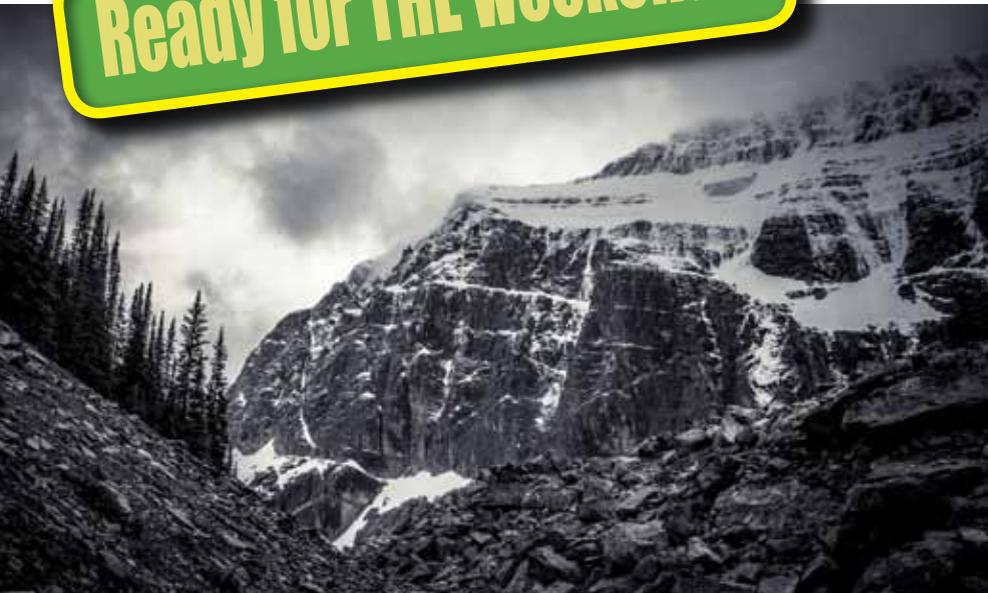




Ever since Dr. Steve Austin earned his Ph.D. in coal geology from Pennsylvania State University, he has shared his expertise with Christians eager to understand how nature expresses what the Bible tells us happened in the past. Indeed, when it comes to geological

has exciting new material from his research, conducted at locations on six of the seven continents. Among his special topics are the “floating mat theory” concerning how plants which later turned into coal, were deposited in thin layers over large areas (as a result of Noah’s

Ready for THE weekend?



with Dr. Steve Austin/ C.S.A.A. Creation Weekend Oct.24/25

research, Dr. Austin’s resume goes on and on, all of it exciting!

Dr. Austin was just out of graduate school and newly appointed to the Institute for Creation Research when the CSAA brought him to Alberta in 1981 to present lectures at their Summer Institute. Since then, CSAA has sponsored several lecture series by Dr. Austin, always to critical acclaim. The last occasion was in 2009.

Research Projects unique to Dr. Austin

Each time Dr. Austin comes, he

flood). An extension of this was his observations on floating log mats at Mount St. Helens in the aftermath of the 1980 volcanic eruption there. He also made many other observations there which have interesting implications.

The list of research topics includes radiometric dating of rocks in the Grand Canyon and at Mount St. Helens, the discovery of a 2-metre thick layer of rock in the Grand Canyon which contains the shells of huge numbers of octopus-like creatures.

Continued on page 2

Appreciating Rodents

Most people have a love-hate relationship with rodents. That is, people love to hate them. This is a pity since rodents exhibit various interesting talents. For a start, when we think of rodents, we think of rats. Rats certainly have a bad reputation because they thrive in so many environments where nobody wants them. Nevertheless rats are smart and individually very clean. Most rats live less than a year in the wild. Mama rats however are definitely overachievers. They can produce up to seven litters per year with up to twelve young per litter. Nevertheless these supermoms provide excellent care to their offspring. Apparently the ancient Egyptians appreciated rats. In 2001 in Cairo, eight tiny gold plated coffins were found, each with a mummified rat inside. The estimated age of these artifacts is 2300 years old.

By
Margaret
Helder



The largest rodent in North America (and second on a worldwide basis only to the capybara of South America), is the beaver. Beaver exhibit amazing dam building and architectural talents. Some people declare that beavers are vital for wetland preservation. Obviously clever, beaver are very family oriented. With

Continued on page 7

Ready for THE weekend?

