



Creation Matters

Volume 10, Number 4

July / August 2005

— A publication of the Creation Research Society —

What Are Creationism and Evolutionism? The Problem of Definitions

by Jerry Bergman, Ph.D.

In discussing any topic, it is *critical* to define the central terms used. This is especially true in the whole creation/evolution controversy. A major trait of anti-creationist literature is gross *over-generalizing* and *labeling*. Comprehensible, mutually understood definitions for terms such as “religion,” “evolution,” “science,” and “creation” are all crucial to the resolution of the creation/evolution dichotomy. These terms, like most others, have many shades of meaning depending upon the context in which they are used.

Ironically, rarely do critics of creationism define even basic terms such as “creationist” or “scientific creationists.” Those who make the attempt frequently define central terms inaccurately, or they use a narrow, idiosyncratic definition designed to serve as a straw man. The words creation and evolution also have meanings within a specified context, often the default

meaning — those understood and accepted by the public at large. If any other meaning is intended, it is the responsibility of the user to share it with readers or audience.

Defining creation

Many of those who classify themselves as *creationists* object to the term *scientific creationists*. Some prefer simply *creationists*, others *abrupt appearance theorists*, or even *anti- or non-evolutionists*. Still others are most comfortable with simply *a believer in creation* as opposed to *a creationist*. Some of the many positions on creationism include *progressive, deistic, theological, ex nihilo*, and *direct creationism* (see Bergman, 2004 for a discussion of the various positions on origins).

The only common thread that runs through all of these positions is that “God did it,” the major difference between them being “how” (Fischer, 1981). The many

problems with the term *creationism* were summarized by Hick, a theistic evolutionist, who concluded that the word “creationist” has become

a label not only for people who believe that the universe is God’s creation but also for those who insist that biological evolution has not occurred. I too am a creationist in the sense that I believe that the universe is God’s creation, but I believe that God’s creative work is progressive and continuous and that biological evolution is a part of it. And so I am sorry that the word creation has become linked with the obscurantist rejection of evolution. The kind of creationism that I and other liberal Christians espouse is neither scientific nor antiscientific. The purview of sci-

... continued on p. 2

Can Science Consider Supernatural Explanations?

by Dave Woetzel

Evolutionists have insisted that science is necessarily about naturalistic explanations and theories. It can’t, they argue, consider supernatural explanations because those are beyond the realm of

observation and experimentation and are thus inaccessible to science. Moreover, to open the door to these kinds of explanations would be a big step back for science, which has debunked the ideas of fairies and magic potions. It would return our scientific society back to the Dark Ages. Eldredge provides one example:

If there is one rule, one criteria that makes an idea scientific, it is that it must invoke naturalistic explanations for phenomena, and those explanations must be testable solely by criteria of our five senses.¹

Evolutionists have attempted to imbed these ideas, often called methodological

naturalism, into the modern definition of science:

Furthermore, even if Scientific Creationism were totally successful in making its case as science, it would not yield a *scientific* explanation of origins. Rather, at most, it could prove that science shows that there can be *no* scientific explanation of origins. The Creationists believe that the world started miraculously. But miracles lie outside of science, which by definition deals only with the natural, the repeatable, that which is governed by law.²

... continued on p. 5

Contents

| | |
|--|---|
| What Are Creationism and Evolutionism? The Problem of Definitions..... | 1 |
| Can Science Consider Supernatural Explanations?..... | 1 |
| Harvard to Prove Life Began without ‘Major Grant’ (satire)..... | 4 |
| Speaking of Science..... | 6 |
| Creation Calendar..... | 8 |
| All by Design: Leapin’ Lizards..... | 8 |

Definitions

...continued from page 1

ence only goes back some fifteen billion years to the big bang. And, if the big bang should turn out to have been an absolute beginning, then science has nothing to say beyond it, though of course religion does. (1985, p. 40)

A good illustration of the problem of terminology is the fact that most people who use the phrase “evolution v. creation” ignore, or are unaware of, the fact that “evolution” and “creation” are *processes*, while “evolutionism” and “creationism” are *belief systems*.

Standard dictionary definitions

Dictionary definitions of creation, such as that provided by *Webster's New World College Dictionary* (Agnes, 2001), are usually given for two distinct contexts. First is with a small “c,” and its meaning is something that was created; a product of inventive ingenuity; an original work, esp. of imaginative faculty. The second definition is with a capital “C,” and involves the bringing into existence of the universe (or life) by a “Deity.”

