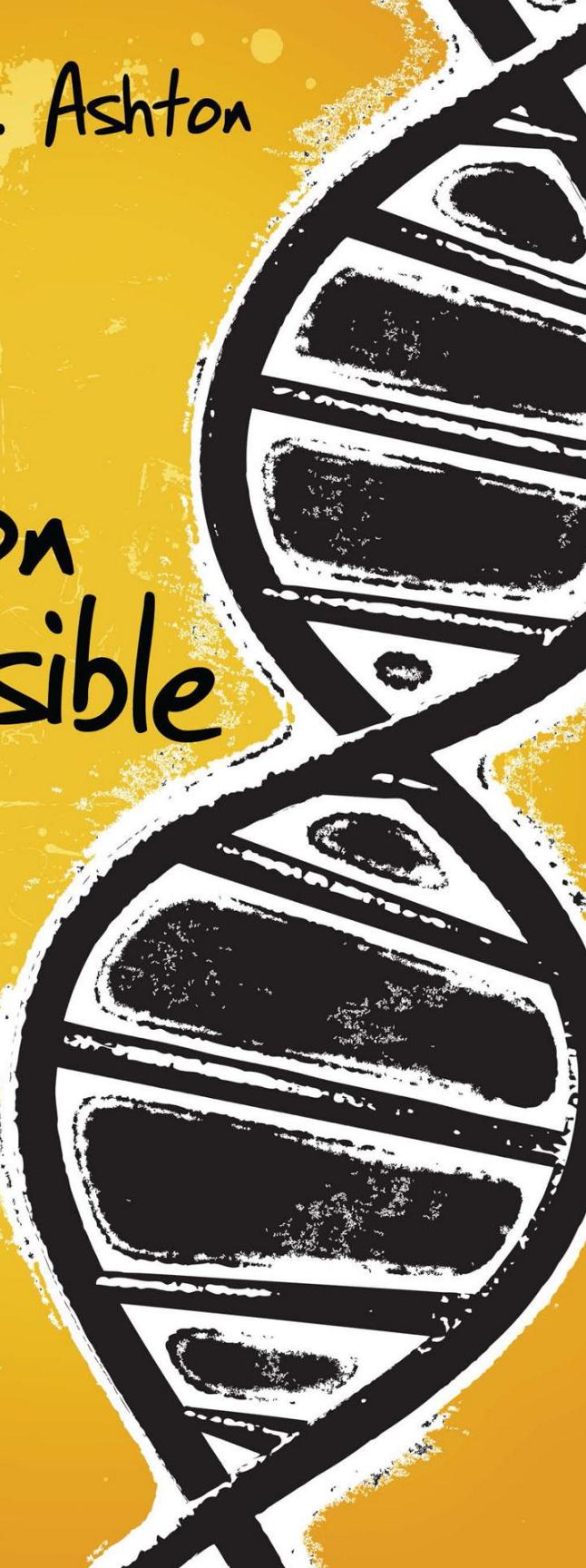


Dr. John F. Ashton

Evolution Impossible

12

Reasons Why
Evolution Cannot
Explain the Origin
of Life on Earth



Evolution

Impossible

12 Reasons Why Evolution Cannot Explain the Origin of Life on Earth

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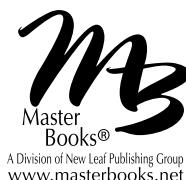
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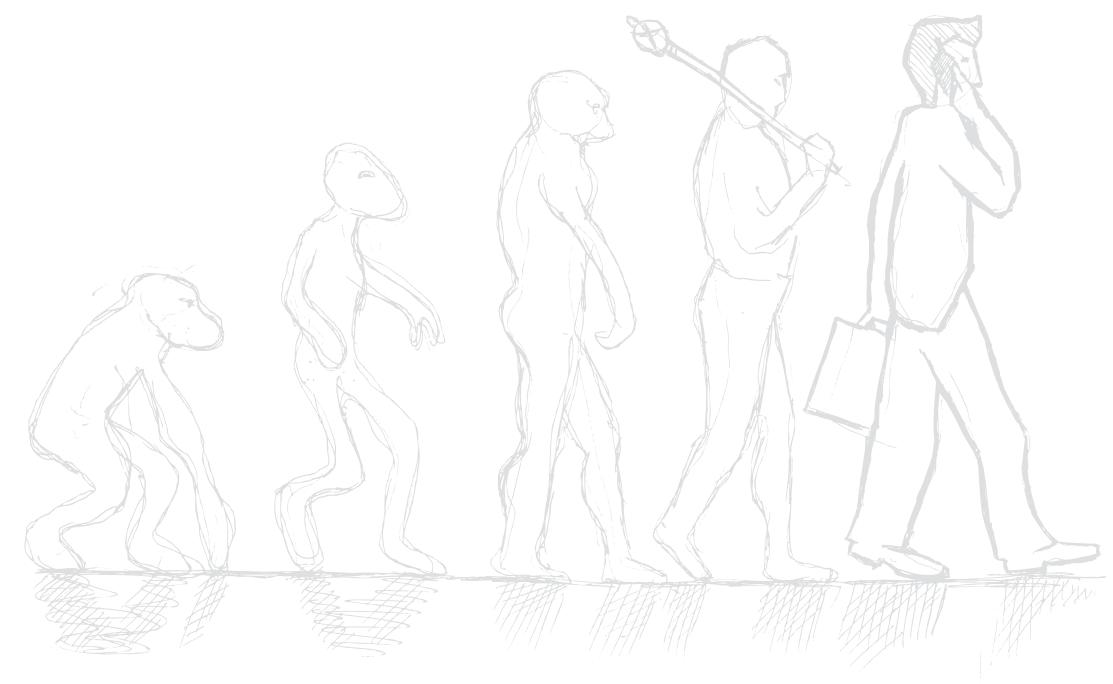
In memory of my friend and mentor
Dr. Henry Zuill, PhD,
who believed “life is a gift of the Creator”

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Foreword

The basis of scientific research is to find the truth, and scientists, of all people, are supposed to have open minds and be willing to look at all the evidence. However, history has told us that once an idea has become entrenched, even scientists find it difficult to accept anything that deviates from this. This is now the case with evolution, and the theory of evolution is now a dogma, or, to quote Professor Bernard David, “Darwin’s Law,” and to impugn the theory is “ignorance and effrontery” (Professor C.D. Darlington).¹

Having said this, there are open-minded scientists, who, while espousing evolution, are willing to admit that there are difficulties. Dr. John Ashton has highlighted these in his book. While there exists the improbability of life forming spontaneously and mutation and selection explaining how simple life forms evolve into more complex forms, no open-minded person can, in all conscience, elevate the theory of evolution to the law of evolution and be critical of anyone who has the audacity to question the evolutionary process.

If one accepts that there are difficulties with the evolutionary process, then one must look at other interpretations, and Dr. Ashton has proposed alternative interpretations of the evidence. Unfortunately, many people will

1. Hugh Montefiore, *The Probability of God* (London: SCM Press Ltd., 1985), p.75.

look at the title of the book and dismiss the book without even opening it. This book is not for those who have already made up their minds but for those who have an open mind and are willing to look at alternative interpretations in their quest for truth. It is to these people that I recommend Dr. Ashton's book.

Emeritus Professor Warren Grubb, PhD
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DNA

Introduction

Some time ago I was meeting with university professors from a highly regarded Australian university. They were involved in plant breeding research and we were discussing a possible collaborative research project, breeding disease-resistance traits into a newly developed functional cereal grain. The breeding techniques included treating seeds with chemicals that damaged their DNA. The resulting mutant seeds were then germinated and tested for any beneficial traits that might have resulted from the changes.

The new grain cultivar we were discussing possessed a favorable variation due to the destruction of part of a gene. This loss of genetic material meant that the “new” plant produced a grain with less easily digestible starch. This grain potentially could be made into foods with significant benefits in the prevention and management of type 2 diabetes.

Over lunch I was thinking of the role of mutations in relation to the theory of evolution. For a new species to evolve from a common ancestor, new genetic information must arise — presumably from some sort of favorable mutation. So while we were sitting around the lunch table, I asked the research scientist in charge of the plant-breeding project a question. “Do mutations ever give rise to new purposeful genetic information?”

His answer was immediate. “Of course — yes!”

“Can you give me an example?” I then asked.

He thought for a moment and replied along the lines of “Um, I can’t think of a specific example right now but ask our geneticist . . . he will be able to.”

Later that afternoon I caught up with the senior genetics researcher in the university plant-breeding department and asked him the same question.

His reply was just as quick, but the very opposite! “Never!”

Surprised, I pressed him further. He explained that mutations always lead to damaged DNA, which usually results in the *loss* of genetic information. He knew of *no* instances where new purposeful genetic information arose, either by a natural process or through a mutation induced chemically or with radiation.

I thought about these two responses. The older, more experienced scientist believed mutations *can* produce new purposeful genetic information. And I dare say the other scientists around the lunch table working in related biological fields believed likewise — they certainly did not correct the first answer. It seemed likely to me that most scientists who put up their hand for believing in evolution would also agree that mutations can produce new genetic codes, providing new traits for the forces of natural selection to choose from for new species to evolve.

