

Armadillos (Spanish for little armoured one) are New World nocturnal mammals covered by a leathery armour shell overlaid by horn. Of all living animals, “few are as amazing ... as the armadillos” (Storrs, 1982). Even Carolus Linnaeus, the fa-

eyes like a pig, a tail like a rat, ears like a mule, armoured scales like an alligator and a carapace (shell) like a turtle (Helder, 1991, p. 31). As Smith states, they are “an endless collection of oddities” (Smith, 2014, p. 124).

In spite of its many oddities, the “armadillo is an ecological success story” that thrives throughout much of the South, Southwest, and Central America (Smith and Doughty, 1984, p. ix). Armadillos are, along with the two other strange animals, anteaters and sloths, part of the superorder Xenarthra. About ten extant genera and twenty extant species have been described, some which are distinguished merely by the number of bands

on their armor. The smallest armadillo species is roughly chipmunk-sized and the largest is about the size of a small pig.

Armadillos have five clawed toes on their hind feet, and three to five toes with heavy claws on their forefeet. They use their sharp claws both to dig for food, including insects, grubs, and other invertebrates, as well

as for making deep underground burrows to live in. Although they thrive in a variety of environments, the most common type, the nine-banded armadillo, prefers to build its burrows in moist soil near the creeks, and streams around which it lives and feeds (Macdonald, 1984).

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Dr. Raymond Damadian Reflections on Science, Medical Technology and Faith

It is not very often that an Edmonton audience has the opportunity to hear a world class expert tie together medical research, technology and Christian faith.

As a young man, Dr. Raymond Damadian carried out research at a small medical facility in upstate New York. He lacked influential friends and research funds. But he had ideas and he set out to make a difference. Despite the ridicule from more famous

Creation Weekend
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experts in physics and medicine, he made medical history.

A physicist at Columbia University had discovered in 1937 that atomic nuclei (in the centre of molecules) have the capacity to absorb and emit radio waves when they are placed in moderately large magnetic fields. After World War II, physicists and chemists routinely studied the nature of various substances using this technique. But nobody thought of studying living tis-

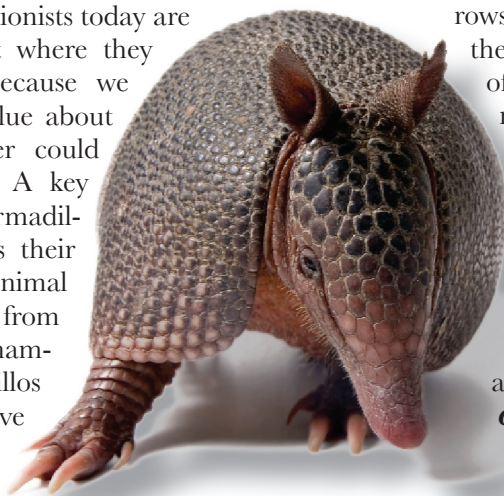
Continued on Page 2

Armadillos Give Evolution Big Problems

By Jerry Bergman

ther of taxonomy, was puzzled about how to classify this “strange-looking mammal” (Smith and Doughty, 1984, p. 2). They are shy, timid mammals that mammalogist David Lamp calls bizarre (1977, p. 36). They look nothing like any other living animal, appearing much more like a fierce miniature dinosaur. These nearly blind and deaf animals must use their keen sense of smell to locate food.

Their origin has baffled Darwinists, and evolutionists today are stymied about where they came from because we have nary a clue about how they ever could have evolved. A key problem for armadillo evolution is their mosaic of animal traits, ranging from insects to mammals. Armadillos are said to have



Dr. Raymond Damadian Reflections on Science, Medical Technology and Faith



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sue this way -- until Dr. Damadian began to wonder about the possibilities.

Dr. Damadian set out to discover if a nuclear magnetic resonance signal could distinguish between healthy tissue and cancer cells. He carried out research on rodents and published his results in 1971 in the journal *Science*. At the time, he had no funding to support his research. Initially many physicists had scoffed at the idea of using NMR (equivalent of MRI) on a living person.

