Creation Science
Dialogue
Summer • June • 2004
Volume 31 • Number 2

In this issue

Publication Mail Reg. 40013654- ISSN 0229-253X

NOT JUNK AFTER ALL

by MOXIE

Imagine that you found a hockey card. The pictured individual looks just like most other hockey players but you do not recognize the name. It doesn't look that exciting does it? You might be tempted to throw the card in the nearest garbage can. Your friend however advises caution. Why not investigate the value of the card? Suppose for the sake of argument that your card turns out to be extremely rare and worth a lot of money. Suddenly, what previously looked like junk, has now become a wonderful possession. The card has not changed, but your appreciation of what the card represents, has changed drastically. Such situations sometimes occur in real life. Not all of these instances involve things, some involve living creatures.

Let's turn our attention, for example to Borneo, the third largest island in the world. Only Greenland and New Guinea are larger. Greenland, of course, lies off the coast of eastern North America and except for attempts to claim nearby islands in the Canadian Arctic, does not concern us here. For those who are as geographically challenged as I am, Borneo and New Guinea both lie in an archipelago of islands off southeast Asia. Indonesia controls part of New Guinea, while the rest is an independent country called Papua New Guinea. Similarly Borneo is split up between three political jurisdictions: Indonesia, Malaysia and Great Britain. Apparently in the northeast of the island, in territory belonging to Indonesia and Malaysia, there exists a small population of elephants. The closest population of elephants is 1300 km away on the island of Sumatra. Many people wonder if the Borneo elephants are good for the island or not. After all, big animals have big appetites.

Most people have assumed that these animals were introduced to Borneo from India within the past few centuries. If this were true, these animals are not native to the region and thus are basically newcomers or intruders into the local ecology. Perhaps the local ecosystem would do better without them. An alternative hypothesis proposes that these elephants have lived on the island for many thousands of years since a time perhaps when land bridges linked these islands to the mainland. If the elephants have lived on the island that long, then they are indeed as native as other animals. In that case, this elephant population would extend the native range of the Asian elephant by 1300 km. Presumably elephants once roamed throughout the region, but since then have died out in the area between. In this case the elephant population could have been isolated for a long time. Such a distant population of elephants would have been unable to interbreed with other elephant populations of the same species. Their pedigree or line of genetic descent would therefore long have been unique to this area. The elephants could well be genetically distinct from other populations and therefore scientifically very interesting. As a result the Borneo elephants would constitute, in the eyes of secular scientists, an "evolutionarily significant unit" and they would enjoy a high priority for conservation. Thus either the elephants are valuable or they are not, either they are worthy of preservation or worthy of extermination. The value depends upon their genes.

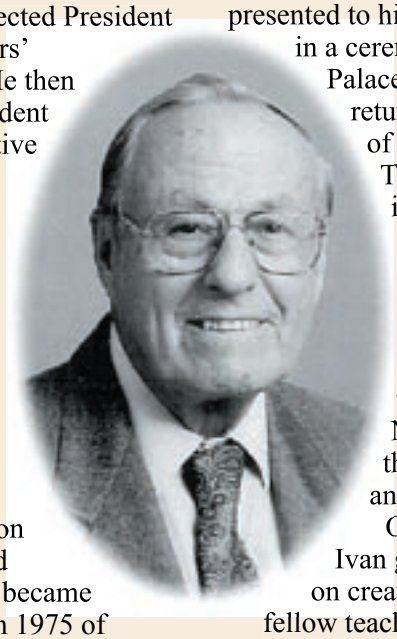
In order to answer the question of value of the Borneo elephants, an international team of scientists undertook to sequence several pieces of DNA from the Borneo population and to compare these with the gene sequences of other elephants from other countries.

- continued on page 7

Ivan Stonehocker 1918-2004 Man of Vision: Man of Action

Ivan was a true gentleman, a fine educator, a good friend and an active Christian. He knew "everybody" in education in Alberta and many in politics. Moreover, he and his wife Irene, took great pleasure in supporting many worthwhile endeavours. In their later years at their acreage, they grew flowers and food which they generously shared. If anybody needed help, they were there for them.

