

# The Impotence of Darwinism: A Christian Scientist Looks at the Evidence

*Dr. Ray Bohlin looks at some of the tenets of Darwinism and finds them lacking support in the real world. Speaking from a biblical worldview perspective, he finds that the gaps and inconsistencies in current Darwinian thinking should demand that different theories be examined and evaluated.*



*This article is also available in [Spanish](#).*

## Darwinism, Design, and Illusions

Darwinian evolution has been described as a universal acid that eats through everything it touches.<sup>[\[1\]](#)</sup> What Daniel Dennett meant was that evolution as an idea, what he called “Darwin’s dangerous idea,” is an all-encompassing worldview. Darwinism forms the basis of the way many people think and act. It touches everything.

What Darwin proposed in 1859 was simply that all organisms are related by common descent. This process of descent or evolution was carried out by natural selection acting on variation found in populations. There was no guidance, no purpose, and no design in nature. The modern Neo-Darwinian variety of evolution identifies the source of variation as genetic mutation, changes in the DNA structure of organisms. Therefore, evolution is described as the common descent of all organisms by mutation and natural selection, and is assumed to be able to explain everything we see in the biological realm.



This explanatory power is what Dennett refers to as “Darwin’s dangerous idea.” Darwinism assumes there is no plan or purpose

to life. Therefore, everything we see in the life history of an organism, including human beings, derives in some way from evolution, meaning mutation and natural selection. This includes our ways of thinking and the ways we behave. Even religion is said to have arisen as a survival mechanism to promote group unity that aids individual survival and reproduction.

Since evolution has become the cornerstone of the dominant worldview of our time—scientific naturalism—those who hold to it would be expected to take notice when somebody says it's wrong! A growing number of scientists and philosophers are saying with greater confidence that Darwinism, as a mode of explaining all of life, is failing and failing badly. Much of the criticism can be found in the cornerstone of evolution, mutation and natural selection and the evidence for its pervasiveness in natural history. One of the biggest stumbling blocks is evolution's repudiation of any form of design or purpose in nature. Even the staunch Darwinist and evolutionary naturalist, Britain's Richard Dawkins, admits, "Biology is the study of complicated things that give the appearance of having been designed for a purpose."[\[2\]](#)

No one denies that biological structures and organisms look designed; the argument is over what has caused this design. Is it due to a natural process that gives the appearance of design as Dawkins believes? Or is it actually designed with true purpose woven into the true fabric of life? Darwinian evolution claims to have the explanatory power and the evidence to fully explain life's apparent design. Let's explore the evidence.

## **The Misuse of Artificial Selection**

It is assumed by most that evolution makes possible almost unlimited biological change. However, a few simple observations will tell us that there are indeed [limits to](#)

[change](#). Certainly the ubiquitous presence of convergence suggests that biological change is not limitless since certain solutions are arrived at again and again. There appear to be only so many ways that organisms can propel themselves: through water, over land or through the air. The wings of insects, birds and bats, though not ancestrally related, all show certain design similarities. At the very least, various physical parameters constrain biological change and adaptation. So there are certainly physical constraints, but what about biological constraints?

Darwin relied heavily on his analogy to *artificial* selection as evidence of *natural* selection. Darwin became a skilled breeder of pigeons, and he clearly recognized that just about any identifiable trait could be accentuated or diminished, whether the color scheme of feathers, length of the tail, or size of the bird itself. Darwin reasoned that natural selection could accomplish the same thing. It would just need more time.

But artificial selection has proven just the opposite. For essentially every trait, although it is usually harboring some variability, there has always been a limit. Whether the organisms or selected traits are roses, dogs, pigeons, horses, cattle, protein content in corn, or the sugar content in beets, selection is certainly possible. But all selected qualities eventually fizzle out. Chickens don't produce cylindrical eggs. We can't produce a plum the size of a pea or a grapefruit. There are limits to how far we can go. Some people grow as tall as seven feet, and some grow no taller than three; but none are over twelve feet or under two. There are limits to change.