Both usages describe similar events, the second being a special case of a particular event by an identified causal agent. Users of the word “creation” must take care to clearly establish both the context of use and their intended meaning. The *Shorter Oxford English Dictionary* defines *creation* as

1. The action of creating; the fact of being created; the calling into existence of the world; the beginning, as a date. 2. The action of making, forming, producing, or bringing into existence. 3. The investing with a title, dignity, or function. 4. That which God has created; the world; creatures collectively. (Little, 1968, p. 419)

This reference defines *creationism* as a “system or theory of creation” that attributes the origin of matter, species, etc., to a special creation in opposition to “evolutionism” (Little, 1968, p. 419).

The *Random House College Dictionary, Revised edition* is more in harmony

with the new use of the word as a result of the creation/evolution controversy, adding the phrase “precisely as set forth in the Bible.” I could not find a single older dictionary that included this claim. The dictionary specifically defines creation as

1. the act of creating; act of producing or causing to exist. 2. the fact of being created. 3. the Creation, the original bringing into existence of the universe by God. 4. a thing that is or has been created. 5. the world; universe. 6. creatures collectively. 7. an original product of the mind, esp. an imaginative artistic work. (Stein, 1988, p. 314)

It defines *creationism* as “the belief that God created the universe, including all life, in its present form precisely as set forth in the Bible in the opening chapter of Genesis” (Stein, 1988, p. 314).

... “evolution” and “creation” are processes, while “evolutionism” and “creationism” are belief systems.

Definition by common usage

Another way to try to define this term is how it is used by informed persons. To do this, a survey was completed of how various mainstream secular reference sources define the term. Librarian Ronald Ecker defined “creation” as the

process by which the UNIVERSE came into being. That process is believed by creationists to have been the act(s) of a supernatural Creator (see CREATIONISM). [1990, p. 54]

He added that “creationism” is the

belief in the CREATION of the UNIVERSE, including MAN and all other LIFE forms, by a supernatural Creator. In the Judeo-Christian heritage this has traditionally meant belief in creation as specifically described in the biblical book of Genesis. (1990, p. 54)

Another source defined creationism as the “belief that life was created by some

supernatural being and not by organic evolution” (Jones, et al., 1992 p. 461). Philosophy professor Niall Shanks defined creationism as the “religious theory that the universe along with its biological contents, was created from nothing by a supernatural being” (2004, p. 249).

The *Encyclopedia of Evolution* defined creation as “the belief that some or all of the various forms of life on earth were brought into being by a creator” (Nelson, 2002, p. 214). This latter reference then noted that it focused on “those varieties of creationism that arise from interpretations of Genesis and of the Koran” (Nelson, 2002, p. 214). These quotes are typical of most of the *academic* sources consulted.

Creationist sources

All of the above definitions came from neoDarwinists, some of whom have been hostile towards the creationism world view.

Leading creationists define creationism as, for example, the belief in the “existence of a creator who brought about the existence of the world and its living inhabitants in furtherance of a purpose” (Johnson, 1998, p. 22). This definition implies that the basic forms of life were intelligently designed by a being transcendent to humans. This definition includes all forms of creationism (Johnson, 1991, pp. 3-4).

The term, as used in most instances, refers specifically to those who deny Darwinism or Neo-Darwinism (macroevolution), and who are open about either criticizing or denying that most gross biological

Creation Matters

ISSN 1094-6632
Volume 10, Number 4
July / August 2005

Copyright © 2005 Creation Research Society
All rights reserved.

General Editor: Glen W. Wolfrom

For membership / subscription information,
advertising rates,
and information for authors:

Glen W. Wolfrom, Editor
P.O. Box 8263
St. Joseph, MO 64508-8263

Email: CMeditor@creationresearch.org
Phone/fax: 816.279.2312

Creation Research Society Website:
www.creationresearch.org

Articles published in *Creation Matters* represent the opinions and beliefs of the authors, and do not necessarily reflect the official position of the CRS.

changes have historically occurred (Johnson, 1990). Persons in this camp also often deny that mutations and natural selection are the major sources of variation feeding the process of evolution.

Theological sources

Strictly speaking, in theology *creationism* is a religious doctrine which teaches that each human soul is a specific and direct creation by God — thus, for each person, God specifically and separately created a human soul. There are probably 100 billion people who have ever lived, and thus there are probably, according to this doctrine, 100 billion human creations by God. Most people do not use the term in this sense.

The Dictionary of the Bible and Religion defines creation as “The divine action that calls the universe into existence and insures its continuity” (Gentz, 1986, p. 231). A much more detailed definition is given by the *Catholic Dictionary of Theology* under the heading “Creation”:

The act of creation may be defined as the production of a thing to the extent of its entire being, and it involves essentially two elements: an act on the part of the Creator which goes beyond any activity of which we have experience (since all the activity which we know extends only to a process of change and not to the total production of a thing), and a relation of total dependence of the created thing on its creating cause (since all that is real in it is produced by that creating cause). (Davis, 1967, p. 137)

Legal definitions

Legal definitions tended to rely on dictionary definitions. For example, the U.S. Supreme Court stated that the “doctrine or theory of creation”

is commonly defined as “holding that matter, the various forms of life, and the world were created by a transcendent God out of nothing.” *Webster’s Third International Dictionary* 532 (unabridged 1981).

