

by  
Margaret  
Helder

## Flip Flopping on How to do Science

Some years ago, I had occasion to collect a water sample from a small pond south of Lake Manitoba. The fun part was going back to the lab and looking at a drop of the sample under the microscope. I was sampling lakes and ponds every day, but on this occasion I screamed at what I saw. There before my wondering eyes were relatively large, brownish algal cells with fierce looking spines. They were spinning slowly as I watched.

The beauty of such distinctive cells is that they are easy to identify from pictures. It is not like birds, where you know what you are seeing, but you can't find a picture or description that matches anywhere.



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# Dialogue



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## Startling Case Of an Aussie Moth

Everyone knows that there are amazing phenomena in the natural world which are totally unexpected. Consider, for example, the male horseshoe crab whose eyes are one million times more sensitive to light at night than during the day. Shakespeare referred to such situations when he had Hamlet declare: "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy." (Act 1 Scene 5)

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In that context, would you believe that there is a night flying moth that migrates long distances using the night sky for its navigation system? Let's see what that moth would need to achieve this: 1) adequate eyesight to see and identify objects in the night

sky, 2) brain cells able to identify and respond to a correct pattern of stars, 3) a biological clock to follow the motion of the stars across the sky (15 degrees of motion per hour) every night, 4) a compass to enable the brain to plot a straight course while the angle to the target stars continues to increase, and 5) an inborn ability (algorithms) to manipulate into a specific migration route, the observed mathematical values that also change as the days pass.



Apparently the impossible is possible. The Bogong moth of southeast Australia fills all these criteria. This little brown moth about 2.5 cm long (1 inch) (*Agrotis infusa*) is simultaneously considered a crop pest and endangered. It lives in the dry-land plains of New South Wales within a radius of about 1000 km from the Atlas Mountains on the southeast coast of Australia, south of Sydney. In the fall (April), female moths lay their eggs in this large area of New South Wales. The caterpillars soon hatch and happily munch on broadleaf crop plants in pastures and regular fields, and in woodlands and forests. The caterpillars, with their broad tastes, grow to about 5 cm long (2 inches) and then form pupae in the soil. After a few weeks as pupae, adults emerge. This is around August or September. But the



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# What was Special about Creation Weekend '25 ... Everything

Once a qualified and interesting scientist has agreed to headline our next Creation Weekend, the members of CSAA's executive have the fun task to choose which presentations will be featured. Every speaker has a menu of titles, but not all of them can be accommodated in one weekend. Choosing the line up of presentations is no easy task. Each member has different preferences and some choices were more recently presented than others. Nevertheless, year after year, the actual material presented fits together beautifully and seems to be the best of possible choices. So it was again this year that our speaker's three lectures were stimulating, upbuilding and interesting.

Dr. Brian Thomas, research scientist from Institute for Creation Research, presented first his special research focus: entitled "Fresh fossils from four continents" Dr. Thomas pointed out that skin in animals is 96% collagen. It is the most abundant protein in the body. It provides structural support for skin, bones, tendons and other connective tissues. This organic compound can last 1000s of years, as we well know from ancient parchments (made from animal skins).

In view of the fact that collagen has been found in connection with a variety of fossils, the question comes up how long that organic matter could have lasted before being lost to decay. Apparently, said Dr. Thomas, it depends upon the temperature and pressure of the fossil environment. Dr. Thomas and colleagues conducted tests in the laboratory and from these results they calculated how long, in a best case scenario, any collagen could last when it is connected with a fossil. The answer that they derived was at most a half million years. This may seem like a long time, but it is nowhere near enough time to allow for collagen to still be connected to fossils that, according to popular assumptions, have been buried 70 million or so years.

Among the fossil creatures mentioned by Dr. Thomas with non-decayed organic material was a horned dinosaur specimen *Pittacosaurus* from China, a slight frisky dinosaur *Caudipteryx* with actual chromosomes, a tyrannosaurid *Tarbosaurus* with red blood cells from Poland, *Nothosaurus*, a marine reptile with blood vessels from Poland, and a collagen containing duck bill dinosaur *Edmontosaurus* from Western Canada.

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# Dialogue

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# Flip Flopping on How to do Science

In this case, pictures quickly told me that this was *Ceratium hirudinella*. Google this name to find photos online. You will quickly understand why I was so excited!