These animals lived in long cone-shaped shells, and it is the shells that are thickly strewn in a bed that extends over 300 km, almost to Las Vegas. A most unusual catastrophe trapped these animals. Also he studied the Santa Cruz River valley in Argentina, discovering that this region could only have been carved by a mega-flood, as was the Grand Canyon.

Earthquakes Connected to Biblical Events

Among Dr. Austin's other interests are catastrophic plate tectonics concerning a possible model for the onset of the flood, and earthquakes recorded in the Bible. One of his most interesting current projects is documentation of the aftermath of the 33 A.D. earthquake in Jerusalem at the time of the crucifixion.

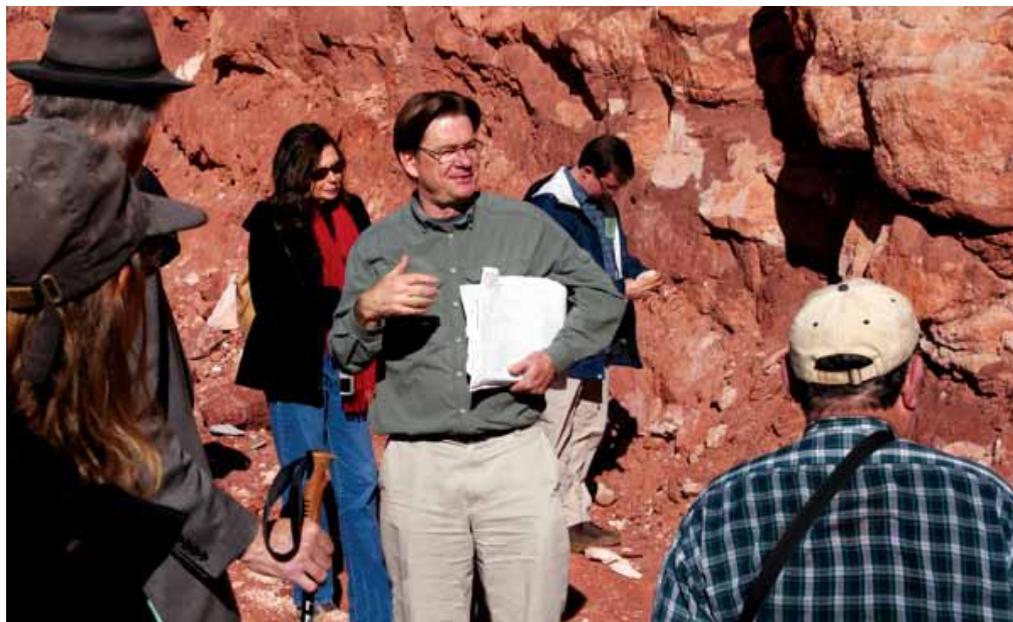
Save the Date

For more than 37 years Dr. Austin was Senior Research Scientist for the Institute for Creation Research. More recently he has shared his talents as adjunct professor of geology at Cedarville University in Ohio and as Senior Research Geologist at Logos Research Associates with the objec-

tive to uphold a high view of science and a high view of Scripture. Dr. Austin belongs to several professional organizations including Geological Society of America, American Association of Petroleum Geologists, and Creation Geology Society (of which he is president).

The Creation Science Association of Alberta therefore is delighted to announce that our Creation Weekend, Friday and Saturday, October 24 and 25 in Edmonton will feature Dr. Steve Austin. His lecture titles are as follows: Continental Sprint and the Global Flood; the Five Signs on the Day of the Cross; Understanding Grand Canyon; and the Jerusalem Earthquake of 33 A.D.: Evidence in Laminated Dead Sea Sediments. The venue is Mill Woods Assembly (66 St and 23 Avenue, the same as previously) and we will again offer a free continental breakfast on the Saturday morning before the first lecture in the morning.

Dr. Austin is exceptionally qualified and an interesting and wonderful speaker. Be sure to invite your pastor, friends and family to these sessions which are free of charge!!!



Dialogue

Volume 41 / # 2 / Summer 2014

Creation Science Dialogue is a quarterly publication of the Creation Science Association of Alberta (CSAA).

Its purpose is to discuss the creation model of origin in terms of scientific details.

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Vance Nelson's beautiful new coffee table style book on fossils, discusses aspects of the topic that will certainly be new to many readers. In addition the author adopts a chatty style which is readily understood by all. Complete with personal reminiscences and historical details concerning each topic, the author builds his discussion of each topic around spectacular illustrations.