“Evolution” is defined as “the theory that the various types of animals and plants have their origin in other preexisting types, the dis-

tinguishable differences being due to modifications in successive generations.” (Edwards v. Aguillard, p. 789)

They often refer to “evolution” as a fact (or practically as good as a fact) while remaining free to pass off proven failures or inconsistencies as merely the disproof of a particular mechanism only . . .

Defining evolution

Evolutionism is likewise rarely defined and, when it is, the definitions often vary widely. Although there is no one definition of the theory of evolution upon which evolutionists agree, many definitions are available.

Darwin never once used the word “evolution” in his 1859 *Origin of Species*, the bible of the movement, but rather the phrase “descent with modification” (Gould, 2000, p. 29). Other terms once commonly used instead of evolution include “transmutation,” “transformation,” and “development hypothesis,” among others.

The word evolution is Latin for “unrolling,” and referred to Roman books that were written on parchment and rolled up on wood sticks. They then were unrolled or “evolved” to be read. The word evolution implies “unfolding in time of a predictable or prepackaged sequence in an inherently progressive, or at least directional manner” (Gould, 2000, p. 29).

An example would be the development of a plant or animal from a seed or embryo. This meaning is very different from the common usage of the term evolution today. For example, evolution was defined by Ecker as the theory that “all living organisms” descended “from simpler ancestral forms” (1990, p. 80).

Common textbook definitions such as “change over time,” “descent with modification,” “shift in allele frequency,” etc., are all so ambiguous as to be next to useless in science. These defining criteria are so imprecise as to apply equally to non-evolutionary intelligently guided “genetic engineering,” normal “biological variation” changes (reflecting only preexisting genetic instructions), and even anti-evolutionary

“extinction.”

Other definitions, such as a “change in gene frequencies,” are also so general and describe so much that they are useless. After all, children manifest a change in “gene frequencies” from their parents, but no one would define children as more evolved than their parents.

Darwinists need to agree on a simple explanation of exactly what the theory of evolution is, and stick to it — and so far they have not been able to achieve this goal. They often refer to “evolution” as a fact (or practically as good as a fact) while remaining free to pass off proven failures or inconsistencies as merely the disproof of a *particular mechanism* only, such as gradualism vs punctuated equilibrium. They also claim abiogenesis is central to the theory, and then, under pressure, often try to deny that it is part of the theory. Julian Huxley defined evolution as a

directional and essentially irreversible process occurring in time, which in its course gives rise to an increase of variety and an increasingly high level of organization in its products. Our present knowledge indeed forces us to the view that the whole of reality is evolution — a single process of self-transformation. (1955, p. 278)

Note that the two major criteria mentioned by Huxley are an increase of variety and an increasingly high level of organization in the products of evolution. This new element, “the whole of reality is evolution — a single process of self-transformation,” applies the word to the process of change in society, government, religion, and every other sphere of activity.

Some writers define “evolution” as synonymous with “Darwinism.” Others define these two terms very differently. For example, O’Leary defined these two terms as follows:

evolution the theory that all life forms are descended from one or several common ancestors that were present on the early earth, three to four billion years ago.

Darwinism each life form has certain random mutations that make it either more or less fit to

survive in a given environment. Over time, these random mutations create the vast array of life forms that we see, from sponges to elephants to people. There is no need for design. This was Charles Darwin's explanation of evolution (2004, p. 9).

In its narrow scientific, biological context, evolution is often defined as the undirected appearance and accumulation of previously nonexistent genetic code required to produce viability-enhancing features in a functioning gene pool. This definition incorporates Watson and Crick's 1953 discovery.

Another common definition of the modern theory of evolution is that all living things are descendants from relatively few (if not one) simple living things (and most leave out abiogenesis) due to natural changes in nucleotide sequences (random mutations). Natural selection, the crown jewel of Darwin's formulation, now involves selecting mutant genes.

This alters Darwin's idea of the source of variation on which natural selection has worked and can work — a view that today is often called *neoDarwinism*. This definition says that evolution is the selection of a series of random mutations that vary from one generation of living things to the next, with some changes eliminated by natural causes, producing all forms of life existing today from a few simple life forms that lived in the past. A brief summary of this view is that "evolution is synonymous with new genetic instructions in the gene pool."

Summary

All of the definitions of creationism referenced in this paper have in common the idea that the creation of the universe and of life did not occur by natural means (such as by evolutionary naturalism), but was due instead to the work of an intelligence or a supernatural being. Creationism is a theistic world view, and evolution is a nontheistic worldview that explains the origin of all reality by naturalistic means.

