

Rats as Pets? **NOT** in Alberta

Rats have the worst reputation of any known mammal. The reasons are many. Rats are often found in filthy places such as garbage dumps or sewers where they come to search for food. Worse, rats serve as disease vectors, causing the plague, more accurately, the fleas on them cause disease. The Black Death killed as many as 50

million persons in Europe in the 1600s, wiping out as much as 60 percent of the existing population. Not surprisingly, people often demonstrate a visceral reaction to a rat's hairless tail and feet. Rats are fast-moving, agile creatures that are excellent climbers. They are also rapid learners and quick to solve problems.

Continued on page 6



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SAVE THE DATE! **Creation Weekend 2026**

Christians have always been interested in the beauty and diversity that we encounter throughout the Creation. But in recent years, we have also begun to reflect on why these designs work so well for their roles in nature. Thus, inquiring minds have begun to investigate principles of engineering. And they have discovered that it is no accident that the properties of chemical elements, the properties of planets, and

the properties of a tadpole, for example, all work extremely well for their created purpose in nature.

Creation Science Association of Alberta is delighted that mechanical engineer Dr. Mark Horstemeyer of Liberty University, has agreed to introduce to us some fascinating cases of design in the creation. He comes to us with an exceptionally interesting background. Dr. H. used his expertise in engineering in the commercial, academic and practical worlds to shed light on appreciation of God's wonderful creation.

Under the theme **God the Ultimate Engineer**, Dr. Horstemeyer is scheduled to present on Friday evening: Noah's Ark, Testament to Excellent Engineering and 2) on Saturday morning Engineers who believed in God and 3) on Saturday afternoon Creationeering the Geosphere.

Tell friends and family about this opportunity to hear family friendly messages! **Don't miss Creation Weekend 2026 in Edmonton**

Check out our website at www.create.ab.ca



Dr. Mark Horstemeyer
*Distinguished Professor of
Engineering, Liberty
University, Atlanta Georgia*
**Featured speaker at
Creation Weekend
October 23/24/2026**



Sometimes we encounter natural events that leave us amazed and reflecting on how beautiful the creation is that God has provided for us to enjoy. It so happened that some friends were on a plane heading to Hawaii early in June. Two years of planning had come together to allow them to be heading to Maui to celebrate a milestone in their lives. Suddenly out of the plane's window they spotted two very bright spots of light in the night sky. This was a conjunction (apparent close approach) in the sky of the planets Venus and Jupiter. The planets were incredibly bright, and easily spotted with the naked eye. The smaller planet, Venus is about seven times brighter than Jupiter, but the latter is much larger. What a wonderful sight that was! Our friends were just days away from the best night to view this event.

It turns out also that Maui, in the Hawaiian archipelago, is a wonderful place to view the night sky. The small size of the island and the scarcity of inhabited areas with electric lights, meant that the night sky was full of crystal clear sparkling stars. This was especially evident when they drove up volcanic Mount Haleakala, a massive dormant shield volcano which rises more than 10,000 ft (3000 m) above sea level. As they proceeded cautiously up the mountain drive, the vegetation became typical of very dry conditions. The absence of light pollution and dry air meant that the sunset and night sky were a breathtaking sight. But it was actually from the beach that our friends captured another photograph of the famous two planets this time very close to great conjunction point.

Interest by the public comes and goes when it comes to topics like the night sky. But right now, we are seeing increased interest. For example, the Artemis II voyage around the moon, unusually produced reports of deep spiritual reflections in some of the astronauts. Mostly we do not hear in the media about personal reflections on space travel, but on this occasion even a non-religious individual was so moved by what he saw in space, that he broke down in tears upon returning and sought to confer with a chaplain.

Such occasions cause us to realize how insignificant we are and how all powerful and wise is the Creator of heaven and earth. Thus, Creation Science Association of Alberta promotes interesting books on the topic of astronomy to encourage us to expand our mental horizons and increase our spiritual discernment.

