroids that come near the Earth. This is done in the hope of having warning if an object could strike the Earth. We know from Scripture that this is not how the world will end. But, this does not mean that impacts have not occurred or could not occur on Earth in the future. How do we understand the issue of impacts from space from a young age creation perspective? This is a question I have given significant thought. This article will summarize some information on this from my own technical papers.

Much has been learned in recent years about the remnants of craters on Earth. There are about 170 known impact craters on the Earth today. More are being considered all the time as possible additions to this list. It is obvious that our Moon and many other objects in our solar system have many craters. In the evolutionary view of our solar system, many craters are said to have formed billions of years ago shortly after the solar system formed. Also, some impacts would have happened at random at other times. We know that comets and asteroids can undergo collisions occasionally. Comet SL-9 was seen colliding with Jupiter in 1994. Some asteroids, between Mars and Jupiter, look roughly like a dumbbell because two asteroids collided and stuck together. Impacts on Earth are also believed by many scientists to be the cause of the extinction of the dinosaurs.

The Alvarez Hypothesis

For years now, the concept accepted by the scientific community on why the dinosaurs went extinct is that a large impact occurred. This is often called the Alvarez Hypothesis, after the scientists that proposed it. There is a site just off the coast of the Yucatan Peninsula in Mexico where there is a buried structure that may be an impact crater. It was argued for some years that this impact was large enough to cause the extinction of all dinosaurs at the end of the age of Earth history known as the Mesozoic Era, which is believed to be 65 million years ago. Then in recent years more study of this structure, called Chixulub, showed it to be a smaller crater than was initially thought. This has made it difficult for scientists believing the Alvarez Hypothesis to make a case that global extinctions could be caused by one impact.

Thus, today, there are a variety of ideas put forward to explain the extinction of the dinosaurs. A few evolutionist scientists suggest volcanic eruptions, instead of an impact or impacts, caused the extinction of the dinosaurs. Some other scientists have tried to argue that it was not just one impact but several impacts occurring simultaneously in various locations around the world that did it.

Evolutionists themselves have debated and argued about how an impact or impacts would kill the dinosaurs. First, why would only dinosaurs be killed by an impact? Impacts would kill in a fairly indiscriminate manner; they would not kill only dinosaurs. Second, the effects of an impact do not last very long. The initial blast and surface effects last less than an hour. But dust and ash can be ejected high into the stratosphere by a large impact. It is believed this could cause what has sometimes been called "impact winter." The dust from vaporized rock would block some of the sunlight and lower the temperature felt at the Earth's surface. There are a variety of other possible effects of a large impact, but they are not global, but only local effects that would be limited in area. (Examples would include acid rain or forest fires.) Impacts into the ocean would vaporize both water and ocean sediments. It is the effects of this

ejecta in the atmosphere that would last longest, of all the effects of an impact. Yet all the atmospheric effects would be over in a few months, after the dust has had time to fall to the surface. It is unlikely that the dust put into the atmosphere would cause global extinctions of just dinosaurs. Many animals could survive such conditions and because plants could recover from it, some dinosaurs could recover from it as well. In fact, the fossil record does show some dinosaur fossils *later than* the end of the Mesozoic.

The Bible and Dinosaurs

An impact from space is thus not a good explanation for what made the dinosaurs die out. A Biblical view of Earth history however provides a logical explanation. Biblically, dinosaurs are treated as just another group of animals. After Noah's Flood, there would have been climate changes and there is scientific evidence that an ice age followed the Flood. The book of Job in the Old Testament makes reference to ice as well, which may allude to the ice age.

The climate changes after the Flood provide a good explanation for something that could cause dinosaurs to die because of harsh weather, lack of food, etc. Yet, it allows for the possibility that a few dinosaurs could survive in a few remote places. There have occasionally been reports throughout history of people seeing or encountering animals that could have been reptiles like dinosaurs. Some of these reports may be exaggerations or not accurate, but some could be true. There are even a few evolutionists who believe there are a few "extinct" reptiles like dinosaurs alive in remote jungles today.

Earth Craters

The term "crater" does not always refer to something formed by an impact from space. Sometimes volcanoes are said to form craters. A round depression or whole in rock can be formed from a variety of geological processes. Thus, a volcanic explanation needs to be ruled out before calling something an impact crater. On an object like our Moon, because there is currently no volcanic activity, craters can normally be assumed to be from impacts. The impact origin of lunar craters has also been confirmed in other ways from our study of the Moon.