In 2002 Ivan was awarded the Queen's Golden Jubilee Medal for his work in education. His career in this profession had indeed been worthy of note. For 36 years he had taught in centres including Edmonton, Fort Saskatchewan, Lacombe and Rimbey. His success as a teacher was also recognized in 1969 when he was elected President of the Alberta Teachers' Association (ATA). He then became the first president to serve two consecutive terms.



Through the years, as a science teacher, Ivan observed changes in the content, emphasis and objectives of the provincial curriculum. Because he disagreed with some changes, and because of his devotion to good education and good information, he became a founding member in 1975 of the Creation Science Association of Alberta. Some other teachers in the public system as well as some other interested individuals, also became founding members. For more than 20 years Ivan served as President of this association. The objective was to demonstrate to Christians and to the public, that nature and the Bible both demonstrate the work and character of God. An important aim was (and is) to persuade schools to allow interested students and teachers the opportunity to discuss these issues. The first step, of course, is for these institutions to stock suitable creation based titles in their libraries and for school jurisdictions to list these on their recommended reading lists.

Other aspects of Ivan's life are equally remarkable and interesting. One of ten children, (of which six were sons), born to John and Olive Stonehocker, he grew up on a farm near Vegreville. Later, at Bible School in Wetaskiwin, he met Irene Gustavson, whom he married in 1942. The previous year he had enlisted in the Canadian Air Force and in 1943 he was transferred overseas. With the rank of Flight Lieutenant, he then acted as navigator for more than thirty bombing missions over enemy territory. His perfect record of "on target, on time" earned him the Distinguished Flying Cross. This was presented to him by King George VI in a ceremony in Buckingham Palace. After the war, Ivan returned to the University of Alberta in Edmonton. There he earned a B.Sc. in agriculture and a B.Ed. in science. Both Ivan and Irene were teachers, but later Irene stayed in the home with their three children. Nevertheless, in all their activities, Ivan and Irene were a team. Over the years, Ivan gave many talks on creation. He spoke to fellow teachers at conventions, to Christians in churches and to the public on radio and in debates. His friendly knowledgeable manner always was a great asset. Thus as well as a remarkable teacher, Ivan was a great Canadian and a fine Christian. He was a man of vision and we shall miss him.

Creation Science
Dialogue

Volume 31 / Number 2
June 2004

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.

Subscription for 1 year $5.00

Address correspondence to:
Creation Science Dialogue
Creation Science Association of Alberta
5328 Calgary Trail
Suite 1136, Edmonton, Alberta, T6H 4J8

Creation Science Associations

Creation Science of Saskatchewan Inc.
P. O. Box 26
Kenaston, Saskatchewan
S0G 2N0

Creation Science Association of British Columbia (B.C.)
Box 39577, White Rock P.O.
White Rock, British Columbia V4B 5L6

Answers in Genesis (Canada)
5 - 420 Erb Street West
Waterloo, Ontario N2L 6K6

Creation Science Association of Quebec
CP63, Succ. Youville
Montreal, Quebec H2P 2V2

Institute for Creation Research
10946 Woodside Ave. N.
Santee, CA 92071

Creation Research Society
Van Andel Center
6801 North Highway 89
Chino Valley, AZ
86323 - 9186