● Space: God's Majestic Handiwork (Children) ● The Astronomy Book (Youth) ● Exploring the World of Astronomy (Youth) ● Solar System: Proclaiming God's Heavenly Design (Introductory Adult) ● Taking back Astronomy (Introductory High School) ● Expanse of Heaven (Adult)



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

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Age of the Earth: Evidence for Youth

It helps to be informed!

In this collaborative effort, scientists from the Institute for Creation Research (Dallas, Texas) “examine evidence from four aspects of our world that refute evolutionary suppositions and match the Bible’s timeline.” Each chapter is intentionally very short, averaging only five or six pages in length, and is accompanied by a detailed list of references that give the interested reader the opportunity to dive deeper into a particular topic. It is important to note here that the sub-title of this book, “Evidence for Youth”, is not an indication that this book is aimed at adolescent readers. This book provides evidence for a Young Earth and some of the discussions, although brief, can get fairly technical.

The book opens with a brief introduction to some biological data that provides clear evidence for a young earth. Examples include the presence of soft tissues and biomolecules in fossils, the revival of viable micro-organisms - such as yeasts - extracted from fossils encased in amber, living fossils, and the degradation of the human genome (the opposite of Evolution!). There is also an excellent presentation of six facts that clearly demonstrate that no fossil can be more than 1 million years old (Chapter 8).

Chapters 10–13, which provide evidence from **arctic ice and ice cores**, discusses, among other things, the fact that Greenland was recently entirely free from ice, that each layer in an ice core does not correspond to a single year, and notes that a squadron of World War II planes abandoned in Greenland in 1942 were found buried under 260 feet of ice in just 50 years!

The next section, evidence from the **oceans and plate tectonics** (Chapters 14–18), delves into plate tectonics and the fact that subducted slabs of crust are still



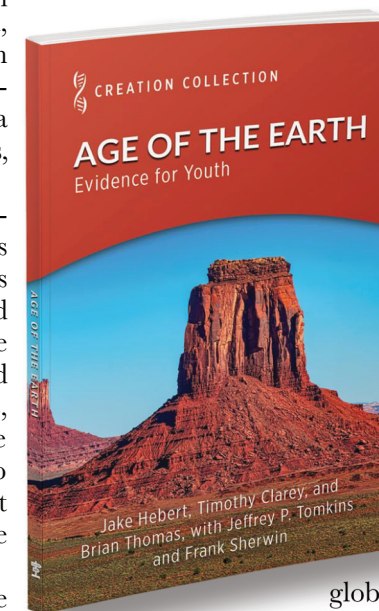
cold and have not yet been melted by the hot mantle is clear evidence of very recent movement of the Earth’s continental plates consistent with Creation models of Noah’s flood, as is the evidence for a young seafloor based on the rapid deposition of sediments.

Next up, evidence from Earth’s **atmosphere and magnetosphere** is presented in Chapters 19–22. This evidence includes the fact that, based on an Evolutionary model, a young Sun would be too weak to warm a young Earth and so the Earth would have frozen solid and remained so to this day. Another piece of evidence that challenges Evolutionary thinking comes from supposed 2.7 billion year-old rain drop impressions preserved in hardened volcanic ash which proves - contrary to Evolutionary theory - that the Earth’s atmosphere has remained unchanged since it first formed.

The final section (Chapter 23–29) looks at the **geological layers and rock formation**. Numerous pieces of evidence for a young earth are presented, including the fact that current erosion rates are too rapid, there is a lack of erosion between rock layers, and that mud-stones must have been rapidly deposited - all of which are consistent with a recent, global flood.

Overall, this book will provide the interested reader with a short synopsis of some key pieces of evidence that clearly show the Earth was recently created and that a global flood occurred only a few thousand years ago.