But if the geneticist was correct and mutations never produced new purposeful genetic information, “evolution” as the cause of life on earth was impossible and could not have happened.

As I thought about this I decided to begin researching and writing this book.

Since the early 1970s, when I was a research fellow in the Department of Chemistry at the University of Tasmania, I have been studying the evidence for evolution. At that time a friend was completing his doctorate in geochemistry. One day he showed me the results from some carbon-14 dating of a specimen of wood from a partly fossilized shovel handle found in the old gold-mining site he was researching. The analysis results from the government laboratory in New Zealand gave an age of 6,600 years. However, the mining activity was from the late 1800s, and it was unlikely that the European shovel handle was made from timber more than a few hundred years old.

This apparently incorrect dating result stimulated my interest in radiometric dating methods, along with the associated implications for the dating of the geological column and evolution. As I continued my research, it seemed to me that evolution had some obvious major problems that were being noted by high-profile scientists such as Sir Fred Hoyle, a well-known

British astronomer,¹ and Professor E.H. Andrews, head of the Department of Materials at the University of London.²

In the late 1990s, after a seminar on the evidence for creation at Macquarie University in Sydney, I decided to write to scientists who held a creationist view of origins, asking them why they chose to believe in creation as opposed to evolution. I found their arguments revealing and compelling, so I edited some of the replies and those became the book *In Six Days: 50 Scientists Explain Why They Believe in Creation*,³ which was originally published in 1999. This book has since been reprinted many times, in German, Italian, Spanish, and Korean editions, too, and is widely cited on the Internet in the evolution versus creation debate.⁴

Creation is an act of God — He is the Supreme Intelligence — so I decided to write to academics at secular universities who were believers, asking them to explain why they believed in God, miracles, and answers to prayer. These academics provided me with abundant evidence of a personal God who interacts with His creation. So again I edited some of the replies I received, and the work was published in 2001 under the title *The God Factor: 50 Scientists and Academics Explain Why They Believe in God*.⁵ Again, this book has been reprinted a number of times.

This present book follows *In Six Days* and *The God Factor*, summarizing the scientific evidence that indicates that evolution cannot be the mechanism responsible for life on earth. It details the evidence I have found that supports the geneticist's assertion, together with much other scientific research that demonstrates that natural evolutionary processes could not have been responsible for the diversity of life this planet has seen.

Many readers may find this a challenging and new perspective, but hopefully one that will stimulate more informed debate on the subject of origins.

1. Fred Hoyle and Chandra Wickramasinghe, *Evolution from Space* (London: J.M. Dent & Sons, 1981), p. 23–33.

2. E.H. Andrews, *God, Science and Evolution* (Homebush West, New South Wales: ANZEA Books, 1981).

3. John F. Ashton, editor, *In Six Days* (Green Forest, AR: Master Books, 2001).

4. See citations of *In Six Days* in, for example: C. Groves, “The Science of Culture,” in *Being Human: Science, Culture and Fear*, The Royal Society of New Zealand, Miscellaneous Series no 63, 2003; E.C. Scott and G. Branch, “Antievolutionism: Changes and Continuities,” *BioScience*, vol. 53, no. 3 (2003): p. 282–285; “Level of Support for Evolution,” http://en.wikipedia.org/wiki/Level_of_support_for_evolution accessed 18/01/2012.

5. John Ashton, editor, *The God Factor* (Australia: HarperCollins Publishers, 2001).





Chapter 1

But Isn't Evolution a Fact?

As you begin to read this book, you might start to respond like many others previously have: “I thought it was well established scientifically that all life on earth, including humans, evolved from primitive simple cells over hundreds of millions of years. This is what we have been taught in science and biology classes. How can a practicing scientist and university professor now write a book claiming that there is evidence that evolution is impossible?”

This is a very legitimate question and one that raises the very relevant issues that this book attempts to address. Most scientists and educators believe that evolution is true — simply because that is what they have been taught when they went through school, college, and university. Most science textbooks, science academies, science museums, and popular biology authors echo the view that evolution is a proven fact of science. For example, a widely used 2007 university textbook on evolution has a bold-type topic heading “The Fact of Evolution Is Explained by Evolutionary Theory.”¹ The authors go on to claim that scientists now understand how all the evolutionary processes work, and in many instances how these processes have generated species adaptation and divergence.

1. N.H. Barton, D.E.G. Briggs, J.A. Eisen, and N.H. Patel, *Evolution* (Cold Spring Harbour, NY: Cold Spring Harbour Laboratory Press, 2007), p. 81.

In a recent position paper on evolution, the United States National Academy of Sciences stated that “evolution” is considered a fact. The Academy maintained that because the theory of evolution is supported by so many experiments and observations, scientists are confident that the fundamental components of the theory will not be overturned by new scientific evidence.² The Geological Society of London claims that it has been long established beyond doubt that our planet is about 4,560 million years old. It holds that life has evolved into its current form over a period of thousands of millions of years as a result of genetic variation combined with natural selection.³

The Australian Academy of Science published a similar view, saying that there is a vast body of “factual” knowledge supporting the theory that the natural processes of evolution have produced the biological complexity we have on earth today.⁴ In fact, science academies around the world echo the same belief in evolution as the Interacademy Panel (IAP), a global network of science academies, publishing a statement on the teaching of evolution signed by 67 academies of sciences. This statement asserts that the member academies agree that evidence-based “facts” about the evolution of life on earth have been established by a large number of observations and results of independent experiments, including that

- life appeared on earth at least 2.5 billion years ago;
- since life first appeared it has continued to evolve, and this is confirmed by paleontology and modern biology and biochemistry;
- the structure of the genetic code of all living organisms indicates their common primordial origin.⁵

Not surprisingly, most natural history museums have displays presenting evolution as if it is a “fact” of science. For example, the Smithsonian Institute, in their 2009 exhibit “Since Darwin: The Evolution of Evolution,” has this statement:

-
2. National Academy of Sciences and Institute of Medicine, *Science, Evolution, and Creationism* (Washington, DC: National Academy Press, 2008), p. 11. Available at: http://www.nap.edu/catalog.php?record_id=11876.
 3. Geological Society of London, “Young Earth Creationism, Creation Science, and Intelligent Design,” 2008, available online at: http://www.geolsoc.org.uk/gsl/views/policy_statements/page3635.html, accessed 8/6/2010.
 4. Australian Academy of Science, *Intelligent Design Is Not Science*, letter published in major Australian newspapers, October 21, 2005. See: <http://www.science.org.au/reports/intelligent-design.htm>.
 5. The Interacademy Panel on International Issues, IAP Statement on the Teaching of Evolution, 2006, see: <http://www.interacademies.net/File.aspx?id=6150>.

“The evolution of living things has been occurring for billions of years and is responsible for the dazzling diversity of life on Earth. *That is a fact*” (emphasis mine).⁶

When the world’s preeminent institution devoted to researching natural history says that evolution is a fact, it is very reasonable for a casual visitor and the media to believe this. Of course, it also is not surprising that well-known evolutionists also assert that evolution is a “fact” of science, such as the eminent Harvard University paleontologist Stephen J. Gould, who writes that he does not deny the “fact” of evolution,⁷ and Oxford University Professor Richard Dawkins, who writes that the purpose of his 2009 book on evolution is to show that evolution is an “inescapable fact.”⁸

However, when we examine these statements about evolution more closely, we find that they are simply assertions made without citing proven evidence, or where evidence is cited it does not actually prove the claim. For example, it is asserted that life arose so many million years ago. But I have found no reputable scientific paper explaining a proven mechanism for how a living cell could arise from nonliving molecules — a process called abiogenesis. On the other hand, I have found many published scientific findings that show that abiogenesis cannot happen, as I explain in chapter 3.

Another assertion is that all life “evolved” from primitive organisms over millions of years, which stems from Charles Darwin’s theory involving mutations and natural selection. When Darwin wrote his book over 150 years ago, scientists at that time knew very little about the extremely complex biochemistry machinery within living organisms. In fact, living cells had not yet been discovered. It took nearly a century of further scientific study before DNA — a chemical molecule that encodes the structure and mechanisms that constitute the myriad different types of cells that make up the millions of different organisms that inhabit our planet — was discovered. The development in recent years — and in particular during the last three decades — of sophisticated scientific equipment and methodologies has enabled scientists to explore the components of living organisms and their cells extensively. We now know a high level of detail about the enormous complexity of the genetic information encoding their structures and biochemistry.

6. See <http://www.mnh.si.edu/exhibits/darwin/evolution.html>, accessed 10/23/2009.

7. National Academy of Sciences, *Science and Creationism: A View from the National Academy of Sciences* (Washington, DC: National Academy Press, 1999), p. 28.

8. Richard Dawkins, *The Greatest Show on Earth: The Evidence for Evolution* (London: Bantam Press, 2009), p. 18.

However, to date I have found no reputable published scientific paper that explains a proven mechanism for how this huge amount of highly complex genetic information could arise by chance. Nor could I find any scientific papers reporting the observation of new meaningful genetic information arising by chance. In other words, I could find not a single published scientific paper reporting the evidence that supports the fundamental requirement of evolution that new meaningful genetic information arises by chance. Instead, I have found much published data showing that it is impossible for new purposeful genetic information of any significance for evolution to arise by chance, and I discuss this evidence in detail in chapter 4.