But perhaps the most telling argument against the usefulness of artificial selection as a model for natural selection is the actual process of selection. Although Darwin called it *artificial* selection, a better term would have been *intentional* selection. The phrase "artificial selection" makes

it sound simple and undirected. Yet every breeder, whether of plants or animals is always looking for something in particular. The selection process is always designed to a particular end.

If you want a dog that hunts better, you breed your best hunters hoping to accentuate the trait. If you desire roses of a particular color, you choose roses of similar color hoping to arrive at the desired shade. In other words, you plan and manipulate the process. Natural selection can do no such thing. Natural selection can only rely on what variation comes along. Trying to compare a directed to an undirected process offers no clues at all.

Most evolutionists I share this with usually object that we do have good examples of natural selection to document its reality. Let's look at a few well-known examples.

## The Real Power of Natural Selection

It should have been instructive when we had to wait for the 1950s, almost 100 years after the publication of *Origin of Species*, for a documentable case of natural selection, the famous Peppered Moth (*Biston betularia*). The story begins with the observation that, before the industrial revolution, moth collections of Great Britain contained the peppered variety, a light colored but speckled moth. With the rise of industrial pollution, a dark form or melanic variety became more prevalent. As environmental controls were enacted, pollution levels decreased and the peppered variety made a strong comeback.

It seemed that as pollution increased, the lichens on trees died off and the bark became blackened. The previously camouflaged peppered variety was now conspicuous and the previously conspicuous melanic form was now camouflaged. Birds could more readily see the conspicuous variety and the two

forms changed frequency depending on their surrounding conditions. This was natural selection at work.

There were always a few problems with this standard story. What did it really show? First, the melanic form was always in the population, just at very low frequencies. So we start with two varieties of the peppered moth and we still have two forms. The frequencies change but nothing new has been added to the population. Second, we really don't know the genetics of industrial melanism in these moths. We don't have a detailed explanation of how the two forms are generated. And third, in some populations, the frequencies of the two moths changed whether there was a corresponding change in the tree bark or not. The only consistent factor is pollution.[\[3\]](#) The most well-known example of evolution in action reduces to a mere footnote. Regarding this change in the Peppered Moth story, evolutionary biologist Jerry Coyne lamented that "From time to time evolutionists re-examine a classic experimental study and find, to their horror, that it is flawed or downright wrong."[\[4\]](#)

Even Darwin's Finches from the [Galapagos Islands](#) off the coast of Ecuador tell us little of large scale evolution. The thirteen species of finches on the Galapagos show subtle variation in the size and shape of their beaks based on the primary food source of the particular species of finch. Jonathan Wiener's *Beak of the Finch*[\[5\]](#) nicely summarizes the decades of work by ornithologists Peter and Rosemary Grant. While the finches do show change over time in response to environmental factors (hence, natural selection), the change is reversible! The ground finches (six species) do interbreed in the wild, and the size and shape of their beaks will vary slightly depending if the year is wet or dry (varying the size seeds produced) and revert back when the conditions reverse. There is no directional change. It is even possible that the thirteen species are more like six to seven species since hybrids form so readily, especially among the ground finches,

and survive quite well. Once again, where is the real evolution?

There are many other documented examples of natural selection operating in the wild. But they all show that, while limited change is possible, there are limits to change. No one as far as I know questions the reality of natural selection. The real issue is that examples such as the Peppered Moth and Darwin's Finches tell us nothing about evolution.

## **Mutations Do Not Produce Real Change**

While most evolutionists will acknowledge that there are limits to change, they insist that natural selection is not sufficient without a continual source of variation. In the Neo-Darwinian Synthesis, mutations of all sorts fill that role. These mutations fall into two main categories: mutations to structural genes and mutations to developmental genes. I will define structural genes as those which code for a protein which performs a maintenance, metabolic, support, or specialized function in the cell. Developmental genes influence specific tasks in embryological development, and therefore can change the morphology or actual appearance of an organism.

