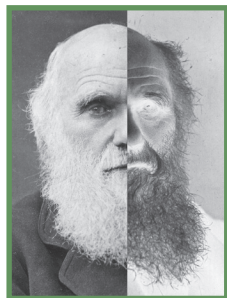


Creation Weekend How Creation Defeats the challenges of Evolution!

For close to 40 years now, the Creation Science Association of Alberta has brought interesting and qualified speakers to the province. In keeping with this excellent tradition, biologist **Dr. Jerry Bergman** is scheduled to speak in Edmonton on **October 14 and 15, 2011**. Dr. Bergman, author of *Slaughter of the Dissidents*; *Persuaded by the Evidence*; and *The Dark Side of Darwin*, is well known as an apologist for creation. His resume included 9 earned university degrees including 2 doctorates. The list of topics he will cover therefore has been chosen to appeal to a



broad spectrum of people. On Friday, October 14 he is scheduled to speak at 8 p.m. on **The Real story about Galileo**. Find out what we really should know about this controversial scientist. Then the next morning, after a complimentary continental breakfast for all, Dr. Bergman will speak at 10:30 a.m. on **Who were the Neanderthals?** No doubt most people are curious about these strange fossil finds. Then at 1:30 pm we are scheduled to hear about **What Mutations do to us and why we care**. Do mutations contribute to the evolutionary process as is widely supposed? Dr. Bergman will provide interesting insights on this whole issue. Then as the *piece de resistance*, Dr. Bergman will discuss **The great take home message of IRREDUCIBLE COMPLEXITY**. Everyone will want to hear about this

exciting topic!!

All these events are free and everyone is encouraged to bring plenty of friends along. The venue for these events is Mill Woods Assembly at 23 Avenue and 66 Street in Edmonton – easy to find and with great parking!



A colleague in creation research, when informed about the scheduled visit of Dr. Bergman to Edmonton, sent the following message: “G R E A T CATCH! Jerry is first class.... ‘Terrific!’ With accolades like this, we don’t need to say anything more!

SINK OR SWIM!

Imagine a dinosaur being swept far out to sea. It might seem like a crazy idea, but it appears that such an event happened in many places. The story however becomes even more amazing when we learn that these victims were unusually heavy creatures for their size, the kind that would be expected to sink like a stone once they were in water over their heads. To some, the story may not come as a complete surprise however. Way back in the dark ages, for example in the spring of 1995, an item appeared in Dialogue. In part, it ran as follows....

“Sometimes it takes a youngster to come up with an interesting question. The occasion was a lecture on dinosaurs, presented in Edmonton’s Provincial Museum on December 11, 1990. Following the main address by Dr. Phillip Currie of the Royal Tyrrell Museum, an excited group of boy scouts was asking most of the questions. “Is it fun to look for fossils?” “How many dinosaurs has Dr. Currie found?” “What is the biggest fossil found in Alberta?” ... Dr. Currie patiently fielded all the queries. Then one young boy asked “Did dinosaurs swim?” As Dr. Currie answered the question, it became evident that this really was an interesting topic.

Dr. Currie remarked that little is actually known about dinosaur habits. There are some tantalizing hints however concerning ankylosaurs or armoured dinosaurs. These remarkable animals were built something like tanks. Their hides were decorated, and weighted down by row upon row of bony knobs and spikes. In Alberta, the vast majority of articulated ankylosaur skeletons are found upside down. They lie on their backs with feet projecting upward. Most experts, Dr. Currie included, suspect that these animals foolishly ventured into water over their heads. Unfortunately, as their bodies were top heavy, these animals tipped over, sank and drowned.

Continued on page 7

By MOXIE

Think Dinosaurs!