Jake Hebert, Timothy Clarey, Brian Thomas *et al.*
Age of the Earth: Evidence for Youth
Paper/full colour 192 pages



Part of the fun of attending the CRS Conference in St. Louis, Missouri, at the end of July 2025 was participating in the pre-conference geology workshop, which included a morning field trip before the temperature became too hot (highs of 35°C every day of the conference). As a Canadian, I joked that I could finally thaw out completely.

The field trip started at the Mastodon State Historic Site and was led by Zachary Klein, from the Missouri Association for Creation (MAC). The site consists of 418 acres containing the Kimmswick Bone Bed, named for its proximity to the town of Kimmswick, where many Ice Age fossils have been found. Albert C. Koch, an entrepreneur and St. Louis museum owner, excavated some bones along Rock Creek. He thought he had discovered something new and named it the Missouri Leviathan (jennifer.sieg 2011). In fact, he had constructed a composite skeleton from

bones of several different individuals. He added extra vertebrae and ribs, inserted pieces of wood between the vertebrae, and positioned the tusks so that they pointed sideways. The aim was to exaggerate the animal's size as much as possible, creating something twice the size of an ordinary mastodon, which was approximately the size of an Asian elephant. Then he took it on tour around North America and even over to Europe (Lotzof, n.d.).

At the end of his European tour, Koch displayed his monster in an exhibition hall in London, England, where one of the visitors was Richard Owen. At the time, Owen was the Superintendent of Natural History at the British Museum. He purchased the fossils from Koch in 1844. Then he took the skeleton apart and rearticulated the bones in an anatomically accurate pose, making it the first accurately mounted mastodon skeleton anywhere. The Missouri Leviathan is still on display at the British Museum in Hintze Hall, much as Owen had assembled it roughly 180 years ago (Lotzof, n.d.).

Secular scientists believe there were as many as 50 Ice Ages, but they have trouble explaining how there could have been both lower temperatures and higher evaporation/precipitation at the same time. Creation scientists, on the other hand, have proposed that the global upheaval of

the Genesis Flood was its cause. Genesis 7:11 says that “all the fountains of the great deep burst forth”. Underwater volcanoes would have warmed the oceans substantially, resulting in increased evaporation, which later became increased precipitation on the continents. Volcanic aerosols (tiny particles) from both submarine and terrestrial volcanoes would have reflected some of the sun's light back into space, cooling the continents enough that the heavy snow during the winter didn't have enough time to melt in the summer and accumulated as massive ice sheets (Hebert 2021).

The second stop on the field trip was at a road cut with an outcrop of the Kimmswick Nautiloid Bed (KNB). The KNB is part of a Late Ordovician medium- to coarse-grained limestone unit called the Kimmswick Formation. Both of these are also named for their proximity to the

town of Kimmswick, but they are not associated with the Kimmswick Bone Bed. Secular scientists generally believe the Kimmswick Formation to have been deposited in a calm environment. However, it ranges from 10 to 30 meters thick and is described as having bedding that varies from massive to cross-bedded (Klein 2023). Massive bedding shows no visible internal layering or structure, suggesting rapid deposition or post-depositional disturbance, such as burrowing by

animals or chemical alteration. This would mean that the sediment accumulated suddenly, burying creatures quickly and uniformly, as is believed to have happened during the Flood. Cross-bedding occurs where sediment is deposited by moving water or wind in thin layers at an angle to the bedding plane. The angle and orientation of the cross-beds can be used to try to figure out which way the current was moving. The Kimmswick Formation contains many fossils, some of which can be seen in the road cut and in rocks along the road where we stopped.

The KNB has an abundance of straight-shelled cephalopods called orthocones, which are concentrated in specific beds, rather than being distributed throughout the Kimmswick Formation (Klein 2023). Orthocones are similar to the nautilus living in the ocean today, but they have

straight shells that resemble unicorn horns. In calm water, orthocones would be buried so they point randomly with no preferred direction. However, in a current, the tips of their shells would mainly point upstream, while a few will be oriented perpendicular to the current. A sample of the orientations of these fossils has been found to indicate that they were buried in a strong current, challenging the secular paradigm, but more research is needed (Klein 2023).