Most evolutionary studies have focused on mutations in structural genes. But in order for large scale changes to happen, mutations in developmental genes must be explored. Says Scott Gilbert:

*"To study large changes in evolution, biologists needed to look for changes in the regulatory genes that make the embryo, not just in the structural genes that provide fitness within populations."* [\[6\]](#)

We'll come back to these developmental mutations a little later.

Most examples we have of mutations generating supposed evolutionary change involve structural genes. The most common example of these kinds of mutations producing significant evolutionary change involves microbial antibiotic resistance. Since the introduction of penicillin during World War II, the use of antibiotics has mushroomed. Much to everyone's surprise, bacteria have the uncanny ability to become resistant to these antibiotics. This has been trumpeted far and wide as real evidence that nature's struggle for existence results in genetic change—evolution.

But microbial antibiotic resistance comes in many forms that aren't so dramatic. Sometimes the genetic mutation simply allows the antibiotic to be pumped out of the cell faster than normal or taken into the cell more slowly. Other times the antibiotic is deactivated inside the cell by a closely related enzyme already present. In other cases, the molecule inside the cell that is the target of the antibiotic is ever so slightly modified so the antibiotic no longer affects it. All of these mechanisms occur naturally and the mutations simply intensify an ability the cell already has. No new genetic information is added.[\[7\]](#)

In addition, genetically programmed antibiotic resistance is passed from one bacteria to another by special DNA molecules called plasmids. These are circular pieces of DNA that have only a few genes. Bacteria readily exchange plasmids as a matter of course, even across species lines. Therefore, rarely is a new mutation required when bacteria “become” resistant. They probably received the genes from another bacterium.

Most bacteria also suffer a metabolic cost to achieve antibiotic resistance. That is, they grow more slowly than wild-type bacteria, even when the antibiotic is not present. And we have never observed a bacterium changing from a single-celled organism to a multicellular form by mutation. You just get a slightly different bacterium of the same species. The great French evolutionist Pierre Paul-Grassé, when speaking

about the mutations of bacteria said,

*"What is the use of their unceasing mutations if they do not change? In sum the mutations of bacteria and viruses are merely hereditary fluctuations around a median position; a swing to the right, a swing to the left, but no final evolutionary effect."*[{8}](#)

What I have been describing so far is what is often referred to as microevolution. Evolutionists have basically assumed that the well-documented processes of microevolution eventually produce macroevolutionary changes given enough time. But this has been coming under greater scrutiny lately, even by evolutionists. There appears to be a real discontinuity between microevolution and the kind of change necessary to turn an amoeba-like organism into a fish, even over hundreds of millions of years.

Below is just a quick sampling of comments and musings from the current literature.

"One of the oldest problems in evolutionary biology remains largely unsolved. . . . historically, the neo-Darwinian synthesizers stressed the predominance of micromutations in evolution, whereas others noted the similarities between some dramatic mutations and evolutionary transitions to argue for macromutationism."[{9}](#)

"A long-standing issue in evolutionary biology is whether the processes observable in extant populations and species (microevolution) are sufficient to account for the larger-scale changes evident over longer periods of life's history (macroevolution)."[{10}](#)

"A persistent debate in evolutionary biology is one over the continuity of microevolution and macroevolution—whether macroevolutionary trends are governed by the principles of microevolution."[{11}](#)



While each of the above authors does not question evolution directly, they are questioning whether what we have been studying all these years, microevolution, has anything to do with the more important question of what leads to macroevolution. And if microevolution is not the process, then what is?

## **Natural Selection Does Not Produce New Body Plans**

The fundamental question which needs addressing is, How have we come to have sponges, starfish, cockroaches, butterflies, eels, frogs, woodpeckers, and humans from single cell beginnings with no design, purpose or plan? All the above listed organisms have very different body plans. A body plan simply describes how an organism is put together. So can we discover just how all these different body plans can arise by mutation and natural selection? This is a far bigger and more difficult problem than antibiotic resistance, a mere biochemical change. Now we have to consider just how morphological change comes about.