The experts said that the patient would have to be rotated at 10,000 revolutions per minute to obtain any results!! Others said that the laws of physics would not allow for a signal. But he persisted in pursuing funding for further research and he obtained some support in unusual ways.

Once he was successful in obtaining an image in 1977, multinational firms began to exploit his idea even although he held the patent (1972). It was not until 1997 that the Supreme Court in the United States upheld his patent.

Dr. Damadian's invention of the Magnetic Resonance Imaging (MRI) scanner has earned him top awards including the United States National Medal of Technology (1988), and the Lemelson-MIT program Lifetime Achievement Award (2001) as the man who invented the MRI scanner. Also he has been inducted into the National Inventors' Hall of Fame (1989) joining others such as Thomas Edison, Alexander Graham Bell and the Wright brothers. His prototype machine "Indomitable" is on display at the National Inventors' Hall of Fame in Akron, Ohio, on loan from the Smithsonian.



As a Bible-believing Christian, Dr. Damadian is convinced of the scientific truth of the Genesis account of creation and its foundational importance to the church and to society. His first lecture will be entitled "The Story of MRI: to God be ALL the Glory" and the second elaborates more on the total absence of scientific evidence for evolutionary 'Chance Genesis' and the abundance of scientific evidence to the contrary that insists that "You Can't Get There Without Him!" **Be sure to mark Creation Weekend October 23 and 24 in Edmonton on your calendar.** The venue is Mill Woods Assembly at 66 Street and 23 Avenue. Don't miss this opportunity to hear this world class scientist and inventor with his inspiring story and message!!

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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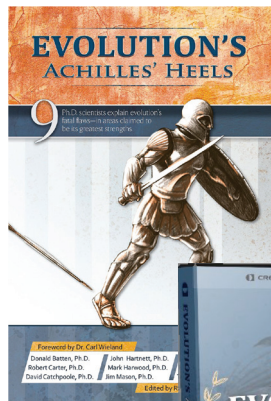
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Review Anyone?

Evolution's Achilles' Heels

(Book review)

Like Alice of Wonderland fame (in *Through the Looking Glass*), who found that she had to run extremely fast just to stay in the same place, so also it is hard to maintain an up-to-date understanding in science. The scientific



journals constantly churn out new articles with new information and arguments. Keep-

fossils and origin of life speculations. The discussion is well foot-noted and includes examples which are not well known, and so are very interesting. Even the chapter on radiometric dating techniques, with its ample use of illustrations, is much more user friendly than most such treatments.

Recommended for anyone who has an interest in current arguments in science and how none of these issues support evolution theory.

Robert Carter (Editor). 2014. *Evolution's Achilles' Heels*. Creation Book Publishers. Powder Springs, Georgia. 272 pages.

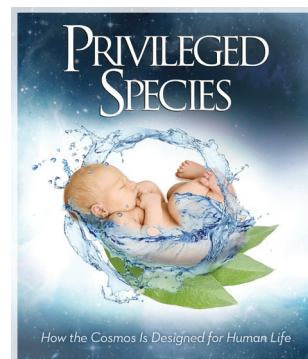
Evolution's Achilles' Heels

(DVD review)

Creation Ministries International

As with the book of the same title, again we find a classy product. This one features interviews with fifteen scientists. This is not a "talking heads" kind of program but one that is accompanied by spectacular visual effects. The depiction of the Flood, for example, is extremely impressive. Every topic comes complete with beautiful illustrations. This DVD is 96 minutes long and includes discussion on t h e

same topics as in the book of the same title. In addition, subtitles are available in 16 languages. One good way to enjoy this video would be to view one topic at a time and then discuss it with friends and/or family. The discussion level, like the book, is intermediate.