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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Few youngsters can resist the excitement of those scary, but mysterious creatures called dinosaurs. Naturally there are lots of books about dinosaurs. Most are written with a young audience in mind. Some, of course, are better than others. While most of the dinosaur books published today feature wonderful illustrations, many of these books unfortunately interpret these creatures in an evolutionary context. Still, there are a number of dinosaur titles which promote a young earth view. Within this number, there are books with different themes. Some of them discuss specific dinosaurs in some detail, where the fossils are found, the relative depth of the rocks in which they are found, how much of the skeleton has been found, anatomical details and possible lifestyles, and so on. These books generally also include chapters on the Biblical context of dinosaur occurrences. Then there are other books which more fully discuss the Scriptural time frame when dinosaurs lived. Details concerning specific dinosaurs are in such cases, more incidental.

Ken Ham's new book *Dinosaurs for Kids* can be included within the latter category.

Unlike *Dinosaurs of Eden*, also by Ken Ham and others, which is written for young children (ages 4-7 perhaps), this new book provides a much more detailed discussion of the historical context of dinosaur discoveries. This book is aimed at upper elementary age children, perhaps ages 8-12.

The book features inserted half pages which provides extra details of a situation. Also the context of dinosaur history is presented in terms of seven words, each beginning with the letter "f", for easier memory recall. Thus we move from the theme "formed", to "fearless, fallen, flood, faded, found and finally fiction." Some sections merit more attention than others, but various dinosaur examples and "4 fast facts" help to keep the discussion moving along well.

Obviously this book is an ideal addition to a youngster's collection of dinosaur books. No one title satisfies all interests, but for interesting discussion

suitable for the upper elementary audience, this one is a great choice.

Ken Ham. 2009. *Dinosaurs for Kids*. Hardcover. Full colour. Master Books. 64 pages.



© Lori Lyman

Who cares what Darwin was like?

There are a lot of books on Darwin in existence, and these tend to idolize him. This book is quite different. It is undoubtedly a major contribution to the history of science. Even if you already know a lot about Darwin, you will learn something new.

Creation-evolution issues commonly end up in the courts. In 2005, Judge Jones (as many other judges before him) asserted that there is no conflict between evolution and traditional belief in God. (p. 45). Bergman shows that this is untrue. He cites eminent scientist William Provine, who makes it clear that such a premise is based on ignorance, intellectual dishonesty, or wishful thinking. Many other leading scientists cited by Bergman, such as Jerry Coyne, the late Stephen Jay Gould, Scott Todd, and others, are also of the opinion that evolution and traditional belief in God are not compatible. (Of course, one can hold contradictory beliefs at the same time, but this does not make them compatible.)

In fact, most scientists recognize this incompatibility. A survey shows that 98.7% of leading scientists reject a theistic worldview, and 84% rejected all theistic religions. Another survey, of 149 leading biologists, found that only 6% of them believe that evolution has any purpose beyond the survival of the organism. [Strictly speaking, even the term “purpose of survival” is itself misleading, as it would imply that evolution has some kind of concern for living things. Survivorship of organisms is an outcome, not a goal or purpose. Evolution just happens: It has no goals or purposes.]

Atheism was no stranger to Darwin’s family. Darwin’s father and grandfather had been atheists. Darwin contended that religion can best be undermined by promotion of evolution rather than by open attacks on religion. His “soft” atheism was driven by the desire not to antagonize believers, and probably also was motivated by his desire not to alienate his devout wife.

Darwin had many severe psychological problems. Bergman suggests that at least some of these problems stemmed from Darwin’s internal conflicts regarding his rejection of God and other implications of evolutionary theory. (p. 108, 111, 117). Interestingly, Darwin may have suffered from Asperger’s Syndrome, which is a developmental disorder that is not as severe as conventional autism.

This work presents many interesting facts. For instance, did you know that children tend to disbelieve evolution because they see the world as filled with design and purpose? (Could it be that God created them with this kind of thinking, just as he had created our hearts to have a God-shaped vacuum? (p. 76). Evolution education aims to teach children, and adults, to see the world as purposeless, and to see the design in nature as an illusion.