On Earth, impact craters are often hard to find and sometimes hard to recognize. On Earth many craters have been buried, melted, moved, or otherwise modified by various geological processes. But, scientists have found some reliable indicators of impacts craters on Earth. First, there are special minerals called shocked quartz, or other shocked minerals like stishovite, and coesite that are good indicators of an impact. These are good indicators because they can only form at very extreme pressures, pressures even much greater than inside volcanoes. So, when these minerals are found at the surface it has to be from a high speed impact. Another type of rock that is a good indicator of impact is what's called a shatter cone. A shatter cone is an interesting thing that the heat and pressure of an impact can do to rock. It makes the rock fracture in the form of a cone and the rock takes on an internal structure that is like having cones inside of cones. Shatter cones are found near some large craters.

There are other clues that point to something being an impact crater or the remnant of a crater. Craters tend to take on certain shapes if they have not been modified too much by geological processes following the impact. So, the shape of the crater "bowl" structure, its proportions and other characteristics can suggest its an impact. There are also sometimes predictable amounts of melted rock or breccia in the floor of the crater or around it. Breccia is a type of rock that is made up of many fragments of broken rock (and sometimes fossils) that get mixed together and buried in a muddy cement like material.

There can also be small objects that suggest something is an impact. Meteorites can suggest an impact but meteorites are not always found near craters. Meteorites are objects that fall from space and remain intact long enough to hit the Earth's surface. Small meteorites fall through Earth's atmosphere every day, and more of them fall at certain times of the year, called meteor showers. These "showers" are times when Earth crosses the orbits of certain comets. Meteorites are recognized mainly by their unique composition and the fact that they have been severely heated in passing through the atmosphere. Meteorites have higher amounts of certain metals than many Earth rocks, such as nickel and some rare metals.

Tektites are very small objects that sometimes are evidence of an impact. Tektites are often a few millimeters in size and can come from either volcanic eruptions or impacts. They are essentially small bits of mineral or metal that have been melted and ejected into the atmosphere. Then they cool off and fall to the surface again and often get mixed with sediments. There are certain places around the Earth known as tektite strewn fields, where tektites are known to be common. Some tektites have shock minerals in them and have a composition similar to meteorites. Even if the crater has been destroyed there can be tektites and other evidence of the material ejected from an impact crater.

When craters are found throughout many sedimentary rock layers that were formed by Noah's Flood, this suggests that impacts were occurring during the Flood. It does leave much research that needs to be done to unravel clues that Earth crater sites give us about how the Flood took place.

Two craters I have written about are the Sudbury crater in Ontario and the Chesapeake Bay crater in Chesapeake Bay, Virginia. The Sudbury crater is very interesting. It is located in rock classified as Precambrian; this rock would have an evolutionary age of 1.85 billion years. Sudbury is known as a location where various metals such as zinc and copper are mined. These metals are present because of how the impact made hot water from below the Earth's crust able to come near the surface through deep fractures, bringing dissolved metals with it. The Sudbury crater is covered by over a mile of various sedimentary and other rock layers. The Sudbury structure is one of the largest crater-remnants on Earth. Some of it has been destroyed but originally it would have been about 220 km in diameter. Some of the materials on top of it require that it was under water after it formed. The Sudbury impact thus must have taken place early in the Flood or perhaps near the beginning of the event.

Another important Earth crater is located under Chesapeake Bay, Virginia. Unlike the well-known crater in Arizona, the Chesapeake Bay crater is buried and not visible from the surface. It is also a large one, being over 50 miles in diameter. In the evolutionary time scale it would be dated at 35.5 million years. Michael Oard and myself wrote about this crater in the Creation Research Society Quarterly (Dec. 2004). You could fit two states of Rhode Island in the area encompassed by this crater.