In the first section, Mr. Nelson discusses how early readers of the Old Testament understood the shape of the ark to be essentially straight sided, more like a box than a boat, such as we understand boat design. He then presents a number of accounts by people who knew somebody who had seen a large straight sided object high up on Mount Ararat. Most intriguing is an expedition in the summer of 1917 sent out by Czar Nicholas II of Russia. Vance Nelson concludes this section with the remark that if the ark has indeed been spotted so high up on Mount Ararat, then it must indeed have been deposited there by exceedingly deep flood waters.

In the next section the author discusses how the flood presented conditions ideal for rapid

fossilization of many organisms. First he discusses how sediments which form layers of sedimentary rock, give every evidence of having been deposited quickly (often from water). He provides maps of the continental aspect of the Tapeats Sandstone, the St. Peter Sandstone and the Morrison Formation, all in North America. He discusses the pressure from overlying sediments that would be required to compress tree trunks into the oval shape of many petrified logs, and he provides pictures of many curved and contorted layers of sedimentary rock that had to still be soft when the bending occurred, otherwise the rocks would be fractured.

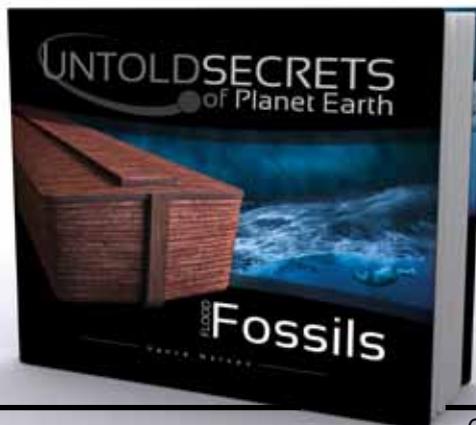
In the same section Mr. Nelson provides illustrations and discussion of fossils which show evidence of having been rapidly entombed in

sediments which soon turned to rock. Everything from ripple marks, trackways and soft tissue are pictured and discussed, as well as closed clams (obviously still living when entombed), wood, and dinosaurs displaying the famous death pose.

The last section is called "Fast Fossils." Mr. Nelson told me that he researched this topic over the span of eight years. Firstly he provides a very nice description of the various types of fossils (molds, casts, carbon films etc.), and how they form. He then takes us on a tour of the world. We find pictures and historical background of petrified materials which are known to have formed in historical times, many of them in the last few hundred years, or even the last few decades. Thus obviously fossils do not require millions of years to be preserved, as many people suppose.

Mr. Nelson concludes with the Biblical message of the significance of the flood. The beautiful illustrations continue to the very last page. This is a book that people will want to look at and reflect upon, again and again.

Vance Nelson (2014) *Untold Secrets of Planet Earth: Flood Fossils*. 197 pages.



Rodents

An Evolutionary Success Story that Evolution Cannot Explain

In many parts of North America, the most common wild mammals one sees are rodents in the order Rodentia. The largest known modern rodent is the South American semi-aquatic capybara, which can grow to be 107 to 134 cm (3.51 to 4.40 ft) long, 50 to 64 cm (20 to 25 in) tall and typically weighs 35 to 66 kg (77 to 150 lb). Rodents are classified in one of the most successful mammalian groups today (Churakov et al. p. 1315).

By
Jerry
Bergman

Rodents are defined by zoologists as mammals having a single pair of deep-rooted constantly growing upper and lower jaw incisors — an unusual feature among mammals. The order is huge, over 40 percent (an estimated 1,700 to 2,300) of all mammal species are rodents (Hartenberger p. 1). They have colonized every continent and most islands, including even many small islands (Benton, p. 354; Churakov et al. p. 1315).

Furthermore, their adaptability seems to know no bounds, as can be seen from the way in which mice, rats, and squirrels exhibit a variety of behavior patterns which enable them to coexist in the modern human landscape (Benton pp. 354-355). Rodents are for all these reasons considered evolutionarily very successful due to their large numbers and ability to not only survive, but thrive, in country and city alike. Reasons for their enormous success include their small size, short breeding cycles, and an ability to survive on a very flexible diet.

From “the point of view of studies



in evolution ... rodents are among the most important orders of mammals” (Wood p. 154). Of interest to creationists is their sudden appearance in the fossil record as fully modern rodents. There are no traces of any ancestry linking them to non-rodent ancestors. Rodents are postulated by evolutionists to date back to 70 million years ago, and have an excellent fossil record (Churakov et al. p. 1315).