The problem of macroevolution requires developmental mutations. Simply changing a protein here and there won't do it. We somehow have to change how the organism is built. Structural genes tend to have little effect on the development of a body plan. But the genes that control development and ultimately influence the body plan tend to find their expression quite early in development. But this is a problem because the developing embryo is quite sensitive to early developmental mutations. Wallace Arthur wrote:

“Those genes that control key early developmental processes are involved in the establishment of the basic body plan. Mutations in these genes will usually be extremely disadvantageous, and it is conceivable that they are always so.”[\[12\]](#)

But these are the mutations needed for altering body plans. However, evolutionists for decades have been studying the wrong mutations. Those dealing with structural genes, microevolution, only deal with how organisms survive as they are, it doesn't tell us how they got to be the way they are. Optiz and Raft note that

"The Modern Synthesis is a remarkable achievement. However, starting in the 1970's, many biologists began questioning its adequacy in explaining evolution. . . . Microevolution looks at adaptations that concern only the survival of the fittest, not the arrival of the fittest." [\[13\]](#)

Wallace Arthur:

"In a developmentally explicit approach it is clear that many late changes can not accumulate to give an early one. Thus if taxonomically distant organisms differ right back to their early embryogenesis, as is often the case, the mutations involved in their evolutionary divergence did not involve the same genes as those involved in the typical speciation event." [\[14\]](#)

To sum up the current dilemma, significant morphological change requires early developmental mutations. But these mutations are nearly universally disadvantageous. And microevolution, despite its presence in textbooks as proof of evolution, actually tells us precious little about the evolutionary process. If these developmental mutations that can offer an actual benefit are so rare, then macroevolution would be expected to be a slow and difficult, yet bumpy process. Indeed, Darwin expected that "As natural selection acts solely by accumulating slight, successive, favorable variations, it can produce no great or sudden modifications; it can only act in short and slow steps."

The origin of body plans is wrapped up in the evidence of paleontology, the fossils and developmental biology. What does

the fossil record have to say about the origin of basic body plans? When we look for fossils indicating Darwin's expected slow gradual process we are greatly disappointed. The Cambrian Explosion continues to mystify and intrigue. The Cambrian Explosion occurred around 543 million years ago according to paleontologists. In the space of just a few million years, nearly all the animal phyla make their first appearance.

"The term 'explosion' should not be taken too literally, but in terms of evolution it is still very dramatic. What it means is rapid diversification of animal life. 'Rapid' in this case means a few million years, rather than the tens or even hundreds of millions of years that are more typical . .

.{15}

Prior to the Cambrian, (550-485 million years ago), during the Vendian (620-550 million years ago) we find fossil evidence for simple sponges, perhaps some cnidarians and the enigmatic Ediacaran assemblage. For the most part we find only single cell organisms such as bacteria, cyanobacteria, algae, and protozoan. Suddenly, in the Cambrian explosion (545-535 million years ago) we find sponges, cnidarians, platyhelminthes, ctenophores, mollusks, annelids, chordates (even a primitive fish), and echinoderms.

While many animal phyla are not present in the Cambrian, they are mostly phyla of few members and unlikely to be fossilized in these conditions. James Valentine goes further in saying that "The diversity of body plans indicated by combining all of these Early Cambrian remains is very great. Judging from the phylogenetic tree of life, all living phyla (animal) were probably present by the close of the explosion interval." {16} Later Valentine assures us that the fossil record of the explosion period is as good as or better than an average section of the geologic column. {17} So we just can't resort to the notion that the fossil record is just too incomplete.