Privileged Species (DVD)

Discovery Institute

Sometimes it is good to take stock and reflect on how wonderfully the universe, and our world, are designed to support human life. There are three particularly important molecules without which life would not be possible. These are carbon, water and oxygen. With beautiful visual illustrations, Aus-

tralian geneticist Michael Denton explains why and how these three commodities are so important.

Lastly, Dr. Denton examines various features of our body design which render us unique and effective at our

tasks. The program is 30 minutes long, perfect for catching the interest, and fostering discussion among junior high viewers up to interested adults.

ing up to date is hard work! But it is extremely helpful to have an understanding of current issues in science and their significance. This makes the new book *Evolution's Achilles' Heels* (Robert Carter, Editor) and its companion DVD of the same title, extremely relevant.

This new book is a classy volume with excellent full colour illustrations. Each chapter deals with issues such as the process of natural selection, molecular machines and DNA, radiometric dating, ethics and morality (as impacted by social Darwinism),





Armadillos

Give Evolution Big Problems

Continued from page 1

Their armour plates consist of relatively small, overlapping epidermal scales composed of bone with a hard horn covering that has the distinct appearance of a turtle shell (Macdonald, 1984, p. 780). Most species are covered with these rigid plates separated by flexible skin to allow some movement. The plates cover their back, shoulders, hips, top of their head, the tail, and the upper parts of their limbs. Their underside is covered with soft skin and fur (Macdonald, 1984, p. 780). If evolution had occurred, their armour progression from pre-armour state to their present design would be critical to document this claim.

Many evolutionists assume the major reason their armour-like covering evolved is for defense, but it is less important for many armadillos then escaping predators by fleeing or hiding in dense brush. Armadillos have short legs, but can rapidly scurry from enemies. Some species can roll up into an almost perfectly round ball, but most have too many plates to protect themselves in this way (Macdonald, 1984, p. 19). Armadillos' main enemies, aside from humans, were once coyotes, foxes and wild dogs, the populations of which are now far less.

The many major design changes that would be required if they had evolved from a non-armoured mammal range from major respiration and thermoregulation alterations, to sig-

nificant mechanical changes that enable these hard plate covered animals to breathe, to escape enemies, and even to reproduce (Supe-
rina, and Loughry, 2012, p. 217)

For example, although due in part to their low rate of metabolism, they have the ability to remain under water for as long as six minutes, about twice as long as most mammals their size. Because of their armour's high density, armadillos must swallow air to inflate their stomach to twice its normal size so as to raise their buoyancy above that of water. This allows them to swim across narrow streams and ditches.

If one accidentally falls into a creek, it sinks to the bottom and slowly walks out of the water (Smith, 2014, p. 124). This ability is another unique trait for a mammal, requiring significant evolutionary changes to evolve from a non-armed mammal. In cold climates they have a system to trap air beneath

their shell that reduces heat loss so effectively that they can survive comfortably on cold winter days (Macdonald, 1984, p. 783).

Armour plates and turtle shells are unique features that are comparatively well preserved in the fossil record in contrast to soft parts and small thin bones such as we see in birds. *Indeed, hard parts are critical fossil evidence.* Considering how well their armour is preserved, if they had evolved, good evidence of this fact should be found in the fossil record.

Like parasitoid wasps, certain flatworms, and a few aquatic invertebrates, the armadillo genus *Dasy-*
pus uses a very unusual reproductive system called polyembryony, which involves producing four genetically identical offspring from a single egg (Hamlett, 1933; Loughry, et al., 1998). But this trait is not advantageous because it reduces genetic diversity and, if the egg contains a deleterious mutation, all four babies will have the defect (Smith, 2014, p. 126). While excellent for scientific research that requires subjects with identical biological and genetic makeup, scientists have failed



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to address the origin of this major evolutionary problem (Smith, 2014, p. 126).

Another indication of their uniqueness is the fact that armadillos, along with mangabey monkeys and rabbits, are among the very rare species that can contract leprosy (Watson, 1989). Armadillos are particularly susceptible to this disease due to their unusually low body temperature, 34 °C, which allows the leprosy bacterium, *Mycobacterium leprae*, to thrive.