The definitions of evolution were far less consistent, and ranged from the idea that evolution is simply a change in gene frequencies, to the concept that it is the secular creation story and the scientific creation myth. Untestable generalities such as "changes over time," "descent with modification," "survival of the fittest," etc., are all meaningless. Unfortunately, many evolutionists continue to fall back on such usage.

It is close to impossible to locate a definition of evolution with which no one would quibble, or even to phrase natural selection in a way that doesn't make it sound like a tautology (or just irrelevant). The reason why no single clear definition exists can partly be explained by the enormous level of disagreement in the field.

References

- Agnes, M. (editor). 2001. *Webster's New World College Dictionary*, 4th Ed. Wiley, New York.
- Berman, J. 2004. Basic positions on origins. *Creation Matters* 9(6):1.
- Davis, H.F. 1967. *A Catholic Dictionary of Theology*. Thomas Nelson and Sons Ltd., London.
- Ecker, R.L. 1990. *Dictionary of Science and Creationism*. Prometheus Books, Buffalo, NY.
- Edwards and Aguillard. 1987. *The Supreme Court of the United States Syllabus*: Edwards, Governor

- of Louisiana, et al. v. Aguillard et al. Appeal from the United States Court of Appeals for the Fifth Circuit. No. 85-1513. Argued December 10, 1986—Decided June 19, 1987.
- Fischer, R. 1981. *God Did It, But How?* Cal Media, LaMirada, CA.
- Gentz, W. (editor). 1986. *The Dictionary of the Bible and Religion*. Abingdon Press, Nashville, TN.
- Gould, S.J. 2000. What does the dreaded "E" word mean, anyway? *Natural History* 109(1):28-44.
- Hick, J. 1985. A liberal Christian view. *Free Inquiry* 5(4):40-42.
- Huxley, J. 1955. Chapter 8: Evolution and genetics. In *What is Science?* edited by J.R. Newman. Simon and Schuster, New York.
- Johnson, P.E. 1990. Evolution as dogma: The establishment of Naturalism. *First Things*, October 6.
- Johnson, P.E. 1991. *Darwin on Trial*. Washington, DC: Regnery Gateway.
- Johnson, P.E. 1998. *Objections Sustained: Subversive Essays on Evolution, Law and Culture*. InterVarsity Press, Downers Grove, IL.
- Jones, S., R.D. Martin, and D.R. Pilbeam (editors). 1992. *The Cambridge Encyclopedia of Human Evolution*. Cambridge University Press, Cambridge, UK.
- Little, W. 1968. *The Shorter Oxford English Dictionary*. Oxford University Press, London.
- O'Leary, D. 2004. *By Design or by Chance?* Kitchener, Ontario, Canada: Castle Quay Books.
- Nelson, C.E. 2002. Creationism. In *Encyclopedia of Evolution*, edited by M. Pagel, Oxford University Press, New York.
- Pagel, M.D. (editor). 2002. *Encyclopedia of Evolution, Volume 1*.
- Shanks, N. 2004. *God, the Devil, and Darwin: A Critique of Intelligent Design Theory*. Oxford University Press, New York.
- Stein, J. (editor). 1988. *The Random House College Dictionary, Revised Edition*. Random House, New York.

Dr. Bergman teaches biology, molecular biology, chemistry and anatomy at Northwest State in Ohio, where he has been on the faculty for over 16 years. He may be reached at jdborg@bright.net.

Satire

Harvard to Prove Life Began without 'Major Grant'

by Scott Ott

Reprinted by permission, courtesy of Scott Ott, editor-in-chief, *ScrappleFace.com*

— (2005-08-15) —

A new multi-million dollar Harvard University effort to study the origins of life in the universe seeks to prove that life did not begin with "a major grant" from an intelligent source, but rather sprang up spontaneously and entirely without purpose.

The university will fund the research

with \$1 million per year in a number of multi-million dollar facilities, employing some of the best minds in science to establish that the complexity of life started with no plan, no design, no forethought, and no intelligent creative agent.

"Harvard University has proven over the years that the more complex something is, the less likely you are to find any intelligence behind it," said an unnamed university spokesman. "In fact, this 'origins of

life' project started out as an accidental ink spill on paper, and it just developed from there."

The university said the study should take several million years to complete and is unlikely to produce any meaningful result.