This was an astounding finding — the widely claimed “fact” of evolution was not only *not* proved, but there were published articles disproving it. This observation will be a surprise to many readers, and some may doubt that my observations are correct. After all, have I not just pointed out that evolution is considered to have occurred by most scientists around the world? How can I now say it has been disproved by scientific studies? Why don’t other scientists now reject Darwin’s theory? The answer is that some scientists, as they read about the latest scientific evidence regarding the biochemistry of living organisms, are now also rejecting evolution. However, it is not easy for scientists to publicly reject evolution because of peer pressure to have those scientists discredited or removed from positions of influence. A recent example of this was the case of Israeli Education Ministry chief scientist Dr. Gavriel Avital, who was sacked for questioning the validity of evolution.⁹ A few years ago the documentary film *Expelled, No Intelligence Allowed* was produced, which exposed examples of the persecution and marginalization of scientists who have dared to question the evidence for evolution.¹⁰

Science-based doubts about the theory of evolution are not new.

In the mid-1960s, several mathematicians challenged the plausibility of evolution from a probability standpoint. The resulting mathematical studies culminated in a symposium on the analysis of the probabilities that evolution could occur, which was held at the Wistar Institute, a highly regarded biomedical science research center in Philadelphia. A full record of the presentations at the symposium was published that showed that the biologists were not happy about this new challenge to evolution.¹¹ They insisted that

9. O. Kashti, “Sa’ar Dismisses Chief Scientist for Questioning Evolution,” *Haaretz*, October 5, 2010; see <http://www.haaretz.com>.

10. See www.expelledthemovie.com.

11. P.S. Moorhead and M.M. Kaplan, editors, “Mathematical Challenges to the Neo-Darwinian Interpretation of Evolution,” The Wistar Institute Symposium Monograph No. 5 (Philadelphia, PA: Wistar Institute Press, 1967).

the mathematicians did not understand evolution, but they did not provide any quantitative answers to the challenges.

In the 1970s, Harvard-educated paleontologist Dr. Barbara J. Stahl drew attention to some of the serious shortcomings in the fossil evidence for evolution.¹² In the mid-1980s, King's College London-educated molecular biologist Dr. Michael Denton drew attention to the huge complexity of biological systems at the molecular level and the inability of the theory of evolution to explain the origin of these systems.¹³

In the 1990s, the science of *information theory* came into prominence, but it still has not uncovered a natural source for the huge mass of specific information found within the genome, the DNA blueprint of living things. The cell proteins and nucleotides in our chromosomes are intricately complex and specific in their structure. Minute alterations in the arrangements of the amino acid components of these protein molecules affects their shape, the way they are folded, and their function. Their unique and precise arrangement gives them their specific biological information or code. Like digits in a computer code, their arrangement must be perfect or it fails. But where did this information come from? “From an ancestor” is not a helpful answer — it explains nothing. This failure of evolution theory to be able to explain the source of biological information has been pointed out by several information theorists such as Professor Werner Gitt at the German Federal Institute of Physics¹⁴ and Massachusetts Institute of Technology-educated physicist Dr. Lee Spetner.¹⁵

In an attempt to fill this glaring gap in the evolutionary explanation of how animals and plants developed their astounding variety and complexity, Harvard Medical School biology professor Dr. Marc W. Kirschner and University of California, Berkeley, professor of cell and developmental biology John C. Gerhart developed a new theory. It is related to the new field of epigenomics and called “facilitated variation,” details of which they described in their book *The Plausibility of Life: Resolving Darwin’s Dilemma*, which was published by Yale University Press in 2005.¹⁶ They suggest that the “core processes” encoded in the DNA of an organism that produce its structure are in a sense so stable they are impervious to change produced by small-scale

12. Barbara J. Stahl, *Vertebrate History, Problems in Evolution* (New York: McGraw-Hill, 1973).

13. Michael Denton, *Evolution: A Theory in Crisis* (Bethesda, MD: Adler & Adler, 1986).

14. Werner Gitt, *In the Beginning Was Information* (Green Forest, AR: Master Books, 2006).

15. Lee M. Spetner, *Not By Chance: Shattering the Modern Theory of Evolution* (New York: Judaica Press, 1997).

16. Marc W. Kirschner and John C. Gerhart, *The Plausibility of Life: Resolving Darwin’s Dilemma* (New Haven, CT: Yale University Press, 2005).

mutations, and they only allow for the possibility of a number of small mutational changes to accumulate over time. They then argue that changes in the organism's environment produce stressors that trigger the activation of the accumulated mutations, which in turn produce some totally new "core processes" resulting in a new configuration of part of the organism. However, even if the theory were proved to explain some changes in biological systems, it still does not explain where the genetic information in the original "core processes" came from. In fact, in their conclusion the authors admit that their theory actually opens up more questions about the origins of the conserved "core processes."

Further shortcomings of the theory of evolution were pointed out by the Rutgers University philosopher Dr. Jerry Fodor, who in an extraordinary article titled "Why Pigs Don't Have Wings" presented very strong arguments as to why Darwinian-type "natural selection" cannot be an effective basis for species evolution.¹⁷ Dr. Fodor's piece attracted a lot of comment from other scientists, and he went on to develop his arguments further in a recent book co-authored by Dr. Massimo Piattelli-Palmarini, professor of cognitive science at the University of Arizona, titled *What Darwin Got Wrong*.¹⁸

Since "natural selection" comprises the essential core of Darwin's theory, Fodor's paper presented a serious challenge to the scientific integrity of evolution. As a result, in July 2008, 16 of the world's leading evolutionary scientists met in a castle in Altenberg, Austria, to discuss these serious threats to evolutionary science. Details of the conference were written up by science journalist Suzan Mazur.¹⁹ She reports interviews and comments from attendees and other thought leaders in the area of evolution. They highlight the growing realization by these scientists that if natural selection is now rejected or marginalized as the underpinning evolutionary process, then Darwin's theory is dead. Dr. Jerry Fodor is quoted as saying, "Basically I don't think anybody knows how evolution works."²⁰

This statement is a far cry from the confident assertions found in biology textbooks and museum displays. Furthermore, nobody knows how evolution works because nobody has ever observed evolution — it has never

17. Jerry Fodor, "Why Pigs Don't Have Wings," *London Review of Books*, vol. 29, no. 20 (2007): p. 19–22, available at <http://www.lrb.co.uk/v29/n20/jerry-fodor/why-pigs-dont-have-wings>.

18. Jerry Fodor and Massimo Piattelli-Palmarini, *What Darwin Got Wrong* (New York: Farrar, Straus and Giroux, 2010).

19. Suzan Mazur, *The Altenberg 16: An Exposé of the Evolution Industry* (Berkeley, CA: North Atlantic Books, 2010), available online at <http://books.google.com/books>.

20. Ibid. p. 34.

been observed in the past and it has not been observed in the laboratory. No one has been able to set up an experiment and make one type of organism evolve into a new type of organism (unless we deliberately remove genetic information or insert genetic information from another organism, neither of which is true evolution). To have no mechanism for how evolution can occur, as well as no experimental evidence, leaves evolution far from being a fact of science.

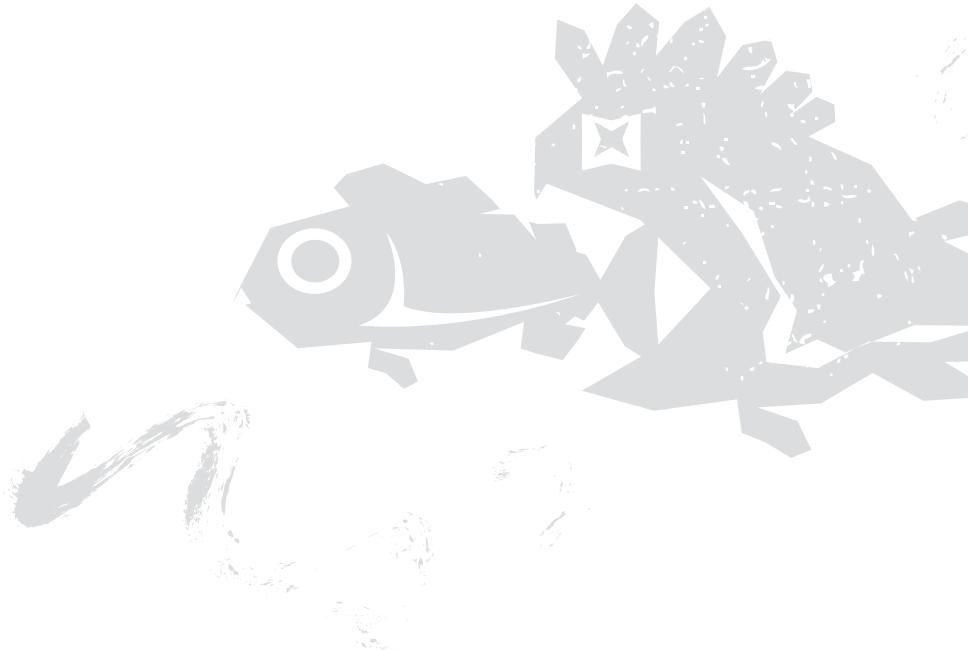
This quandary over evolution among top scientists is very real. What theory can replace neo-Darwinism? No one knows. Evolutionists are groping for credible mechanisms that can give rise to the multitude of life forms in our biosphere. The interviews reported by Susan Mazur present a vivid picture of the uncertainties and vehement disagreements of these scientists who continue to cling to their faith that evolution is an unquestioned fact of history. But evolution's inner workings and mechanisms are made excruciatingly doubtful by the recent discoveries in molecular biology such as those highlighted by University of Cambridge-educated philosopher Dr. Stephen C. Meyer in his recent book *Signature in the Cell: DNA and the Evidence for Intelligent Design*.²¹