The literature is almost totally silent on armadillo evolution scenarios, rarely even attempting to speculate on how they could have evolved from some non-armadillo ancestor. The fact is, the relationship of armadillos to other mammals is obscure due to the absence of fossil intermediates (Engelman, 1985, p. 52). The armadillo has been called a “living fossil” (Lampe, 1977, p. 36) because it shows no evidence of significant change in the fossil record. Speculation involves the supposition that they evolved about 130 million years ago in South America.

A major problem for evolution is

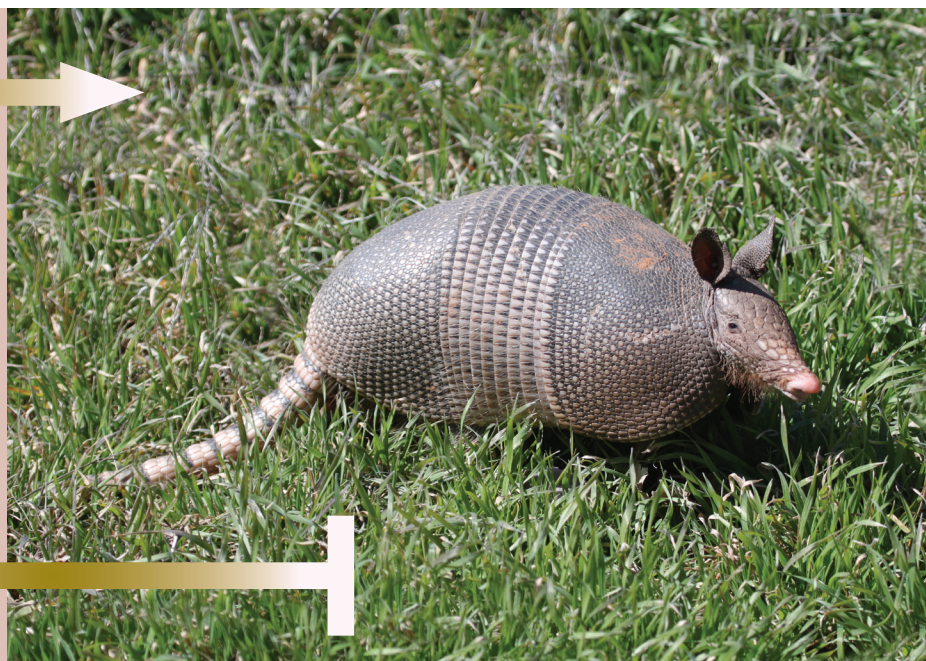
that the armadillo shell plates, which were fully formed in the earliest known armadillo fossils, making it “the most heavily armored modern mammal that has ever existed (Patterson and Pascual, 1968, p. 423). Zoologist Smith writes of their contrast with all other life forms, arguing that if evolution is true, they must have had a very long evolutionary history, yet no fossil evidence exists, and evolutionists do not even have a plausible scenario as to their origins (Smith, 2014, p. 125). We should see evidence in the lower fossil record of the beginning of the evolution of their shell. Higher in the fossil record, a larger more advanced shell should exist. Then next in the fossil record, a yet larger shell should be found until the modern shell that covers almost the entire animal is present today. No hint of this progression has ever been seen in the fossil record.

Armadillos are very fecund animals that live in large areas of the North and South American continents. Enormous numbers of armadillos exist today, and have existed in the past. Even if only one out of a million were fossilized, they should be common in

the fossil record. Furthermore, the fossil record of mammals in South America is “very good,” another reason why clear evidence of armadillo evolution should exist, if it had occurred (Patterson and Pascual, 1963, p. 410).

An extinct animal called *Glyptodon* has a similar armour covering that looks somewhat like a cross between a turtle and an armadillo, but also no evidence of its evolution exists in the fossil record. Glyptodonts were enormous animals about the size of modern automobiles. Another example is *Utaetus*, claimed to be a primitive armadillo, but actually is probably a palaeonodont, the largest surviving armadillo whose fossil record is also blank (Patterson and Pascual, 1963, p. 422). With so many remarkable characteristics, we surely will regard the armadillo with new appreciation. Their shell, that appears so weird or funny looking, is actually an amazing feature and an embarrassment to evolution theory.