In the Cambrian Explosion we have the first appearance of most

animal body plans. This sudden appearance is without evidence of ancestry in the previous periods. This explosion of body plans requires a quantum increase of biological information. New genetic information and regulation is required.[{18}](#) Mutations at the earliest stages of embryological development are required and they must come in almost rapid fire sequence. Some have suggested that perhaps the genetic regulation of body plans was just more flexible, making for more experimentation. But we find some of the same organisms in the strata from China to Canada and throughout the period of the explosion. These organisms do not show evidence of greater flexibility of form.

The type of mutation is definitely a problem, but so is the rate of mutation. Susumo Ohno points out that "it still takes 10 million years to undergo 1% change in DNA base sequences. . . . [The] emergence of nearly all the extant phyla of the Kingdom Animalia within the time span of 6-10 million years can't possibly be explained by mutational divergence of individual gene functions."[{19}](#)

Darwinism would also require early similarities between organisms with slow diversification. Phyla should only become recognizable after perhaps hundreds of millions of years of descent with modification. Yet the great diversity appears first with gradual drifting afterward, the opposite of what evolution would predict. Again some suggest that the genetic structure of early organisms was less constrained today, allowing early developmental mutations with less severe results. But there would still be some developmental trajectory that would exist so the selective advantage of the mutation would have to outweigh the disruption of an already established developmental pathway.

But each of these speculations is unobservable and untestable. It's quite possible that developmental constraints may be even more rigid with fewer genes. But even if the constraints were weaker, then there should be more variability in morphology of

species over space and time. But as I said earlier, the Cambrian fauna are easily recognizable from the early Cambrian deposits in China and Greenland to the middle Cambrian deposits of the Burgess Shale. There is no testable or observational basis for hypothesizing less stringent developmental constraints.

This stunning burst of body plans in the early Cambrian and the lack of significant new body plans since the Cambrian indicate a limit to change. Evolutionary developmental biologist Rudolf Raff told *Time* magazine over ten years ago that “There must be limits to change. After all, we’ve had these same old body plans for half a billion years.”[\[20\]](#) Indeed, perhaps these limits to change are far more pervasive and genetically determined than Raff even suspects.

Along the way, functional organisms must form the intermediate forms. But even the functionality of these intermediate organisms transforming from one body plan to another has long puzzled even the most dedicated evolutionists. S. J. Gould, the late Harvard paleontologist, asked,

“But how can a series of reasonable intermediates be constructed? . . . The dung-mimicking insect is well protected, but can there be any edge in looking only 5 percent like a turd?”[\[21\]](#)

With his usual flair, Gould asks a penetrating question. Most have no problem with natural selection taking a nearly completed design and making it just a little bit more effective. Where the trouble really starts is trying to create a whole new design from old parts. Evolution has still not answered this critical question. I fully believe that evolution is incapable of answering this question with anything more than “I think it can.” However, unlike the little train that could, it will take far more than willpower to come up with the evidence.

In this brief discussion I haven't even mentioned the challenges of [Michael Behe's irreducible complexity,{22}](#) William Dembski's specified complexity,{23} and a host of other evolutionary problems and difficulties. This truly is a theory in crisis.

## Notes

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23. William A. Dembski, *No Free Lunch: Why Specified Complexity Cannot Be Purchased without Intelligence*, (Lanham, Maryland: Roman and Littlefield, 2002).

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## Icons of Evolution

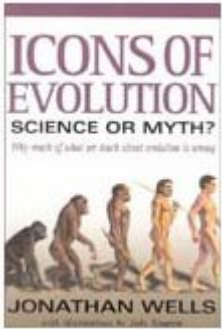
*Dr. Ray Bohlin reviews Jonathan Wells' book Icons of Evolution, which exposes the lies and distortions that constitute evolution's best textbook "evidence."*



*This article is also available in [Spanish](#).*



# Lies and Distortions Masquerading as Truth in the Halls of Science



Most everyone was required to take biology in high school, and many who went on to college likely took an introductory biology course as an elective, if not as a beginning course for a biology major. Required in most of these courses, mainly because of its inclusion in the textbook, was a section on evolution. Therefore, most people with a secondary education or above are familiar with the more popular evidences and examples of evolution nearly all textbooks have been using for decades. These include the peppered moth story of natural selection, Darwin's finches as an example of adaptive speciation, and the ubiquitous tree of life with its implied common ancestor to all life forms.