Our final stop on the field trip was at Blackburn Park in Pacific, Missouri. The park the field trip went to sits on a bluff overlooking Route 66 (now Interstate 44), on top of the St. Peter Sandstone, a Middle Ordovician sandstone layer made of pure quartz covering much of North America that makes up the base of the Tippecanoe Megasequence (Morris 2011).

Megasequences are groupings of sedimentary rock layers with an erosional surface called an unconformity at the top and bottom that can be traced across continents. A megasequence often starts with a sandstone layer at the bottom. The grain size becomes progressively smaller as you go up through the sequence. On top of the sandstone is usually a layer of shale or siltstone, made of really tiny particles, and then the layer on top of that tends to be made up of particles precipitated out of solution, such as limestone (Clarey 2020).

An amazing feature of the St. Peter Sandstone, which is 80 to 100 feet thick on average (Davis 2014), is that the unconformity below it is almost perfectly flat. Dr. John Morris compared this to “a sheet of paper 0.1 millimeters thick measuring 1 kilometer by 0.6 kilometer draped across a surface flattened with extreme care.” The uniformitarian explanation is that the sand was deposited during an ocean transgression (when the sea level rose and the ocean supposedly covered part of the continent) over millions of years. However, the only way for this unconformity to be so flat is by “sheet erosion,” which is when water flows rapidly across a wide area at an equal depth. This is believed to have happened as enormous tsunamis set off by “the fountains of the great deep” breaking open pushed the ocean onto land. Erosional forces today, such as rivers, leave un-

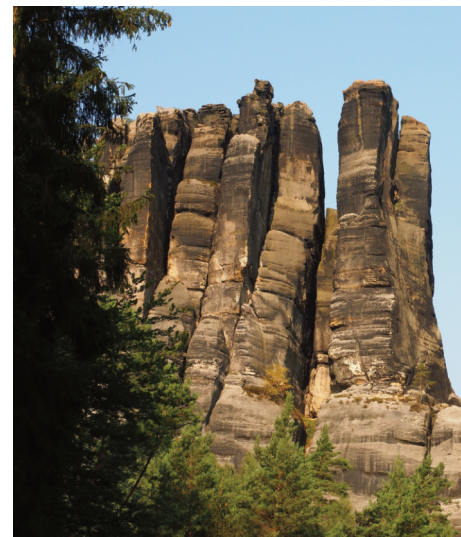
even surfaces with valleys and gulleys (Morris 2011).

Below Blackburn Park are old sandstone mines. This is because the St. Peter Sandstone is 99.44% silica, making it suitable for glass manufacturing, which has been a local industry since the late 19th century. The sandstone crumbles easily when freshly exposed, but weathering hardens it, making it tough and durable. The hardened surface is called a patina, and it can protect the softer rock underneath. Another feature of the St. Peter Sandstone is that it contains almost no fossils. It is also quite uniform, with no bedding (Abeln 2009), and is described as massive with some localized cross-bedding (Davis 2014), which was explained earlier as evidence that it was deposited quickly during the Flood.

The field trip was a fast run through some interesting geological areas. I wish I had planned on staying a couple of extra days so I could go back and hike the trails at Mastodon State Historic Site and Blackburn Park.

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A common example is that they can be taught to run through a maze to reach food. Their talent in this area makes them excellent animals to use for many kinds of scientific experiments. A 2021 *Nature* Magazine study determined that over 100 million mice and rats were used in U.S. research laboratories annually, making them by far the dominant lab mammal. When I was doing biomedical research at a medical school, we used only white rats for all of our research. For this reason biologists know a great deal about them including their genetics.