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It is not just the Bible believing Christians who base their interpretations of nature on their worldview, so too do the secular scientists. It so happens however that the worldviews of these two groups, and thus the assumptions used in interpreting nature, are totally different. The most obvious assumption of the Christians is that God's work and character are evident in nature. Mainstream scientists alternatively assume that God will never be revealed in nature, but only matter and processes.

One thing that cannot be over-emphasized is how important it is to identify the assumptions used to draw conclusions from a given set of observations. The thing about assumptions is that they are based on the worldview of the expert. On this topic, philosopher of science, David Berlinski (b. 1942 and whose specialities are mathematics and physics) remarks: "Arguments follow from assumptions, and assumptions follow from beliefs..." (Berlinski 2009 *The Devil's Delusion* p. 103)

The whole point is that there are no objective scientists. Everyone has starting assumptions. The Christian naturally confesses that God exists, that He is omnipotent and omniscient and has communicated with us. Nature is God's handiwork. Thus the Christian confesses that we see testimony to God's work and character when we look at nature. For example we read in Psalms 19:1-3 "The heavens declare the glory of God, the sky above proclaims his handiwork. Day to day pours out speech and night to night reveals knowledge. There is no speech, nor are there words, whose voice is not heard." The apostle Paul points out the importance of this revelation from nature when he quotes the above passage. Thus he writes "So faith comes from hearing and hearing through the word of Christ. But I ask, have they not heard? Indeed they have, for their voice has gone out to all the earth, and

their words to the end of the world." We see God's works revealed in nature.

The secular position contrasts sharply with the Christian view. Mainstream scientists maintain that natural explanations can be found for everything. No supernatural input will ever be evident. With different expectations on the part of secular individuals and some Christians, there is a big difference in the questions asked of natural systems and the answers obtained. For example, suppose that somebody showed you a photograph of an unfamiliar object (for example an alga). If you were to ask that person "How did you make that?" the only possible response would be some sort of process. However, if you were instead to ask "Did you make that?" then the person has the opportunity to reply that he did not make the object, that it is in fact an alga floating in lakes in the summer.

Similarly, in our study of nature, it matters what questions we ask. If a scientist asks "How did life come about spontaneously?" Then the only possible answer is a process. If the same scientists were alternatively to ask "Could life come about spontaneously?" In this case he has the opportunity to examine what cells are like and what biochemical processes in cells are like, and thereafter conclude that life could not have come about spontaneously. Thus the answers ob-

Surviving Courses in

By Margan

tained from the study of nature depend upon what questions are asked.

The mainstream scientist approaches the study of nature with a specific agenda. Nature is to be interpreted only in terms of matter, energy, and natural processes, even if the results look ridiculous. A prominent geneti-



Advanced n Science

et Helder

cist, Richard Lewontin (b. 1929) actually stated this very clearly. In a famous review of a book by Carl Sagan, Dr. Lewontin wrote : “Our willingness to accept scientific claims that are against common sense is the key to an understanding of the real struggle between science and the supernatural. We take

the side of science.... because we have an *a priori* commitment to materialism. It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our *a priori* adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door.” (*New York Review of Books* January 9, 1997). What

Dr. Lewontin said, was that scientists bias their studies so that only natural explanations will ever be obtained.