The current scientific debate over the mechanisms of evolution demonstrates that evolution is not a proven “fact” of science — it is a “wish” of science, a fanciful hope in the light of overwhelming evidence to the contrary, that somehow a mechanical process to describe how life arose will be discovered. As several social commentators and a biographer have pointed out, Darwin established a mechanical conception of organic life in the “machine age,” that time following the first world fair in London in 1851, when the machine had become the single most absorbing preoccupation of the time.²² This obsession with the “machine worldview” continues to dominate science to this day and is played out in the evolution controversy.

But before considering more of the evidence against evolution, let us first revisit Darwin’s theory in the next chapter.

21. Stephen C. Meyer, *Signature in the Cell: DNA and the Evidence for Intelligent Design* (New York: HarperOne, 2009).

22. Geoffrey West, *Charles Darwin: A Portrait* (New Haven, CT: Yale University Press, 1938), p. 334. See also A. Sandow, “Social Factors in the Origin of Darwinism,” *The Quarterly Review of Biology*, vol. 13 (1938): p. 315–326; John C. Greene, *Science, Ideology and World View* (Berkeley, CA: University of California Press, 1981).





Chapter 2

Darwin's Theory of Evolution

The year 2009 saw the 150th anniversary of the publication of Charles Darwin's book *The Origin of Species by Means of Natural Selection or The Preservation of Favoured Races in the Struggle for Life*. In his book, Darwin recorded his observations of the struggle for existence of many species. He proposed that there was a principle operating in nature that the "more diversified the descendants from any one species become in structure, constitution, and habits," the better enabled they will be to take opportunistic advantage of differences in the environment to increase in numbers in the struggle for existence.¹ In other words, the more varieties of grass there were, the more likely some grass varieties would survive variations in environmental conditions such as rainfall, temperature, and soil type, and be able to increase in numbers, thus perpetuating the species.

Darwin was impressed by the enormous variety of species in nature. He noted the range of plants of Europe and North America through to the birds from the separate islands of the Galapagos Archipelago. For example, he described his observations of a small three-feet-by-four-feet area of turf, where he was able to identify 20 species of plants from 18 different genera

1. Charles Darwin, *The Origin of Species by Means of Natural Selection or the Preservation of Favoured Races in the Struggle for Life* (London: John Murray, 1859), p. 156.

belonging to eight orders of plants. All these different plants were striving to live in this identical environment.²

Darwin went on to propose the hypothesis that the different species and genera arose from a single common ancestor as part of the diversification survival mechanism, illustrating his idea with a branching “tree-like sketch.”³

At the bottom of the tree was a species belonging to a large genus. As the species bred over generations, there would be extremely slight variations, represented as lines branching out from a common point. After 1,000 generations (and Darwin comments that 10,000 generations might be a better estimate) he showed two main lines had diverged as a fork in the tree. These represented the accumulated differences between the two breeding lines, which had now changed enough to be identified as two different species. Over the next 1,000 generations, these two species continued to diverge and became even more distinct from each other. As thousands of generations passed, more forking and divergence into different species occurred. Some branches ended without diverging, representing the extinction of that particular variety. After ten levels of branching on this hypothetical tree of life (that is, after 10,000 generations), three new species were shown as having evolved that would then be significantly different from the original parent. After 14,000 generations, Darwin suggests that the differences between the evolving species would be so large as to constitute several new genera.

This concept of a tree of life that diagrammatically mapped out the origin of different species made it relatively easy for people to understand Darwin’s idea. He was able to argue successfully that evidence for this tree was obvious in nature, plain for all to see. For example, he pointed out that different species of flowers have sepals, petals, stamens, and pistils, and although fitted for different purposes, they are constructed on the same pattern. Similarly, the fore-limbs of humans, moles, horses, porpoises, and bats are constructed on the same pattern, while giraffes and elephants have the same number of vertebrae in their necks, and so on.⁴

Darwin offered an explanation of this “fact of nature” by proposing the mechanism of natural selection via the “survival of the fittest” group of organisms. That is, the new species in the tree of life came about as a result of small mutations in a population of organisms that gave particular organisms an advantage in surviving in their environment. As those organisms

2. Ibid., p 157.

3. Ibid., p. 160–161. See also G. Lawton “Uprooting Darwin’s Tree,” *New Scientist* (January 24, 2009): p. 34.

4. Ibid., p. 418, 415, 451.

with the inherited advantage bred over a period of time, another mutation within the population would give those new offspring a new advantage in surviving compared with the other organisms.

The discovery of large numbers of different species of wingless beetles on the islands of Madeira off the west coast of North Africa intrigued Darwin. Out of the 550 different species of beetles on the islands, 200 were wingless. He noticed that the proportion of wingless beetles was largest on the exposed windy side of the island, whereas in the non-windy areas, there were large numbers of fully winged beetles. Darwin proposed that this was a clear example of natural selection at work. Over thousands of generations, the beetles with less perfectly developed wings were less likely to be blown out to sea and therefore survived to breed and pass on the weaker or smaller wing traits.⁵

Over time, the successive and cumulative successful inherited mutations would give rise to what would become a new species, that is, a new branch on the “tree of life.” Darwin saw the wingless beetles on the island as an example of one of the new branches on his tree of life.

While travelling on the *HMS Beagle*, Darwin had read Charles Lyell's book *Principles of Geology*, in which Lyell had proposed that the earth's land-forms had been formed by millions of years of slow change. This geological hypothesis provided the time frame needed for evolution. Darwin went on to apply his tree of life concept to the fossil record, arguing that it showed the divergence of the different ancient species from their common ancestors. He proposed that the example of the tree diagram could explain how the genera representing points on the lowest part of the tree, as seen in the fossil layers of the Silurian epoch, evolved into some of the organisms found still living today, as represented by the genera on the uppermost part of the tree.⁶

Darwin eventually came to the conclusion that over eons of time all life had evolved by the process of natural selection from a single original organism. He wrote:

Therefore I should infer from analogy that probably all the organic beings which have ever lived on this earth have descended from some one primordial form, into which life was first breathed.⁷

Thus Darwin proposed a scientific theory for the origin of life that was based on random mutations producing a vast diversity of new organisms.

5. Ibid., p. 176–177.

6. Ibid., p. 404–405.

7. Ibid., p. 455.

The new organisms would have similar forms and functions to their ancestors and thereby the evolutionary pathway could be worked out from the fossil record. This hypothesis has come to be known as the theory of evolution.

For much of the last 100 or so years biologists have devoted a significant part of their research activities to identifying proposed evolutionary pathways and filling in the details of this tree of life — from the supposed first life form through to present-day life forms. Where species have become extinct, the branch simply ends with that species. Examples of these trees or particular branches of the tree, such as the proposed evolutionary pathway for vertebrates (that is, animals with a backbone structure), can be found in most biology textbooks.

Up to the 1990s, developments in the tree of life were based largely on finds from the fossil record. Fossils found in the higher rock strata were believed to have been of organisms evolved from the species found in the lower and “older” rock strata. Evolutionary links were proposed on the basis of physiological and skeletal similarities (referred to as homologies) along the lines Darwin originally proposed.⁸

Since the 1990s, the structure of this tree has been changing as biologists re-map its branches on the basis of identifying the genetic sequences in the genomes of modern organisms. Heritable traits that formed the basis of Darwinian evolution are encoded in the genes within the organism’s DNA. By identifying common pieces of DNA in different animals, biologists attempt to link those animals to a common ancestor and represent theoretical connection using a tree type diagram. These diagrams are referred to as “phylogenetic trees.”