Probably nobody has viewed algae from that pond either before or after my visit to the area. But that does not mean the algae were not there! We know that nature is real and we can count on it to be the same and to act the same today, tomorrow and in the past. I own a book for example, written by a Francophone monk Frere Irene-Marie of Montreal, who published this book in 1939. It includes pictures and descriptions of beautiful single celled green algae called desmids. This book was useful to me, many years later and far from Quebec, because these algae can be counted on to act the same both far and near, and down through the years. This understanding of nature as dependable, is basic to the practice of science.

Dr. Kurt Wise, in his book *Faith Form and Time* (2002) points out that our expectation that nature can be studied, is in fact based on the Bible. Concerning Genesis 1:1, for example, Dr. Wise declares "Implicit in the very first statement of Scripture is the claim that the physical world does exist ... Thus implicit in this statement is the claim that the truth about the physical world can be known and should be known." [p. 31] Thus "the physical world exists, that information about it should be known ... if any of these claims were false, the study of the physical world would be unjustified and impossible." [p. 33] Scientists may and do disagree on interpretations of observations, but all/most of them have agreed until now that what they are looking for, is truth. Since the Middle Ages, this worldview has dominated naturalist agendas as dedicated people developed the pursuit of science.

A recent article in *Nature*<sup>1</sup> calls the above description of science "Dominant science" or "Western science." This approach is rooted in the Old Testament view that nature is amenable to study because God made it and God is dependable. But the article in *Nature* recommends that we abandon this western understanding of nature with its methods such as experiments, measurement and conclusions and instead embrace "other ways of knowing." [p. 333] The article recommends that we support "philosophies, methodologies, criteria and worldview" from ancient peoples with their pagan religions from around the globe. Ideas about sacred sites, animal spirits and origins myths must be recognized under this scenario as "real knowledge." [p. 333]

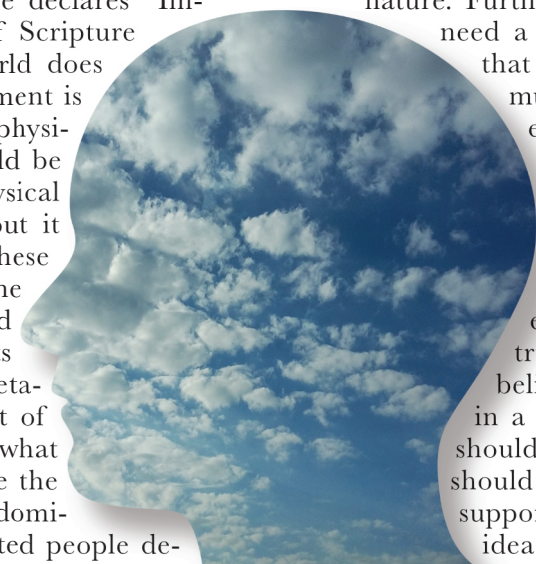
One person who objects to this new view of science (which is not based on the actual study of nature) is atheist Jerry Coyne. His blog informs us that the influential journal *Nature* is lending its support to the idea that we should "change science from an endeavor finding truth about nature to an endeavor that's a lever for social justice." [i.e. more scientific jobs and money for people in proportion to their representation in the population rather than actual studies and qualifications]. The blog further claims that the *Nature* article supports the idea that "science" be based not on the tools of modern science but on nonscientific aspects such as unsubstantiated stories and myth.

Dr. Coyne and most of his colleagues in the academic establishment, consider that matter and processes represent all of reality. They deny that God exists or that nature displays the work of God's hands. Thus, these people reject a Christian worldview on the creation, while at the same time basing their expectations of the reliability of nature on God's unchanging nature. Furthermore, they understand that we need a standard of truth in research in that they know that all practitioners must report their observations honestly. Nevertheless, they actually eliminate truth when they banish any idea of God from their work.

At the present time we can see that there is a movement in scientific circles away from seeking truth to a promotion of cultural beliefs. A specialist in neuroscience, in a blog, insists that science can and should make its own truth. Society should decide what ideas they want to support and how to arrive at those ideas. Decide what questions scientific practitioners should ask to obtain the answers society seeks. Thus Sara Giordano declares "critical scholars offer democratic processes for people to determine which values are important and for what purposes knowledge should be developed." [*The Conversation* September 4, 2025.]