Visit us at
www.create.ab.ca

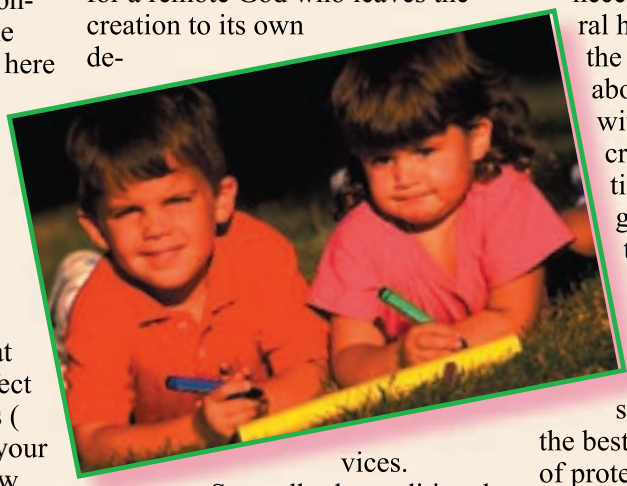
FAQ

What does it matter how we came to be?

Junior high and high school students wonder what difference it makes whether the universe came about through a long process or whether God spoke all things into existence a relatively short time ago. The main thing, many suggest, is that we are here. Details are irrelevant so why the big fuss over origins?

A review of the issue shows that there are major differences between evolutionary views of nature and the traditional Christian view. Firstly the traditional view of God's character and work are gone with evolution, replaced by something else. Secondly the traditional concept of truth is gone. Thirdly the traditional view of man's place here on earth is gone, replaced by something else. No one can force anyone to support either position, but everyone should at least be aware of the implications.

As far as the character and work of God is concerned, the traditional Christian view is that God created all things in a perfect state, that He delights in details (for example "the very hairs of your head are all numbered" Matthew 10:30) and that death and disease resulted from God's curse of nature after the fall of Adam. Evolutionary arguments however are based on a far different view of God. This is illustrated by Cornelius Hunter in his 2001 book *Darwin's God* (Brazos Press). Dr. Hunter asks us to consider the popular view: "how is it that God could create the universe but have nothing to do with science? The answer of course is that God did not create the world, at least not directly -- the world evolved." (p. 149) This latter view, points out molecular biophysicist Dr. Hunter, was based on the assumption that God places a high value on letting nature do its own thing. Thus rich diversity in nature as well as death and disease, are not from God, but "natural." Many scientists claim that God is all the greater for His refraining from dabbling in nature. Thus the evolutionary view denies God's providence (upholding and intervention as He chooses), judgment and His plan in history. Many evolutionists have declared in their scientific writings that God would never bother to create the diversity of creatures that we see or to inflict suffering on nature. Dr. Hunter gives many examples of such documents. These declarations stem from evolutionist support for a God who, if He exists at all, pays little attention to details of the here and now -- or the past or future. Miracles and salvation, of course, are not suitable activities for a remote God who leaves the creation to its own de-



vices.

Secondly the traditional view of truth is gone. Secular scientists seek the best *natural* explanation of their observations from nature. To be truth seeking, they would have to ask what happened, what is the best explanation. However this is not what we see in modern science. Instead secular scientists, as a matter of course, exclude the work of God from consideration and instead seek an explanation involving time and chance. Thus with the philosophical deck stacked in its favour, evolutionary explanations cannot claim to be the most probably true or the best fit of the data since not all possibilities have been considered. Young people should not therefore assume that the facts support evolution. This is not the case. When you have only one choice, it does not matter what the facts are. The creation alternative is all too typically never considered.

The role of mankind in nature is another dramatic casualty of evolution theory. The traditional Christian view is that people are God's special work, the pinnacle of creation. It was alternatively none other than palaeontologist Stephen Jay Gould who called long ages "geology's most frightening fact" (*Wonderful Life* p. 44). How, he asked, can we pretend that God made nature for man's benefit when mankind was absent during almost all of this evolutionary past.? Obviously, he implies, mankind is unnecessary and irrelevant to natural history. Similarly of course, the secular scientists who talk about mankind's "oneness" with nature, mean that all creatures had the same evolutionary origin and thus no organism is any more valuable than any other. A mosquito is as worthy of protection as a person. This is not the Christian position. Lastly, many evolutionists consider that only creatures with the best characteristics are worthy of protection. Thus out the window go Christian values of protecting the weak and promoting the good of one's neighbour or even of one's enemy.