Classical scientists

First, let's establish a point of history. The great classical scientists held to supernatural explanations of origins. Yet they were the ones who initiated and advanced scientific inquiry at a pace unmatched in history. Kepler famously wrote,

The chief aim of all investigations of the external world should be to discover the rational order and harmony which has been imposed on it by God and which He revealed to us in the language of mathematics.³

One of Isaac Newton's primary goals for the *Principia Mathematica* was to show that the laws of physics revealed supernatural design in the universe. In his correspondence with Richard Bentley, he said:

When I wrote my treatise [*Principia*] about our Systeme [solar system] I had an eye upon such Principles as might work wth considering men for the beleife of a Deity & nothing can rejoyce me more then to find it usefull for that purpose.⁴

Yet this attitude did not keep science from debunking mystical theories and explanations of natural phenomena. It precipitated it.

Search for "truth"

Secondly, we must understand that, as Nobel prize-winner Pauling once said, "Science is the search for truth, the effort to understand the world."⁵ We should place "truth" in quotations because science never establishes anything in the absolute sense. All our facts, theories, and laws are held with certain provisions and are tentative. New evidence might come along that would demonstrate that our previous interpretations were somehow mistaken. Or someone could provide a more elegant theory.

Nevertheless, science *is* all about finding the best explanation, the actual facts, and the real events. Laws like gravity, biogenesis, and thermodynamics are "true" in the sense discussed above. But there is no reason to rule out a certain explanation before starting the investigation, just because it might be distasteful to someone, or because it might fit or not fit with a particular religious revelation. The best explanation of the evidence should be allowed to win on its merits. It is perverse to hold a theory that is false or that is less than the best just because we have refused to consider certain options.

Examples

Thirdly, let's consider three examples of how science actually can consider supernatural explanations.

- 1 The word supernatural has for some become synonymous with divine. It should not be. Any phenomenon that cannot be explained as the outworking of natural laws is, by definition, super (or beyond) natural. Physicists have a fancy term for situations in which our current laws break down – a singularity. Examples in the mainstream scientific model include the state prior to the Big Bang and the scenario in the middle of a Black Hole. These are situations that are beyond our natural laws. Indeed, the Big Bang is supposed to have produced our natural laws.

But how is a singularity different from a miracle? It really isn't very different. Neither are repeatable or observable, and so they fail Ruse's criteria mentioned above. But I believe we can conduct tests to determine the reasonableness of these scenarios. Science puts the emphasis on testability, and does not rule out the supernatural. When approached the right way, the supernatural can sometimes be testable science. Gödel's Theorem (from the logic of mathematics) is an example.⁶

- 2 Science, as was noted above, has debunked various paranormal explanations. Fairies and magic potions were not disproved because science refused to consider them. Rather, phenomena that were purported to be magical were demonstrated empirically to have a better explanation, thus falsifying the magical explanations.

For example, I once read about a cave in Hawaii that emitted low moaning noises on particular nights...supposedly demonstrating that it was haunted. Careful investigation established that when water levels reached a particular height, the wind, which typically picked up at night, produced the peculiar noise naturally when it blew through the cavern. But if scientists actually *had* established that a particular paranormal activity was the most reasonable explanation of the evidence, that would not turn our society back to the Middle Ages. Indeed, it would not be any different from any other advance of knowledge. The only area that would be affected would be our understanding of that particular phenomenon.

- 3 Lastly, we can easily imagine a scenario where science could substantiate a supernatural explanation as reasonable. We all agree that science has been successful in establishing naturalistic explanations, and we concur that extraordinary claims should be backed by extraordinary evidence. But let's say that I claimed to heal people merely by laying hands on them and praying. We could visit a hospital where you could observe my heal-

ing patient after patient. Then we could get more precise and actually monitor the injury on video to confirm that the exact time of healing corresponded to the time of my prayer.

We could also add a test group for which prayer was not offered, and then submit each group to objective testing. The phenomenon could be duplicated at other institutions and in other locations to rule out any local influence. Over time, it could be established that the best explanation for the healing phenomenon, my prayer, was indeed supernatural. Science could not, however, say anything about the source of my power or the methodology of my channeling it. It would be forced to merely be descriptive in its explanation, much as it is done today with our fundamental understanding of energy and matter, or with the scenarios we call singularities.

Conclusion

In conclusion, I believe that science certainly can consider supernatural explanations. Science is, after all, nothing more than a very practical approach to gathering knowledge of the world to achieve workable solutions to human questions and problems. If a supernatural phenomenon was repeated with any regularity, no silly "rule" would keep naturally inquisitive folks from conducting experiments. If a supernatural explanation is the best, then it ought to be presented. Once this philosophy of science issue is resolved, it becomes easier for the design hypothesis to get a fair hearing. Creationists still have a lot of work to do to bolster their case, but we should not let evolutionists rule out a supernatural explanation before the evidence has even been considered.