It is evident that when society abandons God and the gospel, society begins to descend into chaos. Society's leaders are not looking for truth but rather for self-serving agendas. When all pretense of seeking truth in general society is gone, the claims of the gospel surely will become more and more appealing to anguished people who have no hope. So, take courage and be prepared to share the hope that is in us!

1. Tara G. McAllister *et al.* 2025. Decolonize scientific institutions, don't just diversify them. *Nature* 644 (August 14): 331-334.





I joined the Creation Research Society in 2023 because God put a desire in my heart to do research and publish technical papers. My undergraduate science degree has no major, and I've received some criticism for that, but the program I enrolled in allowed me to try a bit of everything and get a well-rounded base of scientific knowledge. Then God gave me a job where I have the freedom to do the things I love. I needed some intellectual stimulation, though, so I told God, "I need some science I can sink my teeth into." In September 2024, He answered by handing me a paleoanthropology assignment and connecting me to a co-author, Carol Adams. We decided to attend the 2025 CRS Conference at the end of July, and Carol suggested that we submit an abstract and present our work.



There is so much to report about what happened at the conference. For most of the sessions, there were three presentations running at the same time, so I had to pick and choose which ones to attend.

On the official first day of the conference, the plenary session was given by **Dr. Jake Hebert** from the Institute for Creation Research (ICR). He shared a summary of what he has been working on for the last while—gathering evidence for greater longevity in animals in the pre- and immediate post-Flood world. He has published articles in the *Creation Research Society Quarterly (CRSQ)* about the larger sizes of fossil *Crassostrea* oysters, sharks, and crocodilians. The similarities between many fossil and living species are possibly signs that the living creatures descended from giant ancestors that lived longer and took longer to mature. If this were the case for animals, it may also be the case for humans before the Genesis Flood as well, explaining the extended lifespans of the patriarchs listed in Genesis 5 and 11 and possibly even the reports of giants later on.

Later in the day, **Dr. Andy McIntosh**, from the UK, shared work he has been involved in regarding the spray system used by bombardier beetles to eject a series of 400-500 explosions per

second as a defence mechanism. At Liberty University, engineering students are working on developing a proof-of-concept model, which could also become a research tool to further develop a sprinkler system for fire suppression in places where fire can be catastrophic, such as in submarines and space vehicles. The idea is for an infrared camera to detect a potentially dangerous heat source and direct a nozzle to spray water/vapour mist precisely at the hazard.

The next presentation I attended was by **Dr. Kevin Horton**. He showed drone video footage and photos of Cascade Butte, Cascade, MT; the Little Missouri Badlands of North Dakota; cliffs above Moab, UT; and the convergence of the Little Colorado River with the Colorado River as examples of what he interprets to be

bottom-end hanging canyons. His hypothesis is that these features formed during the receding phase of the Flood, as the currents changed rapidly and the water became channelized. What he presented builds on Michael Oard's hypothesis published in the March 2011 issue of *CRSQ* for how the Grand Canyon was formed.

**Dr. Robert Carter** from Creation Ministries International (CMI) presented a critique of Dr. Joshua Swamidass' Genealogical Adam and Eve Model. The model postulates that Adam and Eve may have been selected by God from a previously evolved human population and given "humanness," or God may have created them from scratch, but with no distinction from the evolved humans. Then they would have interbred with the population lacking this humanness, and their DNA would have disappeared from the population over time, but not their genealogy. Dr. Carter introduced a population modelling software that he has developed to test this model, showing that Swamidass' assumptions about ancestry are wrong. He also showed how complicated the picture becomes due to geographic separation and local mating patterns. Swamidass' model leaves uncertainty about whether all people were genealogically descended from Adam by the time of

Christ, resulting in some serious theological problems.

Then, **Dr. Jeff Tomkins** from ICR presented some of what he has discovered about the alleged chromosome fusion in an evolutionary common ancestor between humans and chimps. Human chromosome 2 has some similarities with chimp chromosomes 12 and 13 (also called chromosomes 2A and 2B, respectively), so it has been a key argument for the human evolution story. However, Dr. Tomkins has found that the supposed fusion sequence is actually a transcription factor binding site inside a promoter for an important gene, and the alleged cryptic centromere is in the middle of a large protein-coding gene. The differences and complexity cannot be explained by a simple fusion event.