It is evident that evolutionary conclusions are not the same as traditional Christian values. One's view of origins matters because the implications are so different.

CSAA sells two books by Cornelius Hunter, *Darwin's God: evolution and the problem of evil* (2001) @ $18.00 and *Darwin's Proof: the triumph of religion over science* (2003) @ $23.00 These excellent books are suitable for adults who like the history of thought and science.

"EE
REFLEC
BEETEC

by Marga

It was just a matter of time, of course, following the discovery of geckos' amazing ability to stick to smooth surfaces by means of molecular forces (see *Dialogue* 31 #1 p. 3), that another such animal would be discovered. One might have expected that the next discovery would be in another reptile, similar to the gecko. Imagine our surprise, then when we heard that the second example is nothing like the first. An article published last year in the *Journal of Experimental Biology* reveals that such a phenomenon has been discovered in a jumping spider (*Evarcha aracuata)* commonly found in Europe. While many creatures such as flies use an adhesive fluid (ugh) to stick themselves to surfaces, these jumping spiders use "dry adhesion" like the geckos.

The exoskeleton that covers spiders (and insects and crustaceans like crayfish) is hard and very unsticky. The "feet" of this jumping spider however feature a tuft of hairs, each hair of which has many smaller hairs (called setae) and these have yet smaller flat triangular shaped hairs called setules. Each foot boasts about 78,000 setules for a total of about 624,000 setules per individual spider. A team of German scientists measured the force with which a tiny probe would stick to a setule. They found that the adhesive force was so strong that this system would still work for a spider 173 times heavier (2 g rather than the actual 15 mg).

The question as to how very different animals come to possess similar sophisticated designs, has recently much occupied the minds of secular scientists. While creationists see obvious design and irreducible complexity, evolutionists talk about "convergence". Their interpretation is that separate evolutionary lines of descent "converged" on the same solution. Why this should be so is a difficult problem for evolutionists. One who has given the issue considerable thought is English palaeontologist Simon Conway Morris in his book *Life's Solution.* Unintentionally he illustrates why "convergence" is such a problem for evolution.

When the expectations of evolutionary science are not met, some people respond by questioning evolutionary assumptions, but not Simon Conway Morris. This man firmly declares his support for evolution: "Evolution is true, it happens, it is the way the world is ..." (p. xv). One wonders if he protests too much when he later declares: "A recurrent theme of this book is not only the implications of convergence for evolution, but also the problems it can pose for its resolution. Not, I hasten to add, in terms of the reality of evolution. This is emphatically not in question; rather the reverse ..." (p. 144)

The cause of Dr. Morris' embarrassment concerning the evolutionary position quickly becomes apparent. Firstly in a section entitled "eerie perfection" he considers the nature of DNA, the famous genetic code found in all living organisms. He cites a study, published in 1998, which examined the efficiency of millions of possible codes and which came to the "startling" conclusion that the way in which DNA carries information is the best there is. Werner Gitt independently came to the same conclusion in his book *In the Beginning was Information* (p. 94 in the 1997 English edition). While Werner Gitt sees the hand of the Creator, Simon Conway Morris comes to the conclusion that such a result was natural but inevitable (p. 18).

The reader might wonder how anyone can declare a surprising phenomenon to be "inevitable". His solution is to appeal to undiscovered physical laws which, he supposes, allow only certain natural forms to develop. This is a popular position these days. How often do we hear that chance and "necessity" drive evolution. Philosopher Stephen C. Meyer however discusses this position in a new book entitled *Darwinism, Design and Public Education*. In it Dr. Meyer points out that scientific laws describe highly repetitive events, while "information sequences are complex, not repetitive." Therefore he says "information mounts as improbabilities multiply. Thus, to say that scientific laws can produce information is essentially a contradiction in terms." (p. 255)