Thus, recent tree of life depictions show the first life forms — the nature of which is unknown, developing into the “last universal common ancestor” (LUCA) — the nature of which is also unknown — which then splits into three types of single-celled organisms: bacteria and archaea (similar to bacteria) followed by the more complex eurokytes, whose genetic material is packaged in a nucleus within the cell. It is claimed that around 3 billion years after the first living organisms formed, the eurokytes began evolving into multi-cellular organisms. Over the next 600 million to 1.1 billion years or so they became the protozoa, then plants, followed by amoebae and fungi, then invertebrate animals like worms, shellfish, and insects, followed by vertebrate animals such as sharks, fish, and amphibians, and,

8. E.P. Solomon, L.R. Berg, and D.W. Martin, *Biology*, seventh edition (Belmont, CA: Thomson, Brooks/Cole, 2005), p. 341, 343–344.

lastly, two main branches lead into reptiles and birds on one branch and mammals and then humans on the other.⁹

Further to this explanation, the Smithsonian Institution National Museum of Natural History's website depicted a modern tree of life diagram with four colored lines showing how humans are supposed to be related, as per the evolutionary tree of life, to dogs, leeches, mushrooms, and the bacterium *E. coli*.¹⁰

The idea that humans had descended from apes was explicitly argued by Thomas H. Huxley in his book *Evidence as to Man's Place in Nature*, which was published in 1863. Eight years later, Darwin expanded these arguments in his book *The Descent of Man and Selection in Relation to Sex*, in which he proposed on the basis of anatomical similarities that man had descended from apes and gorillas. Darwin predicted that fossils of the earliest ancestors of humans would be found in Africa where apes still live. This idea that humans evolved from apes remains a dominant theme of scientific study, and there is continuing research to try to put together the last branches of an ape-to-human evolutionary tree.¹¹

For example, popular science articles and documentaries on evolution commonly show “artists’ impressions” of apes evolving into humans, and museum displays of very human-like supposed missing links between apes and humans such as “Lucy” make the claim seem realistic. In the case of “Lucy,” the popular name given to a specimen of the fossilized remains of *Australopithecus afarensis*, subsequent studies of the remains showed it was actually very similar to the pygmy chimpanzee or bonobo and not human-like at all.¹²

For many biologists, the theory of evolution claim that humans evolved from apes has been reinforced by DNA similarities between chimps and humans. In 2005, the sequencing of the chimpanzee genome was published and compared with the human genome.¹³

About 96 percent of chimpanzee and human DNA is similar. However, this is not surprising, since humans and chimpanzees are obviously different but have many similarities. These include arms, legs, fingers, eyes, heart, lungs, liver, kidneys, gastrointestinal tract, and blood, as well

9. Lawton, “Uprooting Darwin’s Tree,” p. 34–39.

10. See <http://www.mnh.si.edu/exhibits/darwin/treecoflife.html>.

11. K. Wong, “The Human Pedigree,” *Scientific American* (January 2009): p. 46–48.

12. A. Zihlman, “The Promiscuous Primate,” *Nature*, vol. 359 (1992): p. 786.

13. The Chimpanzee Sequencing and Analysis Consortium, “Initial Sequence of the Chimpanzee Genome and Comparison with the Human Genome,” *Nature*, vol. 437 (2005): p. 69–87.

as hormones, blood-clotting mechanism, immune system mechanisms, and the list continues. It is on this basis that chimpanzees have been used in the past for medical and drug research studies before applying the learning to humans. All these structures and functions, down to the finest detail of molecular structure, have to be encoded in the DNA. So it is not surprising that if you have similar anatomy and biochemistry you would have similar genetic code.

However, if in fact humans had evolved from chimpanzees as the last small step in 3.5 billion years of evolution, one would intuitively expect to have found something like 99.99 percent similar DNA. This relatively large 4 percent difference is more indicative of having the same intelligent designer just like the early model Volkswagen Beetle and Porsche cars. Both vehicles had air-cooled, horizontally opposed, four-cylinder engines in the rear, two doors, a storage trunk in the front, and many other similarities because they had the same design team — Ferdinand and son Ferdinand “Ferry” Porsche. An identical explanation would apply to the homologies argument for evolution, that is, the various animals described by Darwin as having the same basic forearm bone pattern do so because they have the same intelligent designer.

Other “so-called” evidence that humans have evolved has been presented by the notion that during an animal’s early development, that is, embryonic development, it retraces its evolutionary history. Darwin believed this. He wrote:

As the embryonic state of each species and group of species partially shows us the structure of their less modified ancient progenitors, we can clearly see why ancient and extinct forms of life should resemble the embryos of their descendants — our existing species.¹⁴

He went on to say, “Embryology rises greatly in interest, when we thus look at the embryo as a picture, more or less obscured, of the common parent-form of each great class of animals.”¹⁵

This idea was popularized by the German zoologist Ernst Haeckel not long after the publication of Darwin’s book. Haeckel made drawings of what were supposedly the embryos of species such as the fish, salamander, turtle, chicken, rabbit, and a human. All the embryos were drawn as having supposed gill slits like a fish. So these drawings suggested that, for example,

14. Darwin, *The Origin of Species*, p. 427.

15. Ibid., p. 428.

a human embryo also ostensibly passed through a fish stage with gill-like structures, and so on, before it became fully human. This was then assumed as being evidence that humans were descended from fish, meaning that humans had evolved from fish. For more than a century these drawings were used as evidence for evolution, and biology textbooks up to the early 1990s contained illustrations of a human embryo with gill pouches and a tail.¹⁶

In the mid-1990s, embryologist Michael Richardson, with the cooperation of other biologists, collected and photographed the types of embryos Haeckel had drawn. The results were published in 1997 in *Anatomy and Embryology* and in *Science*, and showed that the actual embryos were very different from the drawings of Haeckel and that human embryos did not have gill structures at any stage of development!¹⁷

Thus we now know that the development of human embryos shows no evidence of evolutionary origins. However, in 2005 a very widely used university biology text still claimed that patterns of embryological development are evidence that vertebrates share a common evolutionary ancestor and that “all vertebrate embryos” have gills, pouches, and other fishlike features.¹⁸

This is a clear example of an important piece of evidence for human evolution proposed by Darwin that now has been shown to be false. We have also seen that Darwin’s evidence from the homologies can be equally well explained by intelligent design. Additionally, the actual evidence claimed to support human evolution from individual fossil remains has been either of a species of ape or a human, so that the supposed ape-man evidence appears to be considerably exaggerated in favor of an evolutionary explanation.

However, the main claim of Darwin’s theory is that in the struggle for living organisms to survive, a large number of small mutations over time, with the help of “natural selection,” can produce completely new types of life. Darwin wrote in the conclusion of his work, “Thus, from the war of nature, from famine and death, the most exalted object which we are

16. See, for example, E.P. Solomon, L.R. Berg, D.W. Martin, and C. Villee, *Biology*, third edition (New York: Saunders College Publishing, 1993), p. 402.

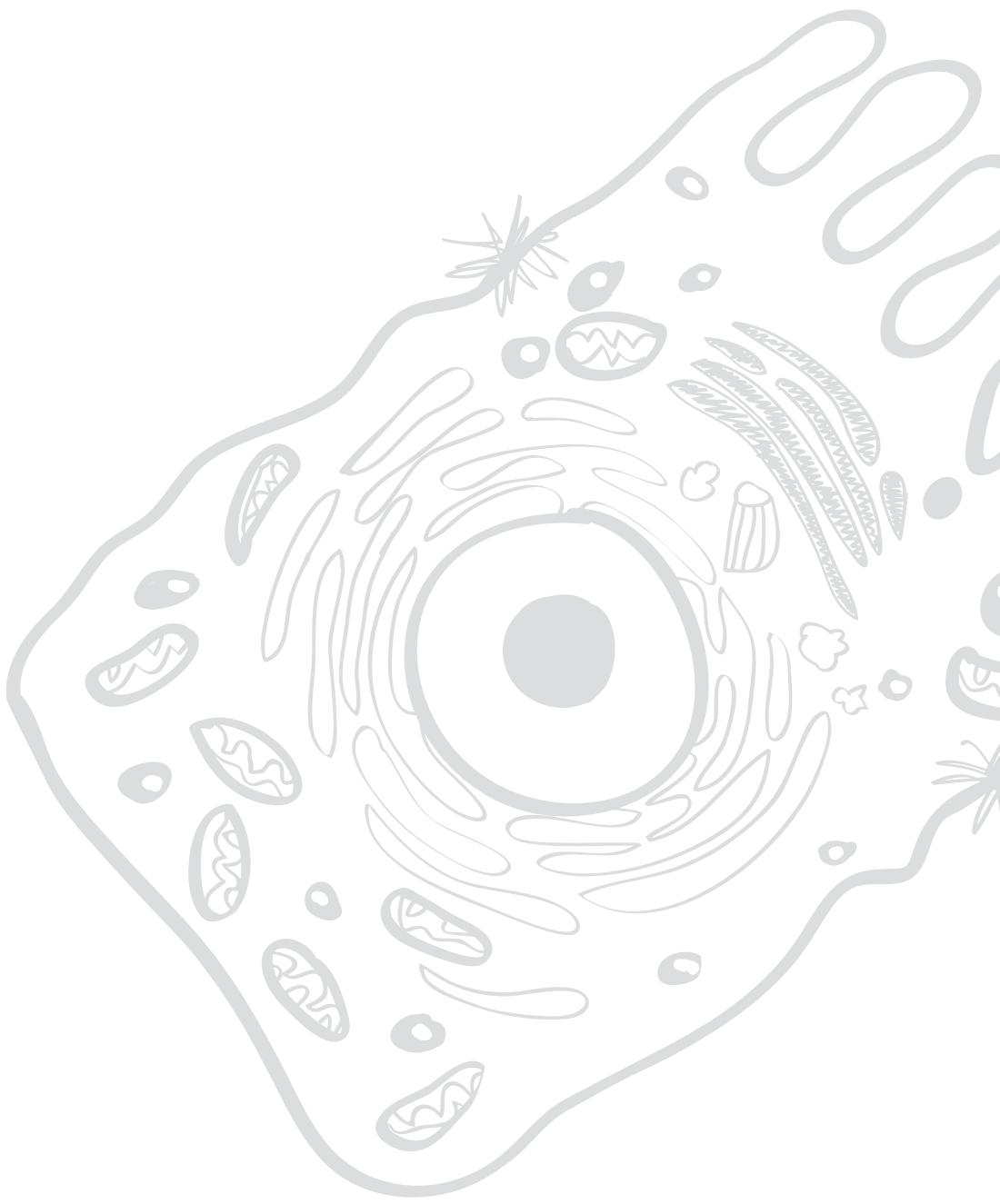
17. M.K. Richardson et al, “There Is No Highly Conserved Embryonic Stage in the Vertebrates: Implications for Current Theories of Evolution and Development,” *Anatomy and Embryology*, vol. 196 (1997): p. 91–106; E. Pennisi, “Haeckel’s Embryos: Fraud Rediscovered,” *Science*, vol. 277 (September 5, 1997): p 1435; M.K. Richardson, “Haeckel’s Embryos, Continued,” letter to *Science*, vol. 281 (August 28, 1998): p. 1285.