How many of Darwin’s ideas were actually his? Bergman shows that Darwin often copied from others without giving them proper credit. For instance, English naturalist Edward Blythe (1810-1873), a creationist, came up with the ideas of nature selecting the most adapted before Darwin did. Otherwise, Darwin’s ideas were quite primitive, even for his time. He basically believed that traits were prepackaged, and passed on to the next generation. (Modern genetics teaches that it is information that is passed on the successive generations).

Racism and sexism were common in Darwin’s day, and some have suggested that Darwin’s acceptance of these views were merely because of his being part of a society that held them. Bergman, on the other hand, shows how Darwin went far beyond the prevailing views of his time. Darwin actively developed, extended, and promoted racism and sexism in terms of his theory. For instance, Darwin’s firsthand experience with South American Indians, along with his theory, led him to develop and promote the notion that these peoples are less evolved than white Europeans. (p. 219). Darwin also promoted eugenics, or belief in the perfectibility of man through selective breeding.

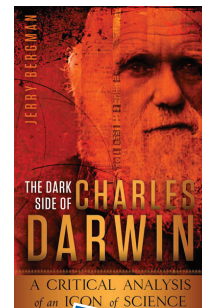
Darwin also studied the differences between men and women. Applying his evolutionary theory to these differences, Darwin saw men as subject to “the survival of the fittest”, while women were less so. For instance, men took active part in wars, which tended to weed out weaker men. For this, and similar reasons, Darwin believed that men were self-evidently more evolved than women. (pp. 246-247).

The reader who does not have a strong background in biology can still get a lot out of this book. It has many

different topics, many not mentioned in this brief review, that can hold the reader’s interest.

Reviewed by John Woodmorappe.

The Dark Side of Darwin, by Jerry Bergman. 2011. New Leaf Publishing/Master Books, 256 pages.





by
Margaret
Helder

Earthquakes – So much yet to learn!

Of all the scientific disciplines which resist solution, earthquake prediction certainly ranks close to the top of the list. One need only review the history of recent major events to discover how difficult this issue is.

Consider, for example, the 7.9 magnitude earthquake in Sichuan province in central China, which took place on May 12, 2008. Concerning this event, a commentator in *Nature* (May 14, 2009) declared: “More so than other quakes, this one has uncovered gaps in earthquake hazard research, both in China and elsewhere.” (p. 153). It happened this way. Beginning in October 2006, the Chinese government established a network of 300 broadband seismometer stations in the western part of Sichuan province. Spaced on average 5 – 30 km apart, these solar powered receptors received signals from an area covering about



370,000 square kilometers. It was the densest array of such sensors in the world, and it definitely was the envy of Western scientists. Nevertheless, when the quake occurred near the towns of Yingxiu and Bailu, it took everyone, including the scientists, by surprise.

It so happens that scientists had formerly studied the nearby Beichuan fault. The data pointed to a very quiet region in terms of seismic activity. And prior to the major event of May 2008, no increase of tremors was recorded. So how could the scientists have foreseen this event? Ob-

viously they could not. Not surprisingly, scientists tend to focus their attention on faults that show active motion, with a history of past large events. They pay attention to regions which might produce a significant event at least every few hundred years, not ones which might be expected every several thousand years!

The Sichuan earthquake of May 2008, then was a surprise because the region had exhibited little recent seismic activity. From this situation, scientists concluded that they had paid too much attention to regions of recent seismic activity and they had therefore underestimated the potential hazard of other areas. But this is a conclusion of futility since what other clues could scientists use to predict earthquake hazard anywhere on the globe?

The Chinese earthquake is an example of a major earthquake event which occurs within a “tectonic plate.” According to current theory, the globe is broken up into a number of large plates which interact with each other at their edges, moving under an adjacent plate edge, or over it. Theory holds that most violent events such as volcanic eruptions and earthquakes will occur at these plate boundaries. However plate tectonic theory gives “no insight into where and when quakes will occur within plates because the interiors of ideal plates should not deform.” (*Nature* November 5, 2009 p. 87). It is evident therefore that scientists have very little understanding of why earthquakes happen at all inside plate interiors and they certainly are not in a position to predict any such events.