Despite the fact that he really lacks any explanation for the genetic code other than "inevitability", Dr. Morris applies similar reasoning to all biological phenomena. He declares that "life is full of inheren-

RIE"

CTIONS

aret Helder

cies" (p. 8), that evolution is "constrained, if not bound" (p. 12) He therefore insists "so life shows a kind of homing instinct. Its central paradox revolves around the fact that despite its fecundity and baroque richness life is also strongly constrained. The net result is a genuine creation, almost unimaginably rich and beautiful, but one also with an underlying structure in which, given enough time, the inevitable must happen." The mere declaration that nature, on its own, possesses astonishing properties however, does not make it true.

Before the author turns his attention to living organisms, he examines some peripheral issues. Firstly he considers origin of life scenarios. What he finds is "a picture that can only be described as distinctly discouraging" (p. 49) from an evolutionary point of view, that is. He then turns his attention to reasons why Earth is so ideally suited for life. When Dr. Morris considers the importance of the moon and the planets for our comfort, he confides: "the peculiarities of the Moon help to epitomize the principle theme of this book, the odd fortuitousness of the world in which we find ourselves, where again and again matters seem to be remarkably well arranged." (p. 69) This is certainly food for thought.

All the above details form the prologue to the main argument of the book, the amazing way in which organisms of entirely different body plans, nevertheless often possess complex features which are very similar. For example, consider the case of the camera-eye such as we possess. Everyone knows that this is a very complicated organ. Not only are animals with backbones and humans provided with such a fine tuned light receptor, but also some invertebrates (without a backbone) such as the octopus, some marine annelids (similar to earthworms), and two shore-snails (e.g. the winkle *Littorina*), also a cubozoan jelly fish and the ogre-faced spider (*Dinopis*). Obviously the camera eye could not have appeared in this strange assortment of organisms through descent with modification from a common ancestor.

The point of Dr. Morris' book is to declare that convergence happens since nature has only a few options available. This is what he means when he says nature is constrained. Thus even when very different organisms are faced with the same problem, they may well nevertheless come to the same solution. That is how he explains the appearance of camera-eyes in such a diverse collection of creatures. Even he, however, admits that the snails do not fit his explanation because their lifestyle is very different. There are many other instances too, of organisms with similar designs which nevertheless lack any needs in common (for example the sperm whale and a desert plant [jojoba] which both possess a unique liquid wax). In the case of the gecko and jumping spider, one wonders what common problems these two organisms share that other reptiles and spiders do not exhibit. Why, other than choice by the Designer, would these creatures be so unique?

It used to be that 'convergence" was regarded as unusual, an exception to the typical evolutionary process. However we now know, says Dr. Morris, that nature is full of such strange situations. (p. 109) Some people conclude that here we see abundant testimony to intelligent design or creation. Not Dr. Morris. He may call convergence "eerie" (p. 128), but he is not about to change his mind about natural processes. Thus he declares "Evolutionary convergence shows that we live in a constrained world, where all may not be possible" (p. 298). Indeed he lumps all nature into these inevitabilities: "Not only is the Universe strangely fit to purpose, but so, too, as I have argued throughout this book, is life's ability to navigate its solutions." (p. 327)

This book is full of fascinating examples of design which the author, in keeping with his evolutionary views, calls convergence. You don't have to be an evolutionist to appreciate the examples, quite the contrary. When you understand the nature of the Creator, all these providential conditions and amazing situations, make sense.

Simon Conway Morris. 2003, *Life's Solution: Inevitable Humans in a Lonely Universe.* Cambridge University Press. 464 pages.