Rats as Pets

Rats have co-existed alongside humans since very early in recorded history. In America, they have been kept as pets back to the 1800s, where they made affectionate, intelligent pets for the upper classes. A white rat named Sammy belonged to Beatrix Potter, the author of the Peter Rabbit stories. Sammy was often featured in her novels.

Most large cities have rat clubs and even rat shows where owners and potential owners can become acquainted with other owners. This allows owners to witness the enormous variety of rats. Their colors alone, besides white, include black, cinnamon, chocolate, gray-blue, and silver.

Because rats are naturally gregarious, they do much better in the company of other rats. Many owners buy rats in pairs of the same sex to ensure they have a cage mate. Opposed sex mates often end up producing a litter of pups. This may not be a problem if one is part of a rat club and can sell the pups to other members.



Not in Alberta

When it comes to rats however, the province of Alberta is very different from most jurisdictions. Except for white rats kept in laboratories of educational or research institutions, possession of these creatures in the province is strictly illegal. Prior to 1950, there were no wild (Norwegian) rats in the province. They had been approaching however at a rate of about 24 km per year from the east. Initially introduced to the continent in the east about 1775, these animals reached the Alberta border through Saskatchewan about 1950. Since agriculture is so important in Alberta, the province promptly introduced the Rat Control Program. Continuous surveillance and extermination have ensured that Alberta remains happily rat-free.

Their Intelligent Design

The rat is nevertheless a super well-designed creature. This includes even their ugly tail. The tail has three functions besides helping them balance as they traverse across a tree branch. These include thermoregulation to maintain their body heat within a certain narrow temperature range. They do this by dilating or constricting their tail blood vessels. When the rat's body temperature rises by a few degrees, the tail vessels (especially the veins) swell, causing *vasodilation* allowing warm blood to flow through the tail to facilitate cooling. This system works very well to regulate their temperature.

Rats have poor vision but their other senses are highly developed. Especially the sense of smell, touch, and hearing are highly developed. Their complex nervous system and brain gift them sophisticated cognitive skills, including empathy, abstract rule learning, and advanced problem-solving. Rats also effectively communicate with each other by using body language like humans. Rat brains are structurally so similar to human brains that, for centuries, researchers have studied rat brains to understand the details of the workings of human brains.

They navigate primarily by using their sense of smell, which responds, not only to the common scents that all

mammals rely on, but also can sense many chemicals that exist in the air. Rats breathe through their noses, causing the air to move past a patch of skin rich with smell receptors and olfactory neurons. Smell particles called odorants then bind to the olfactory neuron cilia, triggering a neural response. Rodents' olfactory lobes are much more pronounced than in humans, making rodents' sense of smell their most important sense organ. Specifically, rats have 1,207 olfactory receptor genes, ranking them far above humans' tiny 396 olfactory receptors. Dogs have only 811 olfactory receptors.

Rats 1,207 olfactory receptor genes make them critical in clearing landmines during human wars. Rats do not weigh enough to set off the landmines, but they accurately locate where the landmines are so they can be safely detonated. Rats are also now used to sniff for tuberculosis disease in humans. They are both more efficient and accurate than microscopic evaluations. Rats can successfully sense tuberculosis in 70 percent of cases in patients with HIV infections, whereas microscope laboratory testing is only 20 percent effective. Chemicals called pheromones are also a critical means of rat communication, emitting them as warnings of danger or when scent marking to let other rats know they were here.

Rats also explore using their whiskers to interact with their environment. They also have a second smell organ, the vomeronasal organ. This organ is set in a thin, ovoid space in the lower portion of the nasal passage beside the septum. When rats sniff and taste, scent molecules dissolve in their mucus, which is evaluated by the vomeronasal organ receptors.