18. Solomon, Berg, and Martin, *Biology*, seventh edition, p. 347.

capable of conceiving, namely, the production of higher animals, directly follows.”¹⁹ But does it really happen? Has this “war of nature” really produced new higher organisms? We will examine this claim more closely in chapter 4.

But before we do that we need to look at Darwin’s other claim — that all life arose from a primordial single organism into which “life was breathed.” If the theory of evolution does not rely on a supernatural creation, is it possible that life itself could have arisen by the random chance combinations of natural chemical compounds to form the first living organism? We will examine the science behind this impossibility in the next chapter.

19. Darwin, *The Origin of Species by Means of Natural Selection or the Preservation of Favoured Races in the Struggle for Life*, p. 457.





Chapter 3

Why a Living Cell Cannot Arise by Chance

How life began remains one of the fundamental questions of modern science. To understand how the first living cell developed by natural physical and chemical processes a very, very long time ago is fundamental to the theory of evolution. While no one has yet come up with a satisfactory explanation of how the first living cell could form by itself, it is nonetheless commonly assumed that it did. In fact, on the basis of this assumption, evolution is even being incorporated into the definition of life by some scientists. For example, the National Aeronautics and Space Administration (NASA) has adopted the definition that life is “a self-sustaining chemical system capable of Darwinian evolution.” This definition directly implies that evolution is as much a fact of science as is life.¹ However, if it can be shown that it is absolutely impossible for a living organism to arise by natural processes from nonliving matter, then the theory of evolution would be without foundation and unable to provide the complete mechanical-naturalistic explanation of how we came to be here. In this chapter we will look more closely at the scientific findings that show that a living cell cannot actually arise by chance.

1. Alonso Ricardo and Jack W. Szostak, “Origin of Life on Earth,” *Scientific American*, vol. 301 (September 2009): p. 38–45.

Most scientific journal articles on origins begin with the confident assertion that living cells just formed by themselves billions of years ago. For example, Harvard University genetics professor Jack Szostak and co-researcher Alonso Ricardo write, “... as first life arose from nonliving matter around 3.7 billion years ago.”² Similarly, University of New South Wales Emeritus Professor of Inorganic Chemistry Stanley Livingstone writes, “It appears that about 3,850 million years ago . . . the first life forms appeared in the oceans.”³ Simple assertions similar to these are echoed in most science textbooks. The popular university biochemistry text by McKee and McKee states, “The Earth was formed from a cloud of condensing cosmic dust and gas about 4.5 billion years ago. Life arose soon thereafter.”⁴

But on what basis do these eminent teachers make these statements — what is the evidence? Let us look at these statements more closely.

Where do the time periods of “about 3,700 million years ago” or “about 3,850 million years ago” for the beginning of life come from? What is the basis for scientists making these statements?

Time periods reaching that far back are calculated on the basis of radiometric dating theory. This theory uses the rate at which radioactive elements in certain rocks change from one element into another element (or isotope) to calculate the age of the rock. The age calculation is based on doing a chemical analysis of the rock at the present time and comparing it with the rock’s assumed theoretical composition in the past. Notice the use of the word “assumed.” This is because we have no way of “knowing” for sure what the composition of the rock was in the past. As a result, radiometric dating methods can have serious problems and give really “wild” results. In fact, these methods have not been validated (i.e., proven) for pre-historical dates. This uncertainty of radiometric dating is discussed in more detail in a later chapter.

The important issue to note here is that the billions of years’ time period is based on calculations, which in turn are based on unproven assumptions. However, let us dig a little deeper. The radiometric methods referred to above date volcanic rocks, not long-dead cells. So how can scientists put a time on the origin of life? They do so on the basis of more assumptions about fossils.

2. Ibid.

3. Stanley Livingstone, “Thoughts on the Chemical Origin of life,” *Chemistry in Australia*, vol. 78 (December/January 2008/2009): p. 10–12.

4. Trudy McKee and James R. McKee, *Biochemistry: The Molecular Basis of Life*, third edition (New York: McGraw Hill Publishers, 2003), p. 58.

Fossils are the preserved remains or molds of the remains of previously living organisms. They are almost always found in what are known as sedimentary rocks, that is, rocks that have been formed or deposited under conditions most often involving water. Usually, rapid burial is required so as to preserve the organism from decomposition. All over the world geologists find layer upon layer of sedimentary rocks. Examples of many of these sedimentary layers are exposed, such as the rock layers in the walls of the famous Grand Canyon of the Colorado River in Arizona. Geologists assume (unless there is evidence of overthrusting) that the bottom rocks or the deepest rocks are the oldest. The layers of sedimentary rocks can contain the fossil remains of organisms, with certain fossils often being more abundant in particular layers. These layers and their characteristic fossils are called the *geologic column*. The rocks at the bottom of the column are called the Precambrian and are claimed by evolutionists to range from 600 million years old to around 4,500 million years old.

However, as will be discussed later, sedimentary rocks usually cannot be dated by radiometric methods, so their ages have to be assumed on the basis of the calculated ages of nearby volcanic rocks. More commonly, the age of sedimentary rocks is assumed on the basis of their fossil content.

The search by evolutionists for the earliest evolving forms of life has concentrated in the lowest layers of the Precambrian rocks called the Archean. In the mid-1980s, scientists discovered what were believed to be fossils of the earliest known forms of life in chert and other sedimentary rocks considered to be around 3,500 million years old. Their findings were published in the leading journals *Science* and *Nature*.⁵ However, these small filamentous types of fossils are not considered the first living organisms; therefore, evolutionists guess that the first life forms arose even earlier. Thus the long ages, such as 3,850 million years ago, asserted by evolutionists as to when life began are simply guesses arising from ages calculated on the basis of a series of unproven assumptions. Evolutionists must have the first life starting a very long time ago, otherwise there would not be enough time for the claimed evolutionary processes to work.

But dating the origin of life to a time of billions of years ago still doesn't help explain how life could start from nonliving matter. So how

5. J.W. Schopf and B.M. Packer, "Early Archean (3.3-Billion to 3.5-Billion-Year-Old) Microfossils from Warrawoona Group, Australia," *Science*, vol. 237 (1987): p. 70–73; also J.W. Schopf, "Microfossils of the Early Archean Apex Chert: New Evidence of the Antiquity of Life," *Science*, vol. 260 (1993): p. 640–646; and M.M. Walsh and D.R. Lowe "Filamentous Microfossils from the 3,500-Million-Year-Old Onverwacht Group, Barberton Mountain Land, South Africa," *Nature*, vol. 314 (1985): p. 530–532.

can scientists assert that life started by a random chance formation of a living organism from nonliving chemicals? The truth of the matter is that despite more than 50 years of research and experimentation, scientists still do not have a workable experimentally viable explanation of how life could start. In fact, some leading scientists have suggested that life must have somehow come here from outer space. This theory is called *panspermia*, and some years ago the famous Cambridge University astronomer Sir Fred Hoyle, who recognized the impossibility of life arising spontaneously by chance, published his alterative ideas in his book *Evolution from Space*.⁶ In more recent times the very vocal advocate of evolution, Oxford University professor Richard Dawkins, when pushed by interviewer Ben Stein to explain how life could have started, could offer no mechanistic explanation and conceded that a possible explanation was that the first life came here from somewhere else in outer space.⁷

So how can we know that it is impossible for a living cell to arise by chance? The answer lies in understanding that a single cell is vastly more complicated than anything human minds have ever engineered.