Evolution under the Microscope

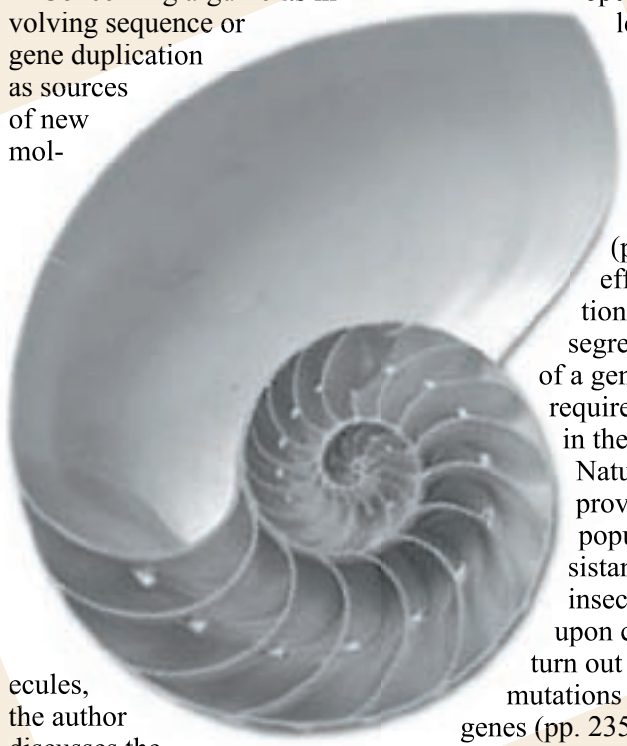
reviewed by Margaret Helder

The striking image on the cover of this book is a crystal of DNA. What more effective illustration could one imagine for a book which deals with the significance of biochemistry for our understanding of biology? The modern interpretation of cell biology followed, for the most part, the 1953 elucidation of the DNA double helix. David Swift, a man initially perfectly happy with the neo-Darwinian synthesis, could not help reflecting on the implications of this new information. Something was terribly wrong with evolution theory. Indeed, he eventually concluded that "the complexity of biochemistry is the reef on which the theory of evolution founders." (p. 187).

In his main argument, the author establishes that evolution, if it is to occur, requires random mutations. However this has important implications. Firstly he examines the probability of the spontaneous appearance of even one large protein molecule, for example cytochrome c(essential in energy transfer). Next he discusses the many known variations (among diverse organisms) on the cytochrome c theme. Do these prove that the molecule could have risen gradually? Apparently not. Firstly he examines the many positions in the cytochrome c molecule where no variation is found or presumably possible. Next he examines other important macromolecules such as ubiquitin, histone H4, actin, and rubisco*, all of which have high numbers of amino acid positions which are invariant (no substitutions possible). The situation stems, he declares from the requirement for precise folding and precisely located active sites. Without these, the molecule has no activity. The flexibility in choices of amino acids in exterior positions does nothing to overcome the prohibitive improbability of developing the critical interior of each molecule (p. 155).

Next he considers phylogenetic trees based on variations in "homologous" molecules. It is the author's contention that such trees show at best how relatively inconsequential changes might have taken place. What they do not show however is how an efficient modern protein could develop from a crude early form. Indeed, the author declares, when proteins first appear, they are already in fully functioning form (p. 157).

Concerning arguments involving sequence or gene duplication as sources of new molecules, the author discusses the cases of haemoglobin and myoglobin, and ferrodoxin. He demonstrates that these molecules work only when fully three dimensional with active sites in appropriate positions. Smaller parts of the molecules would be of no benefit and would be selected against. Moreover a protein needs to be a minimum of 70 amino acids long for folding to occur properly. This process is highly sensitive and even slight variations in sequence can result in failure. Indeed he declares that "the criterion for folding by itself, is probably enough to defeat any attempt at finding a protein randomly." (p. 176). But there is more bad news. Every gene for a protein also requires at the same time, the operation of numerous control sequences in order for the macromolecule to be expressed. And even if it were produced, the protein requires the cooperative action of numerous other proteins in order for it to be effective. These simultaneous requirements push the probabilities for random development of macromolecules basically down to never never land.