References

- 1 Eldredge, N. 1982. *The Monkey Business: A Scientist Looks at Creationism*. Washington Square Press, New York, p. 82.
- 2 Ruse, M. 1982. *Darwinism Defended*. Addison-Wesley, Reading, MA, p. 322.
- 3 Kepler, J. 1601. *Defundamentis Astrologiae Certioribus*, Thesis XX, as cited in Bradley, Walter, "Is There Scientific Evidence for the Existence of God?" www.origins.org/articles/bradley_existenceofgod.html#text3
- 4 Turnbull, H.W., J.F. Scott, A. Rupert Hall, and Laura Tilling (ed.). 1977. [Newton to Bentley] "10 December 1692," in *The Correspondence of Sir Isaac Newton*, University Press, Cambridge, p. 233.
- 5 Pauling, L. 1958. *No More War!* Dodd Mead, NY, p. 209.
- 6 See Remine, W. 1993. *The Biotic Message*, St. Paul Science, Saint Paul Science, St. Paul, MN, pp. 49-53.

Dave Woetzel has a B.S. in Physics/Engineering and currently works at CCR Data Systems. He maintains the www.genesispark.org website which showcases the evidence that men and dinosaurs coexisted.

Speaking of Science

Commentaries on recent news from science

How otters keep warm

While on a sabbatical exploring Isle Royale National Park, John Weisel decided to collect hair from various mammals. He found otter fur to be particularly interesting, says a press release from the Univ. of Pennsylvania (Anonymous, 2005). Since otters don't have a layer of fat, he wondered, how do they keep warm in the icy water? Scanning electron microscopy showed the secret: the hairs fit together like tongue-and-groove woodwork:

They found that the cuticle surface structure of the underhairs and base of the less-abundant guard hairs are **distinctively shaped to interlock**, with wedge-shaped fins or petals fitting into wedge-shaped grooves between fins of adjacent hairs. (Emphasis added. See web link for micrographs and diagrams of how these hairs interlock.)

Not much on a mammal's body seems simpler than hair, but like everything else in living things, simplicity evaporates on closer inspection. Not only are these hairs shaped just right to produce a tight, insulating pattern, but the blueprint has to be encoded in DNA and transcribed by the cellular construction factory according to spec, and extruded from each hair follicle at the right time, with the right shape, the right color, and the right length. The structural details on the micro level are necessary to produce the macro result: a sleek, playful otter that makes a living in cold water.

Anonymous. 2005. **Otter adaptations: How do otters remain sleek and warm.** Press Release, University of Penn. Health System, August 18. www.uphs.upenn.edu/news/News_Releases/aug05/Weiselotter.htm

Do you belong in the zoo?

People are gawking at people in the London Zoo, each probably wondering on what side of the cage they belong. In one of the primate exhibits, eight scantily clad white people are on display, reports the Associated Press (Vinograd, 2005). Wearing fig leaves pinned onto their swimsuits, they play, they scratch, they groom each other, they wave to the onlookers. The idea is to show that humans are nothing special, but just like other animals. Unlike the apes and chimpanzees in the other primate cages, however, the humans get to go home at night.

The stunt is drawing visitors who had never visited the zoo. Some viewers were disappointed to find the humans wearing clothes. Children, confused by the message of the display, have been overheard asking, "Why are there people in there?" An apocryphal story has one of the chimpanzees asking, "Am I my keeper's brother?"

The advocates of evolution should get into the cage to show the rest of us how to act like a primate – where to scratch, how to shriek and club each other, how to draw figures of prey on the wall, and how to make rock music. We'll promise to take good care of them (feed them all the bananas they want, etc.) as we laugh all the way to the school board meeting.

Vinograd, C. 2005. Humans are ones on display at London Zoo. *Yahoo News / Associated Press*, Aug. 26. http://news.yahoo.com/s/ap/20050826/ap_on_fe_st/britain_human_zoo_3

Darwin's finches evolve – back and forth

What's new on the Galápagos? For those needing an update on Darwin's famous finches, the researchers who have spent the most time studying them – Peter and Mary Grant (Princeton) – wrote a Quick Guide in *Current Biology* in question-and-answer format (Grant and Grant, 2005). We'll skip the introductory material about how the birds got named after Darwin, and what makes them special in the history of evolutionary thought, to see if the Grants have any evidence that the finches have, indeed, evolved. The key question is: "Are Darwin's finches still evolving?"

An often asked question may be phrased as follows: **what can be said about evolution if it all happened in the past**, for surely understanding where our biological diversity came from is then **a mixture of scientific inference and inspired guesswork**, almost **impossible to verify**? **Imperceptibly slow evolution encourages such skepticism**. In the *Origin of Species*, Darwin wrote "We see nothing of these slow changes in progress until the hand of time has marked the lapse of ages."