This crater appears to have formed during Noah's Flood, probably while waters were running off the continent. Under the Chesapeake crater are igneous and metamorphic rocks that could be either from creation or the Flood. Then there are some thick sedimentary rock layers that were present prior to the impact. Some of these are limestones, which have to form under water. Then there is a thick layer of breccia that fills the crater called the Exmore Breccia with other thinner sedimentary layers on top of it. The Exmore layer contains a wide variety of materials including marine fossils, wood and gravel from the continent, pollen, and boulders up to 30 feet in size. The Chesapeake Bay impact occurred in water

and a large tsunami would have been generated by it. It would also have vaporized large amounts of water. The Flood may provide the best explanation for why the breccia is only found along the Virginia coastline and not all over Virginia. Strong currents were probably rushing off the continent as the impact occurred. This would have caused the crater to fill up with a variety of sediments containing both marine material and continental material. Michael Oard and myself argue that this impact would be placed in the "mid-to-late" Flood time frame. Some creationists might take the view that it would actually be post-Flood. But at any rate the evidence can be accounted for in a Biblical approach to Earth history.

Creationists still debate where the objects came from that would have produced Earth's craters. I have leaned toward the view that most of the craters formed during and after the Flood. I suspect there was some kind of event that led to widespread impacts on many objects in the solar system around the time of the Flood. Other creation scientists may prefer to say some craters formed during the creation week or after mankind's Fall into sin, then there were more around the time of the Flood. There may be a number of possibilities for how this may have happened.

As Christians we do not have to accept billions of years (which compromises Biblical inerrancy regarding times and dates) to deal honestly with the facts of science. There are always options other than the naturalistic evolutionary ideas. Old age evolutionary ideas actually make a number of things about the solar system hard to explain. We can rationally accept the Biblical time scale for both the Earth and the solar system. Creation scientists continue to discuss and debate these issues. As so much is being learned about the solar system, this is an exciting time to be a creationist.

Climate Change and Extinctions

Evolutionary scientists struggle explaining extinctions in Earth history. The extinction of the dinosaurs is not the only extinction mystery to evolutionists. Evolutionary Earth scientists believe in many ice ages throughout Earth history (creation scientists generally believe in just one ice age following Noah's Flood). Evolutionists try to argue that the extinction of various animals could correspond to either the beginning or the end of an ice age. What evidence is there to make such an argument?

There is a great deal of research on ice cores which measure oxygen isotopes from glaciers. The oxygen isotope data is believed to indicate variations in annual temperatures. But evolutionists do not take account of the many effects possible from a global Flood and its aftermath. Creationists can explain the ice cores better than evolutionists. Studies of ice cores in recent years have pointed to rapid climate changes. Evolutionists have difficulty explaining such rapid changes in their long age time scale. From an evolutionary perspective, there is not an adequate mechanism to support the significant rapid changes in climate.

But, from a creationist perspective, there are a number of possibilities for explaining such changes. They are just what would be expected as consequences of a global Flood. In a creationist perspective of Earth history, the ice age could generate thick ice layers from the climate effects of the post-Flood period. Volcanoes were a key factor in the ice age as well. These eruptions after the Flood could explain some of the ice core data in a time frame much shorter than the long periods of time supposed by evolutionists. Layers that are often interpreted as annual seasonal deposition in the ice are better explained as changes due to storm surges and varying amounts of volcanic dust and ash in the atmosphere.

For more information on Noah's Flood and how it would cause an ice age, see the

September 2005 issue of the Creation Answers newsletter (available on the creationanswers.net web site). Also, there are a number of books and articles in creation publications from Michael Oard and Larry Vardiman that address these issues in detail. They have done most of the original research on ice age climate issues.

ICR Opens Dallas Office

The Institute for Creation Research (ICR) has a new presence in Dallas, Texas. The Thousands Not Billions conference of September 30th in Dallas corresponded with an Open House event for ICR's new Dallas office. Called the **Henry M. Morris Center for Christian Leadership**, the office will mark a new chapter in ICR's ministry. The Dallas office will house a small group of staff that will focus on ICR's internet ministries and reaching Christian leaders. The Morris Center has reproduced the office of the late Henry M. Morris. It also has space for offices and at least one classroom. ICR has plans to offer a new web-based course for Christian leaders on creationism. Henry Morris III, son of the late Henry M. Morris, lives in the Dallas area and will be the Director of the Dallas office. The address to the Morris center is 1806 Royal Lane, Dallas, TX 75229.

Below are two pictures from the new Morris center in Dallas. The first is the outside of the building and the other is a mural seen when you walk in the lobby.