One of the most studied regions of intraplate (within plate) activity is the town of New Madrid, Missouri which lies 2000 km from the nearest plate boundary. In this region however on December 16, 1811 and for three months



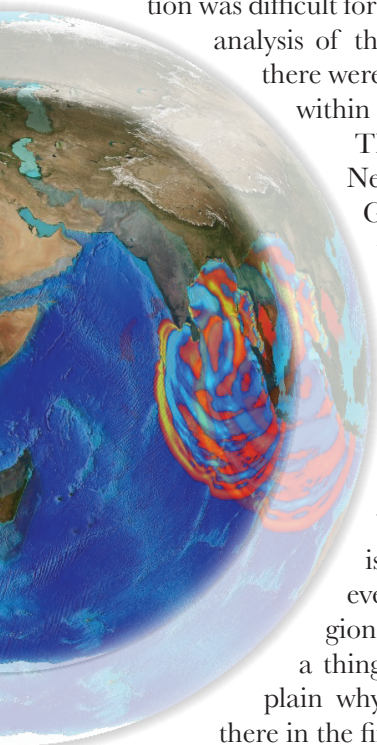
afterward, a series of strong earthquakes occurred which shook the entire eastern half of the country. At the same time, widespread sand blows occurred. These phenomena result when a quake of magnitude 7.6 or stronger, causes saturated sandy sediment to become liquefied. It then violently erupts from the surface and is deposited over the nearby landscape. The sand from the 1811-12 events, covered wide areas of farmland in a layer so deep that cultivation was difficult for many years to come. Geological analysis of the area, moreover, suggests that there were three or four such major events within the past two thousand years.

The mystery of the events near New Madrid lies in the fact that GPS measurements for the past twenty years show no detectable activity in the landscape. There is no obvious difference between the New Madrid region and the rest of the central and eastern United States. So why have there been such events near New Madrid? Nobody knows, and expert opinion is divided on whether more such events can be expected in that region or not. Even if these events are a thing of the past, that does not explain why major quakes ever happened there in the first place.

If earthquake prediction is difficult in intraplate regions of the world, it actually is not that much better near plate boundaries. The disastrous magnitude 9.0 Japanese earthquake of March 11, 2011 is a case in point. Already in 1978 and still in April 2006, according to *National Geographic*, the Japanese government had identified the Tokai region 160 km southwest of Tokyo as the probable site of the next great earthquake in Japan (p. 139). Contingency plans for such an event, with minute attention to detail, have been prepared for the area. Sadly, the terrible (worst ever) earthquake when it did come, was near Sendai, 270

km northeast of Tokyo instead of to the southwest.

Similarly the frightful Sumatra-Andaman magnitude 9.1-9.2 earthquake of December 26, 2004, took everyone by surprise. While scientists had equipment deployed and were monitoring various regions of concern around Indonesia, the actual massive event took place in a region with few sensors because practically nobody expected such a major event where it actually happened. (*Nature* March 2, 2006 p. 31). This event was the first giant event in which even some sensors were able to record the progress of the event. Apparently, over the space of 8 minutes, a rupture occurred which progressed over 1300 km so that a block about 150 km wide was moved about 20 m. The event was much larger than might have been expected in the area. Thus scientists concluded that any such fault can potentially pro-



duce a large event. So much for informed assessment of specific risk!

Thus much as we would like to think that we can control risk, our understanding of these events is minimal at best. Meanwhile, societies and governments must take what prudent precautions are possible, such as strict building codes in areas presumed to be at risk. And when such terrible events do strike, we must show compassion and generous assistance to the victims.



by Margaret Helder

Beauty in Miniature

Anybody studying biology today is aware that proteins form the molecular machines that keep the cells of our bodies healthy. But how many students are told that these proteins are actually beautiful?