As a result of a lack of fossil evidence to the contrary, paleontologists are free to speculate about rodent evolution. For this reason, paleontologist Michael Benton noted that “The phylogeny [evolutionary history] of rodents is controversial” (p. 359). Pa-



leontologist Barbara Stahl added that because of the lack of fossil evidence for their evolution “Paleontologists have had...difficulty in constructing a phylogenetically correct classification scheme for the rodents” (p. 471). Furthermore, there exist “striking differences between” squirrels, beavers, and geomyoids “as far back as they have been traced” in the fossil record (Wood p. 157). Because of a lack of fossils connecting different rodents in an evolutionary scheme, of all the “orders of mammals, the rodents are the most difficult to classify” (Colbert et al. p. 366). Dr. A. E. Wood, a leading student of fossil rodents, concluded that “The current status of rodent phylogeny and classification is such that anyone can point out inconsistencies in anybody else’s classification” (quoted in Colbert et al. p. 366).

The first appearances of rodents in South America were dated by evolutionists to about 34 million years ago (Antoine et al. p. 1319). Several fossils have been claimed to be ancestors to rodents and, due to the lack of evidence for any one potential fossil ancestor, all have their supporters and detractors. Some of the latest evolutionary candidates for rodent ancestors include the Eurymylidae, found in Asia dated to the early Tertiary, and fossils of mouse-size, 100 percent rodents discovered in South America.

The two main theories of rodent evolution are the primate and palaeoryctoid hypotheses (Hartenberger p. 18). The main evidence for the primate hypothesis is the discovery of the Paleocene primate *Plesiadapis*. The main argument against this theory is that plesiadapids are now known to be far less primitive than first assumed (Hartenberger p. 17). The same problem exists with the palaeoryctoid hypothesis.

Evolutionists also postulate that a eurymyloid called *Heomys* may be a possible ancestor of rodents. Meng et al. concluded that “rodents are first

known from many localities of the latest Paleocene-earliest Eocene age in Asia and North America. They are widely considered to have originated in Asia based on the occurrence there of eurymylids, their perceived nearest relatives” (Meng et al. p. 136).

Other experts argue that *Heomys* are too advanced and their appearance in the fossil record is far too late to be a rodent ancestor. From the fossil evidence they appear to be very similar to modern rodents and are obviously just an extinct rodent variety. Other eurymylids, such as *Matutinia*, *Rhombomylus*, and *Eurymylus*, are now all also considered either rodent varieties and not directly ancestral to rodents, or morphologically too different from rodents to be their ancestor (Meng et al. 2003; Hartenberger pp. 20-21). What the fossil record shows is not evolving rodents, but rather that a large number of rodents have become extinct.

DNA research has not been much help in resolving rodent evolutionary history either. One study of rodent phylogenetic trees based on DNA provides very conflicting results among both proposed lines of descent and with the fossil record (Churakov et al. p. 1316).

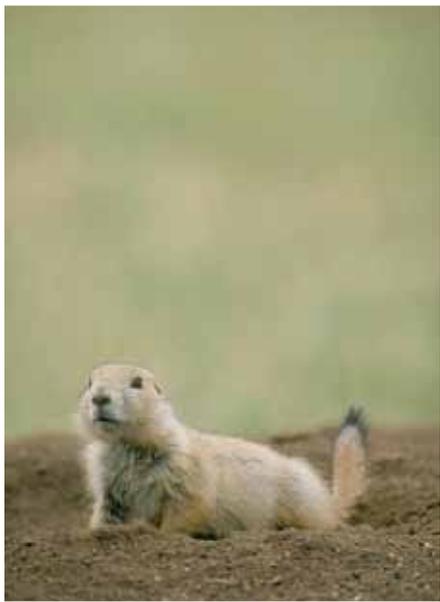
The fossil record has documented that rodents have become smaller in size in our modern world. One of the largest extinct rodents known, *Tigasia monesi*, weighed as much as 2,200 pounds (Rinderknecht and Blanco p 923). It is based on an “exceptionally well-preserved skull” and is a member of family Dinomyidae. About 50 fossil species of Dinomyidae are known, allowing a good understanding of this extinct rodent family (Rinderknecht and Blanco p. 923). Another rodent, *Phoberomys pattersoni* had a body mass of 700 kg (1500 pounds), about ten times the mass of the largest known living rodent (Sánchez-Vilagra et al p. 1708).