While the author agrees that the operation of natural selection is real and has important implications for ecology, he now realizes that evolution and natural selection are not the same thing (p. 220). While the effects of natural selection are to shuffle and segregate various versions of a gene, macroevolution requires new information in the form of new genes. Natural selection cannot provide that (p. 247). The popular examples of resistance to antibiotics and insecticides, he points out, upon closer examination turn out to be unfavourable mutations in already existing genes (pp. 235-244). Based on his new understanding of macromolecules, he declares that "the fundamental evolutionary principle of incremental progress fails completely at the level of molecular biology"

(p. 318). That is the death knell for the neo-Darwinian synthesis.

Based on his conclusions from molecular biology, in similar vein, the author discusses origin of life speculations, the origin of the eukaryotic cells, and the origin of sex. In every case he considers molecular details which are devastating to evolution. Also he considers cladistics and homology. No discussion of origins is complete without reference to the fossil record. Based on molecular biology and population genetics, David Swift had already concluded that primordial organisms were equipped with all the genetic information they would ever need and that these early populations rapidly diversified by gene segregation into clusters of related taxa (p. 250 and 257). This sounds very close to archetypes or the modern creationist concept of baramins (created kinds).With a view such as this, the author is obviously going to be critical of modern conclusions on the fossil record. Indeed what he sees is a record of sudden appearances in the strata: "no phylum can be traced from a preceding one in the fossil record, in fact we cannot account for the origin of a single phylum: they all appear abruptly. This is also true of lower taxonomic groups such as classes and orders, and possibly lower still" (p. 295)

This book demonstrates what happens when an individual really looks at the evidence

from nature. The author prefaces his main argument (which does not begin until p. 115) with a somewhat tedious review of the history of science. Once he reaches the main body of this work however, the text comes alive. It is clear, interesting and with occasional glimpses of humour. The book includes few footnotes, but this probably makes it easier to follow. This book is ideal for university students and scientifically literate adults who seek a current introduction to the problems with evolution theory. This is a highly effective book which we will surely want to distribute on university campuses everywhere. Is there a student in your life who would benefit?

*(Ubiquitin is involved in DNA repair, histone H4 is part of chromosomes, actin is part of muscle and rubisco is involved in photosynthesis.)

David W. Swift. 2002. *EVOLUTION under the Microscope: a scientific critique of the theory of evolution.* Leighton Academic Press, Stirling University Innovation Park, FK9 4NF, UK pp. 423.

NOT JUNK AFTER ALL

continued

in her work. Perhaps biologists should instead adopt the motto "Don't fix what isn't broken." Leave nature alone. Of course it is still prudent to eliminate invasive organisms which devastate the local ecology. That list includes such animals as rabbits and cane toads in Australia and weedy plant species everywhere.

What the scientists found was that the genetic information of the Borneo elephants, while roughly similar to other Asian elephants, was nevertheless quite distinct. Such differences could not have developed within a few hundred years.

Conclusions about biological value do not depend upon the elephant's role in the ecosystem or their appearance, but on their presumed lengthy evolutionary history. This seems an artificial way to value anything, and certainly one which we would not condone. The attempt to eliminate non-native plants and animals is found in many political jurisdictions these days. The case of the Borneo elephant illustrates how artificial this criterion can be. Nothing intrinsic to the animal has changed except man's opinion as to their source. Man's objective is to assist "evolution"

So what are we to conclude about the genetic differences of these elephants and other populations of the same species? Does this demonstrate evolution in action. Not! What we see here are accumulating small variations in detail. These small changes never lead to new information, just variation on the same elephant theme. In this case the elephants even look the same. Biologists could not tell the difference between a long isolated population and a recent introduction. Mutations and natural selection lead to small variations, never to new kinds of organism. The Borneo elephants are not on their way to becoming anything else, just more elephants.