In fact, numerous studies **have demonstrated evolution in action**, and the study of finches on the island of Daphne has **contributed significantly**. When the **environment changes**, for example when a severe and **prolonged drought** occurs, finches die in large numbers, not randomly but size-selectively. Large finches with **large beaks** have an **advantage** over small birds, and survive better, because they are able to crack the large seeds that are relatively common after almost all the small seeds have been consumed. When they breed the next year they produce offspring with large beaks because **beak size is heritable**.

This change from one generation to the next **is evolution**. Some time later, the **environment changes again**, food supply changes, the advantage shifts **toward finches with small beaks** and correspondingly the **direction of evolution changes**. The **back and forth process may have a net trajectory** toward large or small size, and this is where **inference enters the interpretation**, because **persistent directional changes** in structures such as bird beaks **are not likely to occur so rapidly that they can be documented in a few years**. (Emphasis added in all quotes.)

Moreover, they say when asked about finch genomics, the genes of the finches are dynamic, though the evidence is only preliminary:

Molecular markers have also been used to track the **exchange of genes between species that interbreed**, albeit rarely, and the finding is **dramatic**. They show a pair of species on Daphne in a state of flux, at present **converging genetically and morphologically**, having diverged strongly in the past. This **nicely captures the evolutionary dynamism** that Darwin's finches display to an unusual degree.

Yet if they diverge then converge back to what they were

before, is that really evolution? The Quick Guide moves on, leaving that question unasked and unanswered.

There you have it: the world's leading authorities on the beaks that made Charlie famous, and they don't add a thing to what young-earth creationists already believe. The Grants merely repeated what is already admitted by intelligent-design researchers in the films *Unlocking the Mystery of Life* and *Icons of Evolution*; viz., any observed changes are mere oscillations about a mean.

These poor devoted people have measured beaks for over 30 years and have not found any persistent directional changes – nor could they be expected to in one human lifetime. They even admit that today the birds remain inter-fertile and so have not really undergone speciation after however long they have lived on these islands. Yet they expect us to think that it is a scientifically sound *inference* to *extrapolate* their data, which in evolutionary terms constitute noise, into long-term directional trends.

Inference, interpretation based on presuppositions – that's what most ardent creationists accuse the Darwinists of engaging in without scientific rigor. We all have the same *data*, but the *interpretation* depends on your world view.

David Berlinski chuckles at the Darwinistic boasting over this most famous of examples of evolution. It doesn't even reach the level of anecdote, he said in the film *Icons of Evolution*. OK, finch beaks adapt to drought conditions, and adapt back when the rains return (the changes are submillimeter differences, by the way). Fine. Berlinski continues: we're going to need a lot more than that to be convinced that all the complexity of life could be explained by Darwin's hypothesis of natural selection.

Grant, P.R. and B.R. Grant. 2005. Quick guide: Darwin's finches. *Current Biology* 15(16):R614-R615.

Do Emperor Penguins Know the Meaning of True Love?

The nature film sensation *March of the Penguins* is capturing the public imagination because of its portrayal of emperor penguins in almost anthropomorphic visions. Strutting upright in their feathery tuxedos, these Antarctic seabirds seem almost human: they love, they walk, they sacrifice, they grieve over the loss of a chick, they endure hardship bravely, they rejoice at a family reunion.

It's a bit over the top, says one reporter (Mayell, 2005). She quotes biologists who cast doubt on whether penguins can experience true feelings. Penguins respond to hormones, biologists tell us, and their social behavior is instinctive. Still, the movie is worthwhile, the article confesses; the simplistic portrayal is useful, helping make some aspects of the life cycle of penguins more accessible to the general public.

Mayell is right about the fallacy of imputing human emotional and moral qualities to birds. Still, birds are among the smartest of animals. Who could know what they think and feel without becoming a "birdbrain"? To believe that such behaviors are mere emergent properties of matter in motion seems inadequate.

In evolutionary terms, animal behaviors that look playful or emotional seem senseless in a world of survival, and evolutionists are at a loss to explain them. Maybe the fact that we humans can relate to the cries, chirps, and behaviors of emperor penguins

indicates that there is, at some level, a non-material element to their ontology, a kind of psyche. While avoiding the fallacy of personification, we must also not commit the fallacy of reductionism.

Penguins, despite their comical waddling, deserve our respect. They are wonderful birds, amazingly adapted to their harsh environment. As true birds, yet so profoundly different from the sparrows and robins that share our urban settings, penguins outperform fish as champion swimmers. The sea is their sky. They fly through the water with the speed and grace of a swift.

Emperors are among the most handsomely dressed of all penguins, their black-and-white curvaceous outfits highlighted with a blush of facial vermillion. One would think it was produced by the same fashion designer who decorated orcas and pandas. Viewers will undoubtedly notice also how the plumage pattern changes dramatically from chick to adult: the chicks' eyes are surrounded by goggles of white, whereas the parents' are nearly concealed in jet black.