The first day ended with the Henry M. Morris Memorial Lecture given this year by **Bill Hoesh**. He talked about the history of the Creation Science movement and how we are in a wilderness, often shunned by the secular establishment.

The second day of the conference began with a plenary session by **Dr. Joseph Deweese**. He shared the progress being made in refining extraction protocols for fossil DNA to prepare it for sequencing. Modern technologies are advancing rapidly, and the time and cost are both decreasing. DNA extraction has been confirmed from several fossils.

**Dr. Timothy Clarey** from ICR has continued his research correlating geological megasequences across multiple continents, showing a progressive Flood that peaked with the Zuni Megasequence and receded with the Tejas. He published the results of the first three continents in the book *Carved in Stone* and has continued correlating more. In his presentation, he showed his results for Australia and the surrounding islands. This Australasian continent shows a Pre-Sauk Megasequence below the Sauk, but otherwise matches the other continents so far studied.

Continuing the Catastrophic Plate Tectonics (CPT) model, **Dr. John Baumgardner** shared that he has been modelling how the creation of new seafloor during the Flood produced tsunamis that eroded, transported, and deposited sediment into layers on the continents. He says that the process would have generated a tsunami about every 1.5 minutes! As the waves washed onto shore, the previous waves would have been receding, and the overall result was to produce extensive horizontal layers across the continents.

**Dr. Brian Thomas** from ICR shared how fossil specimens exhibit collagen-rich regions under a cross-polarized light microscope, due to the collagen fibers' ability to hold hydroxyapatite crystals in a regular pattern. As the collagen decays, these crystals are released, and these areas go dark. It has been observed that various fossils show spectra of apparent collagen content ranging from abundant to none. To investigate the cause for this, two *Camarasaurus* specimens (sauropods) were compared. They both came from the Brushy Basin Member of the Morrison Formation. One was from a private ranch near Dinosaur, Colorado, and the other was from private property near Devil's Tower, Wyoming, which is believed to be the throat of an extinct volcano. The Colorado specimen showed abundant collagen, but the Wyoming specimen showed none. Because higher temperatures speed up the decay rate, the specimen from near Devil's Tower was likely "cooked" by the heat from the volcano.

So, what was my favourite part of the conference? The fellowship! With attendees from the three major creationist organizations (ICR, CMI, and Answers in Genesis) and many others, there was an amazing spirit of collaboration, even when viewpoints and hypotheses did not align. Conferences like this are a great way to be informed about cutting-edge creation research. It's also a great way to connect with like-minded people and grow your faith.





# Startling case Of an Aussie Moth

Continued from page 1

climate is becoming very hot and dry, which the moths do not like. They start to migrate at night, billions of them converge on the same mountains near the coast south of Sydney. Their route can take one month to cover 1000 km. At their destination they sit out the hot summer months in lovely cool caves at high altitudes.

In the caves, these insects huddle together, as many as 16,000 insects per square metre!! After about four months, the moths wake up and migrate back to their breeding grounds. This time the brain reacts in opposite fashion to the night sky in order to bring the moths home to their fall breeding grounds. After mating, the adults die. These moths make only one round trip. How they navigate so precisely a route that they have never seen, is absolutely amazing.

Scientists trapped some migrating moths and took them to a laboratory for study. They tethered each moth to a thread, allowing it to fly freely in any direction. They used a fancy machine to block effects of earth's magnetic field and on a screen above the moth, they projected a simulation of the night sky. When the sky was portrayed as a normal arrangement of stars, the moths flew southeast. If the scientists flipped the star pattern 180 degrees, the moths flew in the opposite direction. Any other pattern resulted in confused moths.

The scientists asked themselves what object(s) the moths might follow in the southern night sky. Apparently the Milky Way is particularly bright in the south as is a nearby object, the Carina nebula.

These objects do migrate across the sky as night progresses, so if this is what the moths are tracking, they need a way to tell the passage of time (clock) and a compass. The scientists planted tiny electrodes in the moth brain, and then showed specific star



patterns to the moth eyes. Some nerve cells reacted particularly strongly to certain sky patterns. The results were strongest for the bar shaped Milky Way and for the bright areas around the Carina nebula. The data indicate that information from the starry sky is encoded in the moth brains!