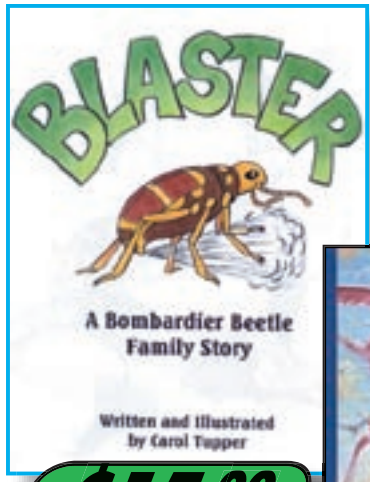
Blaster: a Bombardier Beetle Family Story

Carol Tupper

Paper with coil

32 pages - full colour illustrations

The author and illustrator is a talented young Albertan who has sought to develop interesting new resources for Sunday school classes. The fascinating details concerning a family of bombardier beetles is explained (at the K to grade 2 level) in the context of Genesis chapters 1- 3. Extra notes at the end enable the parent or teacher to elaborate on the discussion as desired.



$15.00

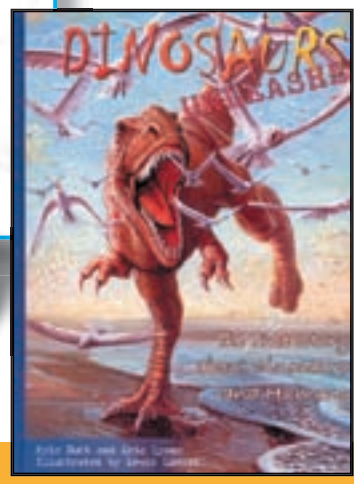
Dinosaurs Unleashed: the true story about dinosaurs and humans

Kyle Butt and Eric Lyons

Hardcover - 80 pages

full colour illustrations

$20.00



Brand new, and illustrated with vibrant paintings by Alberta's famous artist Lewis Lavoie, this book answers in upbeat fashion, all the popular questions concerning dinosaurs, and equally scary flying reptiles and swimming reptiles. This fun book is particularly suitable for youngsters in grades three to seven.

...and as the tourist season dawns, don't forget the Tour Guide: Royal Tyrrell Museum @ $6.00

Grand Canyon: a different view

Tom Vail (editor)

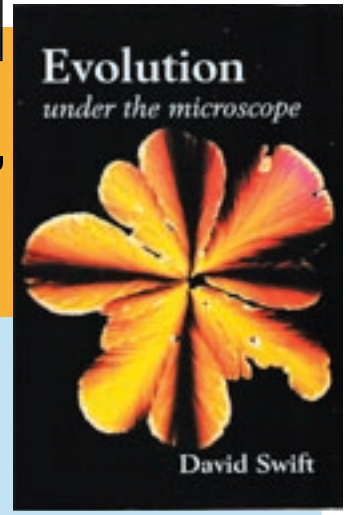
$18.00

Hardcover

104 pages

full colour photographs

A bestseller at the Grand Canyon, this book really does provide a different view. The deluxe colour photos include scenes of rocks and views not normally seen. The brief notes and commentary, provided by various well known young earth geologists and scientists, is simultaneously inspiring and informative.



EVOLUTION Under the Microscope: a scientific critique of the theory of evolution

David Swift - ***Paper - 423 pages***

This author never meant to challenge evolution, yet he could not help reflecting on the implications of molecular biology. What he sees in this field is a clear demonstration that evolution could never take place. Based on these conclusions, he also discusses other important aspects of origins theory. This book is ideal for university students and scientifically literate adults.

$25.50

Please fill in order form and mail to: Creation Science Association of Alberta, 5328 Calgary Trail, Suite 1136 - Edmonton, Alberta, T6H 4J8

Name:

Address:

City: Postal Code/Zip:

Please state titles and quantity of books ordered:

Total order	$	.
Add 10% for S/H ($6.00 min.)	$	.
Subscription ($5.00)	$	.
Donation	$	.
Total enclosed	$	.
Free Catalogue	----------	
Total	$	

Make cheque or money order payable to:

Creation Science Association