Let us consider the components of a simple cell using the well-studied organism *Escherichia coli*, which is a single-celled organism found in the human gastrointestinal tract. In 1996 a two-volume, 2,800-page set of articles that summarized some of our knowledge of the biochemistry and biology of this organism was published. Using this data, George Javor, professor of biochemistry at Loma Linda University, calculated the following statistics: A single living *E. coli* contains around 2.4 million protein molecules made up of approximately 4,000 different types of proteins. Along with these proteins the cell contains around 255,000 nucleic acid molecules made up of 660 different types of nucleic acids. Included with these nucleic acids are around 1.4 million polysaccharide (long chains of sugar type molecules) molecules made up of three different types of polysaccharides. Associated with these polysaccharides are around 22 million lipid molecules made up of 50 to 100 different types of lipids. These lipids also cooperate with many millions of metabolic intermediate molecules made up of about 800 different types of compounds that have to be at just the right concentration, otherwise the cell will die. Along with the metabolic intermediates there are many millions of mineral molecules made up of 10 to 30 different types

6. Fred Hoye and Chandra Wickramasinghe, *Evolution from Space* (London: J.M. Dent and Sons, 1981).

7. Ben Stein, *Expelled: No Intelligence Allowed*, Premise Media Corporation, 2008, documentary DVD; see also: www.expelledthemovie.com.

of minerals.⁸ The above components make up about 30 percent of the cell with the balance being water amounting to approximately 24.3 billion water molecules. These provide the environment for the life-sustaining chemical reactions to take place within the cell structures.

Of the nonwater components of a cell, more than 90 percent are made up of biopolymers, that is proteins — which are long chains of amino acids, nucleic acids that are made up of long chains of nucleotides, polysaccharides that are long chains of sugar molecules, and lipids that are the molecules that make up fats. (Lipids are not true biopolymers from a biochemistry definition perspective, but they can aggregate to form large structures such as membranes.)

A common feature of these biopolymers is that they are made up of many repeats of smaller building block compounds. However, the linkages that join these building blocks together are created by dehydration, that is, by removing a molecule of water. One of the challenges faced by chemical evolution theory is explaining how these biopolymers, which require the removal of water to form, could arise in the assumed primordial watery environment. It is extremely difficult to form new chemical bonds by eliminating water in an aqueous environment.⁹

However, the problem of forming a cell is not just to get these biopolymers to form but assembling them with just the right sequence of building blocks. This process is important because the sequence (that is, the particular order) of these building blocks actually encodes the information that directs the chemical reactions responsible for the cell's existence.

For example, the sequences of amino acids in the protein chains constitute information as a code that determines its type of chemical activity. These types of protein chains are referred to as enzymes and guide smaller molecules through precise paths of chemical changes required by the cell, while at the same time preventing numerous unwanted chemical side reactions.

The sequence of nucleotides in a nucleic acid such as deoxyribonucleic acid (DNA) constitutes genetic information as a code. This code contains the templates for the proteins that constitute the cell and its enzymes responsible for directing the chemical reactions that result in the cell's form, function, and reproduction. The DNA itself consists of hundreds to thousands of genes, each made up of chains of thousands to millions

8. Calculated from data in F.C. Neidhardt, editor, 1996, *Escherichia coli and Salmonella* (Washington, DC: ASM Press, 1996), p. 14, by G.T. Javor, professor of biochemistry, Loma Linda University; see <http://www.grisda.org/origins/25002.htm>.

9. Ricardo and Szostak, "Origin of Life on Earth," p. 41–42.

of nucleotides that encode the information responsible for particular traits of the organism.

Each nucleotide is made from a sugar type molecule, a phosphate group, and a nucleobase. In a DNA nucleotide, the nucleobase is one of only four particular amino acid molecules: adenine, guanine, cytosine, or thymine. These “bases” are assigned the letters A, G, C, and T, respectively. (In ribonucleic acid [RNA], the base thymine is replaced with the molecule uracil, which is assigned the letter U.)

Genes can be thought of as the cell libraries that inform the cell’s protein building apparatus of the correct amino-acid sequence for each of the thousands of different proteins and enzymes.

For example, the DNA of *E. coli* contains 4,288 genes.¹⁰ The functions of some of these genes have been identified as follows.

Function	Number of genes involved
Amino acid metabolism	131
Biosynthesis of cofactors, etc.	103
Cell envelope	195
Cellular processes	188
Central intermediary metabolism	188
Energy metabolism	243
Fatty acid and lipid metabolism	48
Nucleotides and related molecules	58
Regulatory functions	45
Replication	115
Transcription	55
Translation	182

Only the functions of 1,551 genes out of the total 4,288 genes are accounted for here. This is because at the time of publication of the genome sequence, the function of the remaining 2,737 genes had not been

10. Frederick R. Blattner, Guy Plunkett III, Craig A. Bloch, et al, “The Complete Genome Sequence of *Escherichia coli* K-12,” *Science*, vol. 277 (1997): p. 1453–1474.

identified. Chemical evolution requires this complex information system to arise by chance!

The simple single living *E. coli* cell requires around 4,750 different types of amazingly complex biopolymer type molecules, constructed to undertake approximately 800 different simultaneous chemical reactions. Indirectly, through the action of proteins, every aspect of this metabolism and the infrastructure of the organism is coded into its genome. This genetic material or DNA of *E. coli* consists of 4.6 million pairs of nucleotides. Imagine that occurring by chance and it actually working! Of course, *E. coli* is not the simplest cell known. The bacterium *Mycoplasma genitalium*, which lives in humans, has only 471 genes.¹¹ Nonetheless, it is still impossible for its genetic code to occur by chance, and even if it “miraculously” did form it does not mean it would be alive. Let me explain.

For the first life to start from nonliving matter, thousands of specialized large complex molecules must somehow be synthesized in very large numbers from simple small inorganic molecules. These molecules then have to come together randomly over and over again until somehow the structure of the cell is formed. This remarkable and complex structure would still, however, not be alive. To become alive, hundreds of metabolic reactions would have to be initiated, with the metabolic intermediates already in place at just the right concentrations so that the reactions went the right way.

Common sense tells us that these sorts of reactions just don’t happen by chance — in fact, we cannot even make them happen. This latter situation would be the equivalent of the example of an *E. coli* cell that has been freshly killed with a drop of toluene. All the 4,750 different types of biopolymers are already in place and all the metabolic pathways are set up. However, the cell is now dead as a result of the solvent chemical toluene breaching the cell’s cytoplasmic membrane, resulting in a loss of the function known as adenosine triphosphate (ATP) synthesis, which is responsible for generating energy in the cell. This loss of energy to drive the cell’s biochemistry would result in all the chemical reactions returning to equilibrium (i.e., returning to balance). That is, the cell is now dead.

To make the complex cell machine start up again, we simply have to change the concentration of hundreds of the metabolic intermediates back to just the right concentrations simultaneously. That is, we have to reinstate steady state nonequilibrium where the rate at which metabolites are formed is balanced perfectly with the rate they are required to be used by the next

11. C.M. Fraser, J.D. Gocayne, O. White, et al, “The Minimal Gene Complement of *Mycoplasma genitalium*,” *Science*, vol. 270 (1995): p. 397–403.

process. We know what to do, but even with our best technology we cannot achieve this — it is impossible. Once even a simple organism is dead it cannot be made alive again. This is a straightforward scientific observation.

Evolution, however, requires not only the equivalent of a dead organism being made alive, but that the organism and its complex components and information systems must form in the first place by random processes. Then it must quickly be made alive before it has a chance to decompose or be damaged by other chemicals.

Thus, the proponents of chemical evolution have to show that under the conditions that supposedly existed in a hypothetical primordial earth:

1. biomonomers (basic building block molecules) could form
2. biopolymers could form from these biomonomers
3. connected metabolic pathways could form
4. a live cell forms where chemical reactions are taking place in steady state (i.e., perfectly balanced) nonequilibrium

To date, scientists have been able to replicate in the laboratory most of the reactions required for step 1. However, scientists have run into major problems trying to perform step 2. Small biopolymers only a fraction of the size required have been produced under ideal conditions using chemically reactive versions of nucleotides. These small, random molecules are a long, long way from the giant information encoded molecules required for life.¹²

The genetic information problem also has not been addressed in these experiments. Step 2 requires not only formation of biopolymers but also information to be encoded into these molecules to prepare for step 3. The evolutionary model requires this encoded information to occur as a result of nondirected random processes.

The probability of proteins or gene sequences arising with specific encoded information can be calculated using mathematics. However, for these calculations to be meaningful, we have to know how improbable an event has to be before we can say it is absolutely impossible. This question has been formerly answered by William A. Dembski, a University of Chicago-trained mathematician who authored *The Design Inference: Eliminating Chance Through Small Probabilities*. Dembski has shown mathematically that chance can be eliminated as a plausible explanation for a specified system when it exceeds

12. Ricardo and Jack W. Szostak, “Origin of Life on Earth,” p. 38–45.

the available probabilistic resources.¹³ For the known universe, this is calculated to be one chance in ten to the power 150, i.e., 10^{150} . The latter number is a 1 followed by 150 zeros. (Note 1 billion is 10^9 , i.e., 1 followed by 9 zeros or 1,000,000,000.)