These familiar evidences of the creation story of our early 21st century culture are what Jonathan Wells (Ph.D., UC Berkeley, molecular and cell biology; Ph.D., Yale University, religious studies) refers to as the *Icons of Evolution* in his book by the same name (Regnery Publishing, 2000). Wells focuses on ten of these icons and meticulously exposes them to be false, fraudulent or at best, misleading. Many of these difficulties have been pointed out before and are known to a few, but Wells adds a level of sophistication and packages them in a form certain to get the attention of everyone in the educational establishment. This book is not a plea for creation in the schools or a selective and picky rant against trivial details. It is a frontal assault against some of the most cherished and revered "proofs" of the evolution story. There will be no shortage of controversy around this extensively researched and well-written exposé. If these "Icons" are the best evidence for evolution, or at least the easiest evidence to explain, then one is left wondering what the future of evolutionary instruction could be. Even further,



what future might there be for evolution itself?

Wells begins with an icon that itself starts at the beginning, the Miller-Urey experiment. This purports to show that molecules necessary for life could have arisen by simple chemical reactions on an early earth. The Miller-Urey experiment uses an atmosphere of reduced gases: ammonia, methane, water vapor, and hydrogen. Then it adds some energy in the form of sparks, and produces as Carl Sagan said, "the stuff of life." Dating back to 1953, this experiment has been around for nearly fifty years. The problem is that for at least the last twenty-five years origin of life researchers realized that this atmosphere does not reflect that of the early earth. Many textbooks will begrudgingly admit this, but include the experiment anyway. One can only guess the reason: no other simulated atmosphere works. I suppose that textbook writers would suggest that since we "know" some form of chemical evolution happened, they are justified in not representing the facts accurately!

## **Tree of Life, Homology, and Haeckel's Embryos**

The tree of life is ubiquitous in evolutionary literature. The notion that all of life is descended from a single common ancestor billions of years ago is how many would define evolution. But the actual evidence argues strongly against any such single common ancestor, and most animal life forms appear suddenly without ancestors in what is known as the Cambrian explosion of nearly 543 million years ago in evolutionary time. The Cambrian documents life forms so divergent that one would predict a fossil record covering hundreds of millions of years just to document the many transitions required from the first multicellular animal ancestor. Current estimates suggest this change took place in less than 5-10 million years. Yet the tree of life, documenting slow gradual changes, persists.

Another critical evidence for evolution over the years has been homologous structures. The forelimbs of all mammals, indeed all vertebrates, from bats to whales to horses to humans, possess the same basic bone structure. This is routinely held up as evidence of having descended from a common ancestor. The different forms simply tell of different adaptive stories, resulting in their unique functions relying on the same basic foundation. What becomes puzzling is, first, a confusion of definitions. *Homology* is **defined** as structures having arisen from a common ancestor.<sup>[1]</sup> But then homology cannot be used as an evidence of evolution. Something is very wrong, yet textbook orthodoxy concerning homology continues to perpetuate a myth that has been exposed for decades. Second, supposed homologous structures do not necessarily arise through common developmental pathways or similar genes.

Next, Wells turns his attention to perhaps the most inexcusable icon of all: similarities in vertebrate embryos originally pointed out by Ernst Haeckel in the 19th century and used by Darwin in *The Origin of Species* as a powerful evidence for common descent. Haeckel's vertebrate embryos are shown passing through a remarkably similar stage early in development and only later diverging to the specific form. This passage through a common form early in development was seen as obvious evidence for a "community of descent." Yet, once again, the evidence gets in the way.