Imagine a scene which could be taking place right now in your body. A killer T cell (a kind of white blood cell) has detected that a virus has invaded a cell in your body. The killer T cell squeezes right up close to the cell in question. Then the killer T cell forms a tiny but beautiful vase like structure. The vase consists of three large protein molecules attached end to end together. Then twenty of these composites are attached side by side in a circular formation to make an elaborate vase with 20-fold symmetry. But this vase is not just pretty, it has a purpose. There is a large, very specifically sized opening all the way through the vase, from top to bottom. The vase projects through the killer T cell's enclosing membrane, across any intervening space and through the membrane of the cell containing the virus. The vase is called "perforin" since it perforates the membranes of these cells. Then the killer T cell releases a protein-dissolving granule into the other cell. The pore in the perforin vase must be of the correct size to allow this chemical weapon to enter the target cell. The infected host cell now duly disintegrates and along with it, the invading virus. Whew! That is one less virus infection

to worry about. It is to be hoped that the killer T cells catch most or all of your cells infected by this virus. (*Nature* on line October 31, 2010)

Another study (*Nature* on line November 4, 2010) discussed

how tiny changes in the structure of a protein called HLA-B, enable 1 out of 300 people with HIV to control the virus rather than succumb to its effects. Apparently just four modifications out of hundreds of component parts in the protein, enable these people to stay healthy. What happens is this. The HLA-B protein grabs fragments of the HIV virus and carries them to the cell membrane, sticking them on the outside where they act like flags to call in the killer T cells and you know what the killer T cells do.

Obviously it is not only the beauty, but the precise way in which the proteins are constructed, which amazes biologists today. Proteins are formed when certain small molecules, called amino acids, are strung end to end like beads on a string. At first we just have a long ungainly strand. Left to its own devices, this strand would most likely collapse into a useless clump called amyloid. Thus a commentator remarked in an article entitled *The Dark Side of Proteins*: "The amyloid state is more like the default state of a protein, and in the absence of specific protective mechanisms, many of our proteins could fall into it." (April 8, 2010 p. 828). This, of course, is not what usually happens in our bodies.

While the proteins start as long chains of amino acids, most of them fold up by means of a precise order of events, into complicated three dimensional shapes. But how does this come about when the default position is the nasty amyloids? The author of this

news features points out that: "Most modern proteins fold into globular structures. But their folding patterns are so complex that they couldn't have evolved by accident." (p. 829) He points out that randomly assembled strings of amino acids would almost never fold into a stable shape. One must have a suitable order of amino acid. (Think design.)

Even if the string of amino acids were ever so carefully chosen and assembled, the protein under construction still needs special hardware, provided by the living cell, in order to collapse the strand into the correct 3-dimensional shape. Thus the commentator in *Nature* declares: "When proteins are first synthesized and start to fold, 'chaperone' proteins and related molecules are there to guard against amyloid formation." (p. 829) These 'chaperones' are structures in the cell which are essential for the survival of all proper-functioning in cells. The chaperone makes sure that the protein folds correctly.

Scientists would love to discover all the ways that strings of amino acids could potentially fold and the ways in which they actually do fold. The Protein Structure Initiative was set up in 2000 to seek a complete understanding of the elaborate protein folds. Using fancy techniques, this centre, based in Bethesda, Maryland seeks to map the "protein universe", or all the ways that a protein can fold. Critics claim that in the past 10 years, this laboratory has studied mainly easier proteins, of little biological significance. Thus of the 5000 protein structures for which the folds have been mapped, only 128 are human proteins. Human proteins, for their part, tend to be larger and more difficult to work with than microbial proteins. The interest in mapping the human proteins, of course, is to develop suitable drugs against various diseases.