Knit together as effectively as thick fur, the feathery coat repels freezing water and biting winds that can rage up to 100 miles per hour and plummet to 70 degrees below. Their thick, leathery feet, looking like crampons underneath and alligator skin on top, are tough enough to survive miles of walking across ice, yet tender enough to cradle an egg and protect a downy hatchling for months.

So many physiological adaptations have to be finely tuned for these birds to survive – from the warm flap of skin that incubates the egg centimeters away from the deadly cold, to the ears and eyes that can survive the pressure a thousand feet down in the ocean, to the exact timing of the hatching of the eggs and the females' arrival to feed them, and much, much more – they seem irreducibly complex on the macro scale.

Undoubtedly some accentuation of existing characters might occur over many generations as the habitat changes, but to believe that all these adaptations could have coalesced in one species by a blind process of natural selection stretches credulity beyond reason. If it were true, where are the transitional forms? Where are the fossils? Despite the single reference to millions of years of adaptation, *March of the Penguins* is a film about intelligent design.

Take the family to see this movie. You'll laugh at the penguins' bellyflops, admire their handsome suits, observe the physical adaptations that outfit them for survival, and shiver at the hardships they endure. The story is beautiful, the photography stunning (a tribute to the challenges the cameramen endured), the music is memorable, and, despite the occasional human emotions attributed to the birds, it's true – emperor penguins actually perform this incredible 70-mile march, year after year, in one of the harshest environments on earth. We give it two flippers up.

Mayell, H. 2005. "March of the Penguins" too lovey-dovey to be true? National Geographic News, August 19.
http://news.nationalgeographic.com/news/2005/08/0819_050819_march_penguins.html

Editor's note: All S.O.S. (Speaking of Science) items in this issue are kindly provided by David Coppedge. Opinions expressed herein are his own. Additional commentaries and reviews of news items by David, complete with hyperlinks, can be seen at: www.creationsafaris.com/crevnews.htm. Unless otherwise noted, emphasis is added in all quotes.

Creation Calendar

Note: Items in "Creation Calendar" are for information only; the listing of an event does not necessarily imply endorsement by the Creation Research Society.

September 25

Human, not Animal

The Age of the Earth: Thousands, not Billions

by Dr. Kevin Anderson, Creation Research Society

Sponsored by First Baptist Church, Vicksburg, MS

Contact: Justine Peters, (601)636-2493

October 22

Conflicts between Evolution and the Science of Genetics

by Dr. Kevin Anderson, Creation Research Society

Sponsored by South Bay Creation Science Assn., Torrence, CA

Contact: Garth Guessman, (310)952-0424

November 5

Thousands ... not Billions (a conference)

Drs. Vardiman, Humphreys, Snelling, and DeYoung

Sponsored by Institute for Creation Research (registration required)

Shadow Mountain Community Church, El Cajon, CA

Contact: Denise Prock, (619)448-0900, ext. 6020 events@icr.org

2006

June 8 - 10

Annual Meeting of Board of Directors

Creation Research Society

Lancaster, SC

Creation Research Society

P.O. Box 8263

St. Joseph, MO 64508-8263

USA

Address Service Requested



Creation Matters

July / August 2005

Vol. 10 No. 4

Nonprofit Org.

US Postage

PAID

Creation Research Society

All by Design

by Jonathan C. O'Quinn, D.P.M., M.S.

Leapin' Lizards

The Bible records that only two people ever walked on water; they are the Lord Jesus and his disciple Peter.

However, there is one tropical lizard that can also move across the water, and its ability mystifies evolutionists. When danger threatens, the ground-dwelling basilisk lizard stands up on its hind legs and sprints across rivers or ponds to reach safety. This lizard's design displays an understanding of both physics and hydrodynamics, which neither evolution nor chance possess. With each step, the basilisk slaps the surface of the water.

For every action, there is an equal but opposite reaction. The downward force exerted by its feet is matched by an upward force from the water, providing up to 23% of the support the

basilisk needs. The resulting stroke through the water provides the remaining support. Tiny, collapsible fringes around the basilisk's toes open up to increase surface area when striking the water and close when each leg is pulled back, just before the water

closes in, keeping the lizard both above water and dry.

Rational thinking leads one to ask how this lizard could have evolved in stages, as evolutionary theory requires of all life forms. How could the basilisk's evolutionary ancestor have learned to move quickly enough on water to remain alive while it "waited" to evolve its speed, toe fringes, ideal body mass and ability to run upright? And, as you might expect, there is zero fossil evidence to prove its evolution.

Bibliography

Glasheen, J.W. and T.A. McMahon. 1997. Running on water. The secret of the basilisk lizard's strategy lies in its stroke. *Scientific American* 277(3):68.



<http://img180.exs.cx/img180/9606/liz8sv.jpg>