North America was also home to an extinct giant beaver (*Castoroides*), growing over eight feet long and



weighing 220 pounds (100 kg), close to the weight of a modern black bear. Its incisors were almost six inches long.

In 1947 Wood said that “nothing can be stated as to the origin of the rodents, other than that they appear to have separated from the basal placental stock” eons ago (p. 154). The same conclusion is still largely true today even though their fossil record is now far better than it was in 1947. A recent international symposium on rodent evolution concluded that the gap between rodents and other mammals is so extensive that search for a hypothetical ancestor of rodents was never strongly attempted, and only imprecise hypotheses have been proposed



concerning the origins of rodents (Hartenberger pp. 15,17).

As of 2014 this conclusion has not changed. Along with openly questioning the extreme dates given by evolutionists, creationists maintain the obvious fact, based on the evidence, is that rodents have always been rodents, created on Day Six thousands of years ago.

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IMAGINE SOLVING PROBLEMS

Imagine that you love solving practical problems like how to build something with straws which will support some weight. No doubt your design will be better than those of your friends and/or siblings!

Well here is a challenge that is fun to think about but difficult to solve. Imagine that you are presented with 600 feet (19000 cm) of shoelace. You are also presented with some small sheets of plastic, each cut into an appropriate shape so that they form a hollow icosahedral container when assembled together. Your assignment is to get the shoe lace into the container!

So, how do we start? First maybe you crumple up the shoe lace to find how much volume it requires. Uh Oh! Bad news! The assembled container is actually considerably smaller than the shoelace requires. But on with the show! First perhaps we try to assemble the sides of the container around the shoelace. Guess what! It just doesn't work. There is always lots of lace which can't be crammed inside the container.

OK ... on to plan B. We first assemble the container, and glue its sides together. There is a tiny hole at one end. Aha! Obviously we just thread the shoelace through the tiny hole into the container. Of course things don't go as hoped. The lace bends, resisting being threaded, and soon it is impossible to shove any more into the container. Is

is a structure composed of a strand of genetic material or DNA (like the shoelace) and a protein coat (like the walls of the container). The virus's genetic information manages to commandeer a living cell to form lots of virus genetic information (like lots of shoelaces), and also lots of containers. But now the task is to get the genetic information into the protein coats, all at the same time. We don't need to worry however, those virus coats come assembled complete with a very powerful motor to shove the genetic material into the tiny containers.

Research carried out by Dr. Carlos Bustamante of California (and colleagues) has revealed how the packaging motor works with the Phi29 bacteriophage (virus) which exploits *Bacillus subtilis* cells. *Bacillus* is a bacterium which lives in soil and the human gut. Once the host *Bacillus* cell has formed lots of virus genetic material (DNA) and lots of icosahedral containers, a motor at the base of each

this an exercise in futility? Mission impossible? Actually not!

There are extremely tiny structures called viruses which have been designed to solve all these problems. Most viruses are so tiny that they cannot be seen with a light (ordinary) microscope. However "small" does not mean poorly designed. A virus



container grabs the end of a DNA strand. The motor consists of a ring made up of 5 subunits. Four of these attach in sequence to the DNA molecule and one motor unit remains unattached, to coordinate the activity of the other four. Then the motor forces a small section of the DNA molecule into the container, meanwhile twisting the strand as it moves inward.

This process continues so forcefully that the DNA is compressed into a very tiny space, such that the DNA lies under 60 atmospheres of pressure! The motor itself is so strong that it exerts 15 - 20 times more intense a force than the strongest muscle. As to the 60 atmospheres of pressure, you may have seen a cork pop out of a carbonated beverage bottle. The carbon dioxide in that drink is only there at 5 - 6 atmospheres of pressure. Imagine if the beverage gases were compressed to 60 atmospheres! It would be downright dangerous!

The scientists involved in this project, declare that the packaging motor of the virus is surprisingly sophisticated in that the motor adjusts its speed and force as the container fills. By the end, the packaging speed has fallen by about 100 times. The whole system is extremely efficient in its use of chemical energy to produce mechanical force. Also, by the way, all five components of the ring motor must be functional, or the whole thing stops right away. That sounds a lot like irreducible complexity doesn't it?

So, how interesting is it that something so tiny as a virus can exhibit so powerful a ring motor? Our technological society has not developed anything like such an elegant machine. But scientists hope to work on the idea soon! Once again we are vastly in debt for design ideas to the Creator of all things, including virus motors.

[For those with technical expertise in biology, look for a Youtube video called "Grabbing the Cat by the Tail: Discrete steps by a DNA packaging motor."]