Other scientists are using the



world's fastest supercomputers to simulate all the possible ways that a given protein could fold. The idea is to use massive computing power to discover correct folding patterns in proteins. But the difficulties are huge. "The number of possible configurations of atoms in larger molecules, over time and in three dimensions, is astronomical. If these kinds of simulation could be sped up 1,000-fold, which even then could take a month of computing time, the pay-off could be high. They might, for instance, reveal binding sites for new drugs to tackle a wide range of medical problems." (*Nature* January 17, 2008 P. 241). So this approach might show promise if we had supercomputers 1000 times faster than today!

That tells us something about the scope of problem.

So here we are, faced with complex and beautiful proteins which our best technology and world wide teams of scientists have not even begun to understand. They can't predict the shape a given order of amino acids will assume once it folds into a protein nor can they manipulate those strands to make the protein do something else. It is obvious that the living cell, made up of many different kinds of



protein, is an absolute miracle! With so many folding options, how does a cell ever achieve a correctly folded protein? Few phenomena in nature demonstrate the absolute necessity for an intelligent designer as clearly as the wonders of protein construction.

SINK OR SWIM!

Continued from page 1

One wonders if the ankylosaurs voluntarily entered deep water, or if a flash flood overtook the victims. Evidences of similar sad events are widely dispersed. American palaeontologist Dr. Robert Bakker, in his 1986 book *The Dinosaur Heresies* (William Morrow and Company, Inc. New York), discussed several occurrences of armour-plated nodosaurs (ankylosaur relatives) found upside down in marine sediments. He asks the rhetorical question whether these dinosaurs foolishly went swimming or whether their carcasses were merely washed out to sea. He concludes: "The problem of oceangoing nodosaurs is especially perplexing because the Como carcass, upside down at the bottom of the Benton Sea, is not an isolated instance. Nodosaur carcasses lying on their backs cropped up in marine beds in Kansas in 1909 and several times since in similar sedimentary circumstances." (p. 40)"

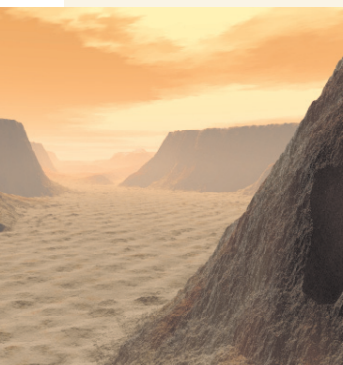
As in the Dialogue excerpt above, so it was that the discovery of an ankylosaur skeleton, north of Fort McMurray, Alberta, on Monday March 21, 2011, should not have come as a total surprise. Here was another terrestrial (land loving) dinosaur found, presumably upside down, in marine sediments. But the site was 150 km from the nearest land based artifacts. This creature did not just step into water over his head! There were some other remarkable features to this case too.

This specimen was found in sediments quite a lot lower down in the rock layers than most ankylosaurs. Also this big and no doubt heavy specimen (5 m long and a very solid 2 m wide) was beautifully preserved in its original three dimensional shape.

In general, ankylosaur fossils are rare. Yet here was an almost complete specimen, not squashed as most dinosaurs are, but shaped as in life, displaying its short but powerful legs, its wide body protected by heavy armour, and its tail supplied with a heavy club at the tip.

The creatures found in the sediments of the Alberta oilsands, north of Fort McMurray, typically include clams, and beautiful ammonites (like squid but with shells), and large swimming reptiles like plesiosaurs and ichthyosaurs. But now here we have a rare skeleton of a terrestrial dinosaur. Moreover these dinosaurs, though rare, are known for being found in sediments which include marine creatures. What kind of flooding, one wonders, would sweep these creatures off their feet and wash them far out to sea? How fast were those water currents moving to carry these heavy creatures along and then dump them in a permanently entombing slurry of sediments? On the topic Robert Bakker himself remarked: "Most fossil bones owe their preservation to quick burial by sediment right after the death of their owner Big bones, such as those of dinosaurs, required big floods of mud to cover them..." (p. 44 and 45)