Since before the dawn of the 20th century, embryologists have known that Haeckel misrepresented the evidence. Vertebrate embryos never pass through a similar stage. What's more, Haeckel left out the fact that the earlier stages of embryonic development between classes of vertebrates pass through remarkably different pathways to arrive at this supposedly similar intermediate stage. The fraud was recently "rediscovered," though most embryologists have been aware of the inaccuracy all along. This shows the longevity of even falsified evidence, due to its persuasive appeal even in the

hallowed halls of science. Perhaps scientists are human after all, seduced by a fraud simply because it makes such a good case for a treasured theory.

## **The Peppered Moth**

Probably the granddaddy of all the icons of evolution is the peppered moth story. In pre-industrial England, the peppered moth was common in entomologists' collections. By the 1840s a dark or melanic form was increasing in frequency in populations across England. By 1900 the melanic form comprised as much as ninety percent of some populations. In the 1950s experiments by Bernard Kettlewell clearly established that this change in frequency from a peppered variety to a dark variety was due to two factors.

First, the surface of tree trunks had changed from splotchy, lichen-covered patchwork, to a uniform, dark complexion, due to increased levels of pollution. The pollution killed the lichens and covered the tree trunks with soot. Second, the peppered variety was camouflaged from predation by birds on the lichen-covered tree trunks, and the melanic variety was camouflaged on the dark tree trunk. Therefore, the switch from peppered variety to melanic variety was due to natural selection, acting through selective bird predation as the trees changed from lichen-covered bark to soot-covered bark. Then with stricter air quality standards, the lichens are returning and the peppered variety is predictably coming back strong.

The peppered moth story became legendary as a classic example of Darwinian natural selection. But within 20 years of Kettlewell's work, cracks began to appear. It was soon noted that the characteristic switch from the peppered form to the dark form happened in areas where the lichens still grew on tree trunks. In other areas, the dark form began to decrease before the lichens began returning on trees. A similar pattern of a switch from a light form to a dark form was observed in

ladybird beetles. Birds don't like ladybird beetles. Therefore, predation is ruled out as the selector. It all began to unravel when it was observed that peppered moths of both varieties **never** rest on tree trunks!

Essentially all photographs of moths on the trunks of trees were staged using dead or sluggish moths. They are not active during daylight. If that were the case, how could birds find them on tree trunks at all? Kettlewell released his moths in his mark-recapture-predation experiments in daylight hours, when the moths are naturally inactive. They simply found the nearest resting place (tree trunks in their sluggish state), and the birds gobbled up the non-camouflaged moths. We still don't know exactly where moths rest or whether lichens play any significant role in the story. Yet many biologists insist that the traditional story makes a good example of evolution in action. "To communicate the complexities would only confuse students," they say. Once again, flawed, yet cherished, examples persist because they are just too good **not** to be true!

## **Birds, Dinosaurs, Fruit Flies, and Human Evolution**

The reptile-like bird, Archaeopteryx, has long been heralded as a classic example of a true ancestral transitional form. The improbable change from reptile to bird has been preserved in snapshot form in this remarkable fossil from Germany. Possessing a beautifully preserved reptilian skeleton with wings and feathers, Archaeopteryx was a paleontologist's dream. This would certainly explain why Archaeopteryx has found its way into just about every textbook. But Archaeopteryx has fallen on hard times. As happens with so many perceived transitions, it is universally viewed now as just an extinct bird, an early offshoot of the real ancestor.

Surprisingly, bird-like dinosaurs from much later geologic

periods are hailed as the real ancestors. This is based on structural similarities despite their existence after Archaeopteryx. Never mind that the child exists before the parent. So enamored are some, that birds are just today's feathered dinosaurs. *National Geographic* was recently caught red-faced by perpetrating a fraudulent dinosaur/bird fossil as the real thing in its pages. Scientists have even accepted molecular evidence indicating an *identical* match between turkey DNA and Triceratops DNA. Never mind that the identical DNA match is more likely the result of contamination from a turkey sandwich in the lab and that Triceratops is in the wrong dinosaur family for bird evolution. Such is the power of *wanting* to believe your theory is true.