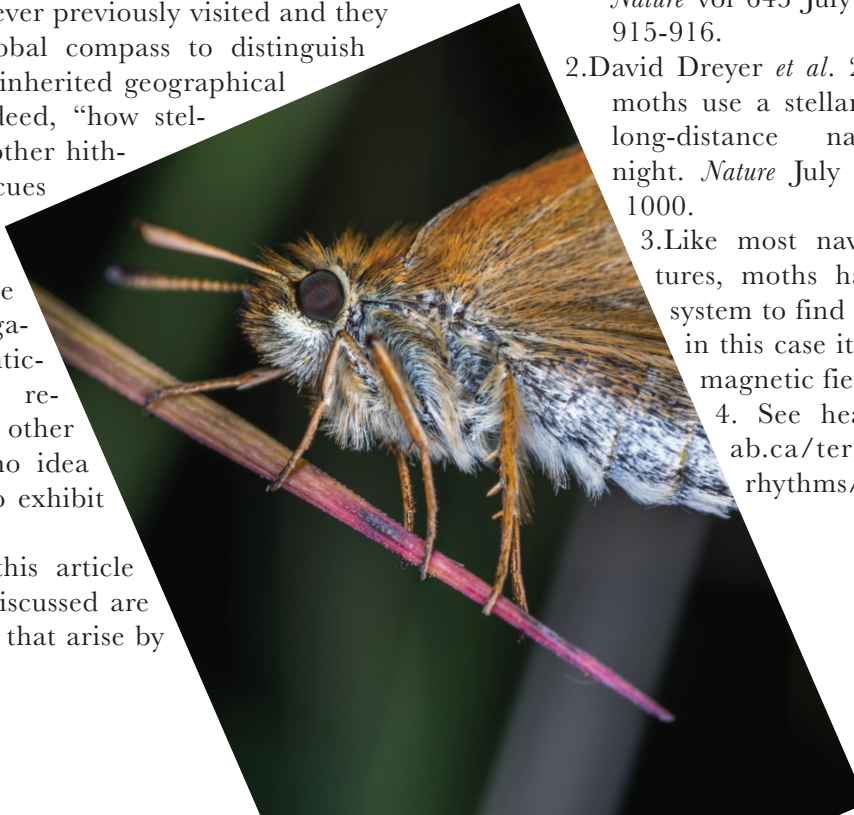
It is evident to the scientists that the Bogong moth is able to adjust its route depending upon geographical location, season and time of night. Where the software (know how or algorithms) come from to enable the moths to adjust to these changing situations, "remains unclear." [Nature p. 999] The technical article in this issue of *Nature*<sup>2</sup> points out that Bogong moths navigate long distances over many nights towards a distant destination they have never previously visited and they therefore require a global compass to distinguish and hold their specific inherited geographical migratory heading. Indeed, "how stellar, magnetic and any other hitherto unknown sensory cues en route are behaviourally and neurally integrated into the brain for robust navigation..... remain enticing topics for future research." [p. 1000] In other words scientists have no idea how the moths came to exhibit these talents.

A commentary on this article reflects that the skills discussed are "ingenious mechanisms that arise by

natural selection [evolution] to shape the navigational strategies leading diverse animals to their goal." [p. 916] Translate these remarks to mean they have no idea how these skills could develop through evolutionary processes, but they are sure it must have happened that way.

Christians have long realized that the amazingly intricate systems which allow the Monarch butterfly to track the sun by means of a biological clock and an amazing compass, must have been conferred upon them by God, the Creator. Clearly super intelligence and a Designer are needed to bring this about. In similar fashion, the Bogong moth is even more amazing in that stars are much fainter and more difficult to follow as a tool for navigation compared to the sun. We may not understand how these creatures work, but we can still praise God that they exist!