So the events of March 2011 near Fort McMurray give us lots to think about. Consider the rushing waters carrying dinosaurs and sediment. Think about what kind of flood (perhaps like a tsunami?) that event must have involved. How far did that flooding extend? Most of the other ankylosaurs in the province of Alberta are found much farther south near Drumheller and beyond. Yet most of them were also overcome by deep water. And just to put things in some sort of context – a similar nodosaurid ankylosaur has been found in similar marine sediments on James Ross Island, in Antarctica!! I, for one, am certainly happy there are no similar disasters in the world today.



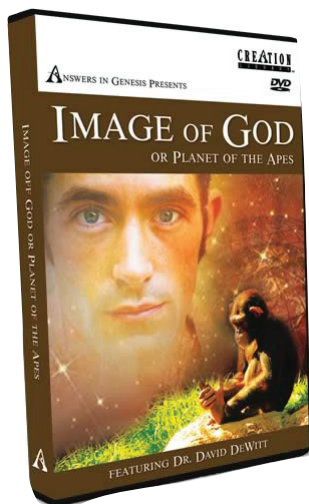


Image of God (or Planet of the Apes) David DeWitt

This specialist in human physiology compares and contrasts humans and chimpanzees. By means of diagrams and models he demonstrates in logical fashion that humans are nothing like chimpanzees. Ideas about descent with modification have no foundation here.

DVD/45 minutes

\$10.00

Dinosaurs for kids Ken Ham

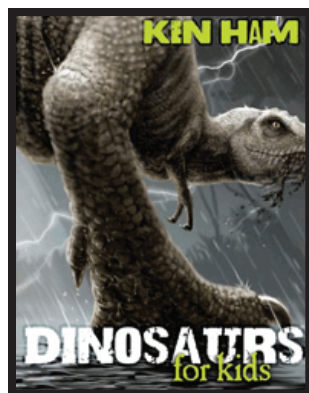
Upper elementary age children will enjoy Ken Ham's focus on dinosaur history. Fast facts, extra fold over pages with contrasting images, and other cool pictures make the discussion lively, relevant and fun.

Hardcover/full colour/64 pages

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The Fossil Book
Gary and Mary Parker
Traces of once living things preserved in rock? That's a weird idea! How did this happen? Learn about the various ways and the various results. This book also discusses how coal and oil formed and what the geological column is all about. Not a new book, but a good one. For ages 10-13.
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The Mind is like the stomach. It's not how much you put into it that counts, but how much it digests!

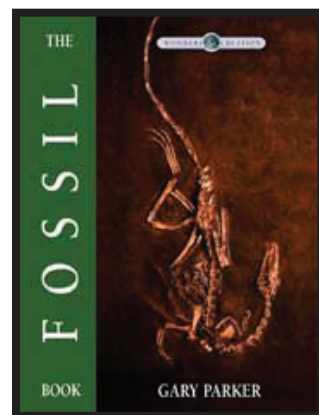


The Dark Side of Darwin Jerry Bergman

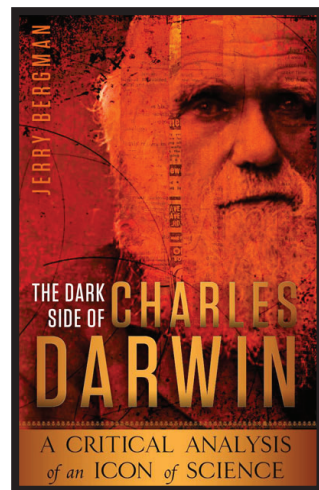
The author provides fresh insights into the life and attitudes of evolution's famous man, Charles Darwin. Although Darwin is widely respected in our society, Dr. Bergman demonstrates that society has been impacted in negative ways by the teachings of this man. Just published!

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