In the next four chapters, Wells visits the familiar icons of Darwin's finches, fossil horses, mutant four-winged fruit flies, and the ultimate icon, diagrams of the progressive change from ape-like creatures to full human beings. Like the others above, these icons turn out to be far less than what the textbooks suggest. In each case, as in the six discussed above, there are plenty of experts willing to expose the lack of evidence for each icon. But they remain staples in the arsenal of evidences of the evolutionary process. Fossil horses and human evolution turn out also to be indicators of the difficulty evolution has in separating philosophical preferences from conclusions drawn from the evidence.

Textbook writers are either ignorant of current data, which prompts one to be skeptical of the accuracy of the rest of the textbook, or they are willfully misrepresenting the evidence in order to present a united front on the factualness of evolution. Unfortunately for our children, Wells is able to provide direct quotes indicating that at least some see no problem with including misleading or false data in order to make a point. After all, we know evolution is true, so just because we don't have easy simple stories to tell, doesn't

mean they aren't out there waiting to be discovered.

## The Scientific Academia Reacts

The reasoning behind these *Icons of Evolution* exposes much of the standard story of evolutionary theory to be mythology rather than science. And if these ten icons have been viewed as the best evidence for evolution, the entire theory needs to be questioned and made accountable to the evidence. It will be interesting to watch the evolutionary community react to these revelations. Evolutionary propagandist Eugenie Scott has already reportedly predicted that the book will be a “royal pain in the fanny” for biology teachers. Will the scientific community be able to respond with an appropriate *mea culpa*, or will there be a battery of excuses and obfuscations? I predict the latter. In the last ten years, the evolutionary establishment has been exerting a great deal of effort to demonstrate that evolution is confirmed to such a degree as to be beyond rational dissent. Organizations such as the National Academy of Sciences, the National Association of Biology Teachers, and the National Center for Science Education have lobbied long and hard for the scientific integrity of the standard evolutionary story. They have held up most, if not all, of these ten icons as the principal pillars of the unassailable evidence for evolution.

Evolution is the principal foundation of the naturalistic world view, presented by many in academia as the only scientific, and therefore, objective, view of reality. Without evolution, metaphysical naturalism cannot stand. As Richard Dawkins has said, Darwin made it possible to be an intellectually fulfilled atheist.[\[2\]](#) Without evolution, the naturalistic worldview is in serious trouble. Therefore, the scientific community can be expected to rally fiercely behind the evolution story. Just how they do it will prove interesting indeed. *Icons of Evolution* will help draw the evolutionary establishment out from behind the protective

bulwark of its authority and force it to defend its theory on the basis of the evidence. This is a fight I believe it must eventually lose in the court of scientific and public opinion.

There are two minor, yet unfortunate, problems with the text. The first, actually a book design problem, regards the difficulty finding the legends for some figures and distinguishing them from the regular text. The second involves an unnecessarily inflammatory discussion of the monetary support evolution receives from the U.S. tax-supported National Institutes of Health and National Science Foundation. While Wells' discussion is accurate, it comes across as sour grapes and may provide a convenient target for evolutionary propagandists to dismiss the book without dealing with the evidence.

These problems aside, *Icons of Evolution* is a landmark work and deserves to be read and studied by all who have an interest in the controversy surrounding not only the teaching of evolution, but also the very theory of evolution itself.

## Notes

1. "The term 'explosion' should not be taken too literally, but in terms of evolution it is still very dramatic. What it means is rapid diversification of animal life. 'Rapid' in this case means a few million years, rather than the tens or even hundreds of millions of years that are more typical. . . ." Simon Conway Morris, *Crucible of Creation*, (Oxford: Oxford University Press) 1998, p. 31.

2. Richard Dawkins, *The Blind Watchmaker*, New York, NY: W. W. Norton, 1986, p. 6.

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