Appreciating Rodents

Continued from Page 1

their sharp teeth, each beaver can cut down an average of 34 trees per year. Their ability to flood large tracts of land, and their tree felling talents, make them unpopular in some quarters. Porcupines are North America's second largest rodent, growing up to 10 kg. Their special talent is to grow barbed quills which inflict serious injury to animals that try to bite them. Porcupines enjoy a leisurely lifestyle sitting in trees, munching on pine needles and bark, or aspen leaves. They can kill the trees, which sometimes makes them unpopular.

Of all the rodents, probably squirrels are the most appealing. They can be found worldwide except for Australia, the Sahara Desert, and southern South America. Squirrels are perky, animated, extremely determined, and of course smart. Of all the small mammals, squirrels enjoy the largest brain size compared to body size. The largest member of the fam-



ily is the woolly flying squirrel of northern Pakistan, whose length is well over 100 cm. This creature had not been seen for 100 years, but was recently spotted again.

Obviously everybody is interested to a certain extent, in rodents. Dr. Bergman therefore takes us deeper into the topic of the origin of these fascinating creatures.



Get your 5th Edition Tour Guide

Since the early 1990s, the Creation Science Association has published an alternative tour guide to the Royal Tyrrell Museum in Drumheller, Alberta. This world class facility was built in large part to display fossils from western Canada, and particularly Alberta. Also a few fossils from the western United States are on display.

The museum has re-invented its displays many times over the years, probably in an effort to maintain public interest. Certainly there are a lot of interesting new fossil finds now on display. Initially many fossilized marine animals without backbones were on display as well as large land (and marine) reptiles. Now most of the beautiful marine creatures are gone. Also a large simulated scene at the far end of the Great Dinosaur Hall has long since been replaced by a presentation on horned dinosaur diversity and relationships.

As the museum adds new displays, all with evolution-based signage, there continues to be interest for creation-based discussion of these displays as well. The new edition of the tour guide continues to emphasize five themes connected to creation and the flood. These include wonderful design; richness and variety within taxonomic groups; and

the death pose found with many dinosaur fossils which demonstrates death by drowning accompanied by rapid permanent burial. Another theme is the sudden appearance in the rocks of fossilized creatures with no sign of simpler ancestors which might have lived at an earlier time.

The new edition is published in the same handy format as previous editions, for ease of holding and reading as one proceeds from exhibit to exhibit. So do order your copy, or multiple copies for groups, as you head to Drumheller and the museum!

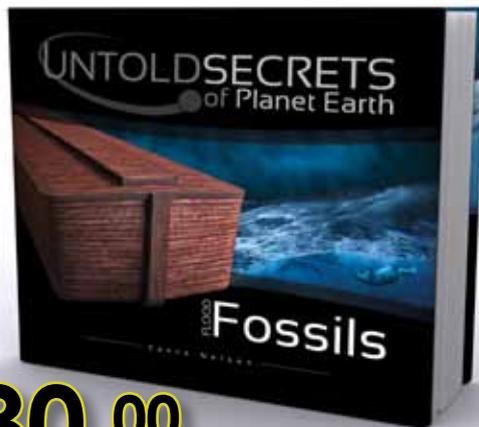


UNTOLD SECRETS OF PLANET EARTH: FLOOD FOSSILS

Vance Nelson

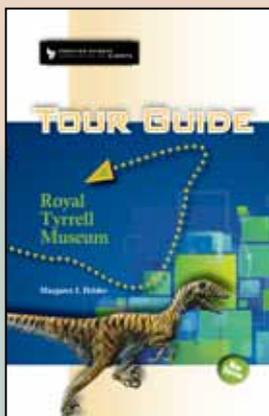
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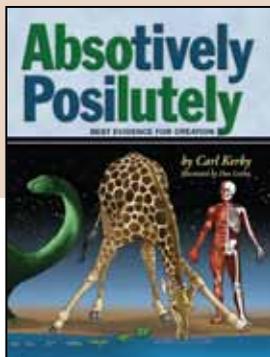
TOUR GUIDE

Margaret Helder

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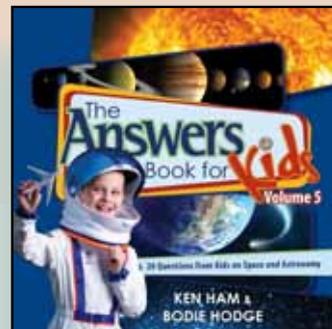
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