- 1.Kenneth J. Lohmann. 2025. Migratory moths navigate using the stars. *Nature* vol 643 July 24, 2025 pp. 915-916.
- 2.David Dreyer *et al.* 2025. Bobong moths use a stellar compass for long-distance navigation at night. *Nature* July 24, pp. 994-1000.
- 3.Like most navigating creatures, moths have a second system to find their way too, in this case it is via Earth's magnetic field.
4. See [headstart.create.ab.ca/term/circadian-rhythms/](https://headstart.create.ab.ca/term/circadian-rhythms/)



## What was Special about

Continued from page 2

## Creation Weekend '25 ... Everything

On every continent young appearing proteins and structures are found in association with fossils which are assumed by most scientists to be many millions of years old. Dr. Thomas has collected scientific references to similar instances, 130 of them from around the world. All of these indicate that these fossils are young in age since their contents decay way too fast to be millions of years old. But of this information and of the implications, said Dr. Thomas, these scientists are "willingly ignorant." If they do not like a piece of information, they ignore it.



Dr. Thomas tied these fossil finds in to the flood of Noah just thousands of years ago. This was an event that could have trapped many creatures in water borne sediment and left them there until modern times. Thus, in this presentation Dr. Thomas explained how we can know that these proteins are relatively young and how these exciting new finds fit with the Bible's history of the world. Dr. Thomas' second presentation was on many extreme chemical barriers that exist to prevent spontaneous chemical processes from coming together to form a living cell. Thus the engineered precision that we see in cellular machines in fact credits the Creator, not nature with bringing about life.

Lastly Dr. Thomas discussed the life histories of many creatures which demonstrate that Darwin's speculations on how creatures adapt to changed environmental conditions, in fact were in error and in any case adaptations do not lead to long term major modifications. The change in topic from chemical details in the previous talk to large creatures and their life histories, demonstrated the variety of information that is relevant to creation. These presentations sent us home reflecting on everything from large dinosaur fossils, to tiny cell components and to the histories of finches and mosquitos and to prairie deer mice and how all these features dovetail so nicely with the Biblical account of origins.



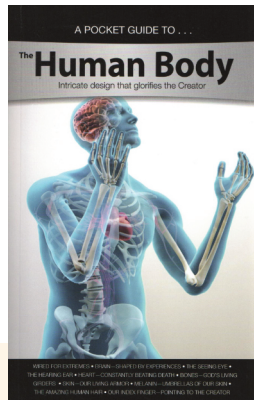


## Darwin's Sandcastle

Gordon Wilson

This overview of young earth science shows us that there are many more issues involved in origins than just the fossil record and DNA. Were there always predatory and disease-causing organisms? Do their features demonstrate design too? What does plate tectonics mean? Why do we care about fossils and DNA anyway? This book provides answers on many issues important to Christians.

Paper/line drawings/222 pages



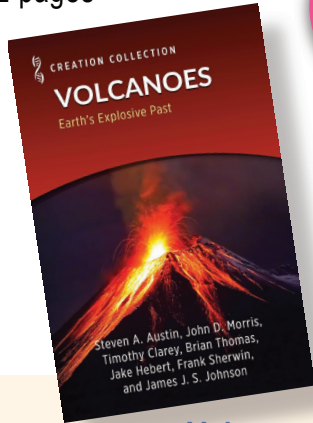
## Pocket Guide to the Human Body

David Menton et al.

There is no doubt that we expect our bodies to work well for us. We take all these good design features for granted. This booklet shows us many amazing design features that point to God as the all-wise designer of these features. The booklet provides fun and fascinating information on eyes, ears, heart, bones, skin and hair. Great information for a very good price!

Paper/full colour/pp 96

**\$6.00**



## Volcanoes

Steven A. Austin et al.

Stories like the eruptions of Mount Vesuvius in Italy and Mount St. Helens in Washington State and Krakatoa in Indonesia have caused us to regard volcanoes with some trepidation. Certainly the appearance of such mountains is hard to ignore. Are these structures important in earth history, especially if the earth is young? This booklet is a handy introduction to the causes and impacts of such eruptions.

Paper/full colour/pp 60

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## Tour Guide Royal Tyrrell Museum (6<sup>th</sup> edition)

Margaret Helder

This handy booklet highlights fascinating insights to the displays in the museum. Dinosaurs and marine reptiles are on display as expected, but there is also a large section which provides arguments for evolution. The guide provides answers to the arguments and fascinating details concerning the dinosaurs and other fossils. The guide comes complete with a map of the major exhibits in the museum.

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