Evolutionary History

The evolutionary history of rodents in North America, evolutionists claim, extends back to the Late Paleocene Epoch, which evolutionists postulate was 56 million years ago. Fossil evidence of modern rats has been found as far back as the Pliocene Era. After decades of looking by paleontologists, as is true of most mammals, the fossil record

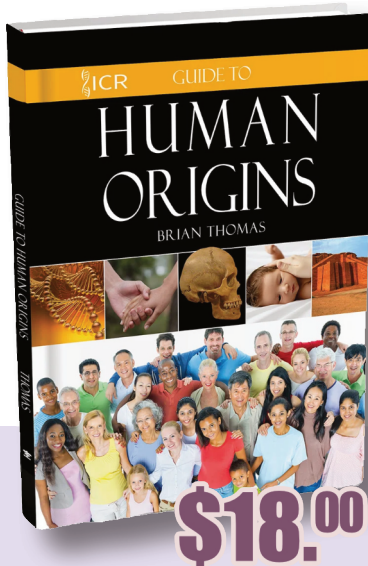
has failed to reveal any evidence of their evolution from some putative non-rat precursors.

The explanation for this problem is: "the fossil record supporting rat evolution is poor" meaning the fossils proving their evolution exist, we just have yet to find them. In spite of over a century we have yet to find any evidence for their evolution from some putative non-rat. Paleontologists claim the reason we have no evidence of rat evolution is not only because of "the gaps in the fossil record" but also because of "the wide variations in dating." Therefore, the "lack of fossil evidence prior to the Late Paleocene makes the understanding of evolutionary relationships between rodents above the familial level a continuing quest." The reason we have no evidence of rat evolution is because they never evolved from some non-rat ancestor. It is clear that they are marvelous creatures even though many are forced to rely on digging through garbage to survive. This is not their fault, but the fault of living in a fallen world.

Endnotes

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Brian Thomas

Guide to Human Origins

In the "ICR Guide to" Series, this new book provides the usual popular features, 2 page discussions on important topics, accompanied by amazing illustrations. The discussion is aimed at youth, grades 7 to 10. The foundational section is the Bible's account of our ancient history. The significance of these events contrasts with what became of the descendants of Adam and Eve. We consider fascinating examples of writing, architecture and other artifacts. And where do fossil artifacts fit in to all this, if at all? A stimulating overview of this very large topic!

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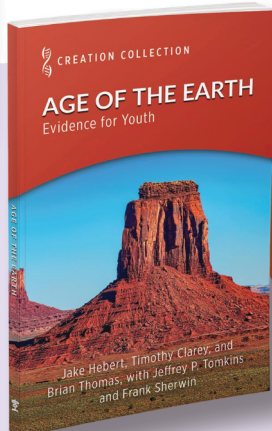
Institute for Creation Research Authors

Space: God's Majestic Handiwork

It is not too soon to discuss space, our solar system and specific planets with young children. After all, the secular world does their best to introduce complex topics to young children. If children can see the sun, moon and stars in the night sky, they are ready to be introduced to topics like the big bang and space craft as well as the sun, moon and stars. Enjoy the text and wonderful illustrations! For children up to ten years.

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Jake Hebert, Timothy
Clarey, Brian Thomas et al.

Age of the Earth: Evidence for Youth

This booklet provides a synopsis of key pieces of evidence that the Earth was recently created. Besides setting the scene with biological data demonstrating young ages, the book discusses 1) arctic ice and ice cores 2) oceans and plate tectonics, 3) atmosphere and magnetosphere, and 4) geological layers and rock formation. If the context of these topics is new to you, this is a great occasion to become better informed!

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**Some minds
are like
concrete!
Thoroughly
mixed and
permanently
set. Not yours
we hope!**



Margaret Helder

Tour Guide: Royal Tyrrell Museum (6th edition)

This booklet is designed for convenient consulting as you move through the museum. A separate map highlights location in booklet and museum of particular highlighted specimens (mainly dinosaurs). We also provide links online to some more in-depth discussions in the museum on the merits of evolution theory. This guide is a great way to discover how well Alberta's fossil treasures display the work of the Creator!

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