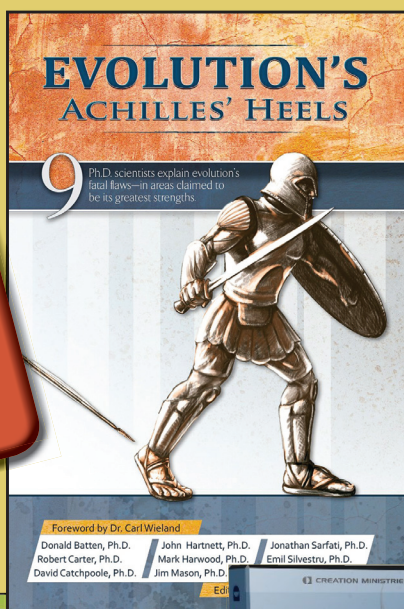
Secular scientists may restrict what explanations about nature qualify for the term ‘science’ but they *cannot* at the same time claim that what they are dealing with is truth. For example philosopher of science Del Ratzsch from Calvin College pointed out in 1996 that: “If nature is not a closed, naturalistic system - that is, if reality does not respect the naturalists’ edict - then the science built around that edict cannot be credited *a priori* with getting at truth, being self-corrective or anything of the sort.” (*The Battle of Beginnings: Why Neither Side is Winning the Creation-Evolution Debate*. InterVarsity Press. p. 167). Thus secular scientists,

with their expectations of never seeing God in nature, have confined themselves to mechanistic explanations and interpretations. As Dr. Ratzsch remarks: “... materialists have no viable choice but to view the world through evolutionary spectacles of some sort.” (p. 197)

And concerning the creationists, Dr. Ratzsch remarks: “... creationists who accept the authority of Scripture and take it to be relevant to issues also will have unique input into their view of the cosmos, its origin and its workings. And there is nothing inherently irrational merely in the holding of such views -- at least not on any definition of *rational* that can plausibly claim to be normative. Some critics will, of course, refuse to grant the honorific title *science* to the results of such views, but that is at best a mere semantic nicety. If the aim is genuine truth, the mere fact that a system purporting to display that truth does not meet the conditions of some stipulative worldview-laden definition of the term *science* can hardly carry serious weight.” p. 197 What better statement could there be to the effect that no one should be intimidated by the pronouncements of mainstream science? Any scientist, for example, who claims that science proves that man has descended from chimps, has based his remarks on a study of the issues biased in favour of a materialistic worldview. Conservative Christians do not need to be intimidated by such conclusions. The nature of the materialistic assumptions and objectives of mainstream science must not discourage Christians from studying science. It is very important to understand how the information content and irreducible complexity of the living cell (among other issues), can really only be understood in terms of creation by a supernatural mind. There are many who want their children to appreciate this and to be able to resist the appeal of mainstream science.



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Can't go wrong
with these
items.**



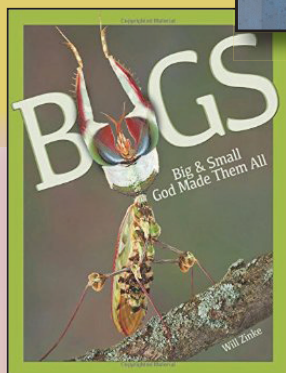
Evolution's Achilles' Heels - Book

Robert Carter (Editor)

Few discussions at this level are as attractively presented as in this new book. Nine scientists discuss fatal flaws in evolutionary explanations. Recommended for those who have an interest in up-to-date information (somewhat technical) on issues concerning origins.

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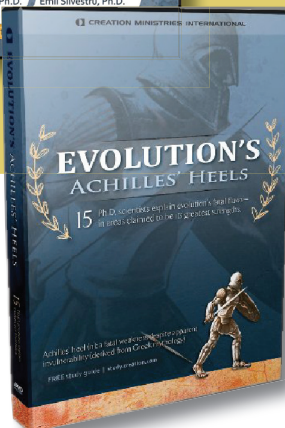
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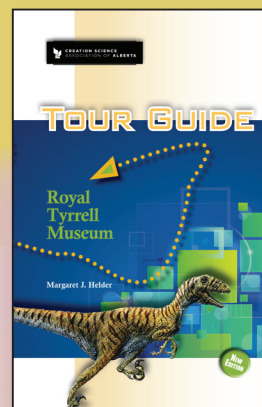
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