We now have a reference point. If we calculate the self-forming probability of a specific protein amino acid sequence or a specific base sequence in a gene or some other component of a cell, and the probability is 1 chance in a number where the power of ten is larger than 150, then we can say that particular specific protein could not arise by chance.

For example, consider the probability of a short, specifically coded protein molecule 100 amino acids in length arising by chance from its amino acid building blocks. To make the protein chain, all the amino acids must form a specific type of chemical bond known as a peptide bond with each other. However, other non-peptide bonds are possible and occur with approximately equal probability. This means that at any given site along the growing chain, the probability of having a peptide bond is one in two or $\frac{1}{2}$. Therefore, the probability of having four peptide bonds in a four-link chain is $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = (\frac{1}{2})^4 = 1/16$ or 1 chance in 16. The probability of building a 100 amino acid chain with only peptide bonds is $(\frac{1}{2})^{99}$, which calculates to be around 1 chance in 10^{30} .

In nature, almost all the amino acids found in proteins can come in two forms where one form is the mirror image of the other, just like the left hand is the mirror image of the right hand. Both forms occur at roughly equal frequency. The functional proteins in a cell require all left-hand forms (L-) with no right-hand forms. Since our chance of getting a left-hand amino acid is one in two, the chance of getting a 100 amino acid protein chain with all left-hand amino acids is $(\frac{1}{2})^{100}$, which calculates to a similar figure as before, that is, around one chance in 10^{30} . So the chance of getting 100 L-amino acids forming a chain with only peptide bonds is now roughly one chance in 10^{60} attempts.

However, we have not dealt with the information requirement. To carry meaningful information, the amino acids have to occur in a specific sequence, just like letters in the alphabet must be arranged in a certain sequence. For example, consider the sentence “a stich in time saves nine” but without spaces: “astichintimesavesnine.”

In this message there are 21 places for a letter. There are 10 possible different letters, which means the chance of getting the right letter in the right

13. William A. Dembski, *The Design Inference: Eliminating Chance Through Small Probabilities* (Cambridge, MA: Cambridge University Press, 1998), p. 175–223.

place is 1 chance in 10 attempts. If we were to give a one-year-old infant a random pile of 210 of these letters, that is, 21 of each letter, and get the child to put 21 letters in a row, the chance that the letters would spell the above sentence is only likely to occur once in $10 \times 10 \times 10$ attempts — that is 1 chance in 1,000,000,000,000,000,000 or 10^{21} .

Just changing one letter renders the message unreadable unless we make an “intelligent” guess, for example, “*hstichintimesavesnine*,” and random arrangements are meaningless: “*meivnahscitsteaineisn*.”

There are 20 different amino acids involved in biological systems that might be considered as the letters used to write a biological message. Unless the amino acids are in the right sequence, the code will not work to carry information in a cell. The probability of getting the right amino acid in the right site is 1 chance out of 20 possibilities. Therefore, the probability of forming a particular protein 100 amino acids long by chance would be $(1/20)^{100}$, which is around 1 chance in 10^{130} . But these amino acids all need to be the L-form, and they all need to be linked by only peptide bonds. So the chance of all these conditions being met is 1 chance in $10^{130} \times 10^{30} \times 10^{30}$, that is, 10^{190} . This number is very much greater than 10^{150} , which defined the limit up to which this event is likely to occur somewhere in the universe during the lifetime of the universe.

The calculation above does not take into account that there are other possible valid sequences that could contain information. Nor does it take into account the fact there are many non-protein-forming amino acids in nature that make the chances of the right protein forming even less likely. The above calculation is based on a relatively short protein. A typical biological protein consists of about 300 amino acid units, and some are much longer. Biochemists at Cambridge University and Massachusetts Institute of Technology have published more detailed calculations of the probability of a functional sequence of amino acids arising by chance, and have come up with probabilities equivalent to finding a particular single atom in the universe!¹⁴

Also, we have not attempted to calculate the probability of a gene that can comprise thousands to millions of nucleobases encoded with information, forming by chance. From studies of single-celled organisms, scientists have estimated that the simplest possible living organism would

14. J. Reidhaar-Olson and R. Sauer, "Functionally Acceptable Solutions in Two Alpha-Helical Regions of Lambda Repressor," *Proteins, Structure, Function, and Genetics*, vol. 7 (1990): p. 306–310; also D.D. Axe, "Biological Function Places Unexpectedly Tight Constraints on Protein Sequences," *Journal of Molecular Biology*, vol. 301, no. 3 (2000): p. 585–596.

require a genome containing a minimum of 250 to 400 genes.¹⁵ Thus, the improbability of life occurring in the simplest cells with the corresponding molecular complexity vastly exceeds 1 chance in 10^{150} . In other words, abiogenesis is absolutely impossible.¹⁶ That is, a living organism cannot arise by chance from nonliving matter.

When the evolution literature is examined closely, we find that there is still no known mechanical or naturalistic explanation as to how life started. The proponents of chemical evolution are choosing to stick with and teach a simplistic 80-year-old model against a tidal wave of evidence that abiogenesis is impossible.

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15. E. Pennisi, “Seeking Life’s Bare Genetic Necessities,” *Science*, vol. 272 (1996): p. 1098–1099; also A. Mushegian and E. Koonin, “A Minimal Gene Set for Cellular Life Derived by Comparison of Complete Bacterial Genomes,” *Proceedings of the National Academy of Sciences, USA*, vol. 93 (1996): p. 10268–10273.
 16. A detailed discussion of the probability calculations together with references to supporting literature can be found in S.C. Meyer, “DNA and the Origin of Life: Information, Speciation, and Explanation,” *Darwinism, Design, and Public Education*, Michigan State University Press, 2007, and can be downloaded from <http://www.discovery.org/a/2184>.





Chapter 4

Why New Types of Organisms Cannot Evolve by Random Mutations

The concept of evolution is part of biology education in many countries. Documentary films such as the BBC series *The Genius of Charles Darwin* present evolution to large audiences around the world with their message that evolution is now a scientific “fact.” In 2009, the presenter of the BBC program about Darwin, Oxford University professor Richard Dawkins, also published a book outlining the accumulation of proposed evidence for evolution. Early in this work Dawkins states, “In the rest of this book, I shall demonstrate that evolution is an inescapable fact.”¹ But is it really? Let us carefully examine the evidence for the fundamental cornerstone of evolution, which is the production of totally new life forms from a multitude of random mutations via the mechanism of natural selection. An example of this process would be a yeast organism slowly evolving into a worm and a worm evolving into a fish, and so on.

Much of what Dawkins presents as evidence for natural selection and evolution in his book is considered evidence for intelligent design and

¹ Richard Dawkins, *The Greatest Show on Earth: The Evidence for Evolution* (London: Bantam Press, 2009), p. 18.

creation by other scientists. As a result, we have the ongoing evolution versus creation debate.² So let us go straight to the main premise of evolution and examine the fundamental foundation of Darwin's thesis. We shall examine whether or not mutations together with natural selection are capable of producing all the genetic information required to generate all the diversity of life that exists today and has occurred in the past. We have already discussed in the previous chapter how the genetic information responsible for an organism's form and function is encoded in the DNA of that organism. That is, the information to make all the physical components of an organism — its skin or bark, internal and external organs, bones, shell, roots, leaves, flowers, physical shape, color, hairiness, digestive system, brain, nervous system, reproductive system, optical system, immune system, and so on are encoded in its DNA. So are the thousands of individual enzymes, proteins, hormones, and other specific molecules such as defense toxins.

Evolution requires that all this specific DNA information for each and every type of animal, plant, fungi, and bacteria has arisen as a result of random environmental conditions. Alternately, it maintains that predators removing less advantageous new genetic information leave beneficial new genetic information that has been generated by random spontaneous mutations.

Dawkins claims:

In the case of DNA we understand pretty well how the information content builds up over geological time. Darwin called it natural selection." Dawkins goes on to call it "information that encodes embryological recipes for that survival."³

The current challenge is to show that random mutations together with natural selection are incapable of producing the level of genetic information required for the evolution of the millions of difference species of living organisms. This can be achieved using the basis of what we now know about the biochemistry of genetic information, to show that Darwinian evolution is impossible. The claims that evolution can explain the origin of life will then have been refuted as false.

So let us now examine the evidence that we can actually "know" as fact and see what we can learn from it. We will consider the actual evidence we observe today, as opposed to some theoretical construct of the past.

2. See, for example, numerous articles on the following websites: <http://www.discovery.org/csc/>; <http://www.icr.org/>; <http://creation.com/>; <http://www.creationresearch.org/>.

3. Dawkins, *The Greatest Show on Earth*, p. 405.

Within the life sciences, the term “evolution” is used to describe the gradual changes over time that can occur in a population, more or less along the lines that Darwin proposed. Hence this type of evolution is sometimes referred to as “Darwinian evolution.” As I have just explained above, all morphological changes, being changes in form or function, are a result of changes in meaningful genetic information encoded in the DNA of the organism. Thus, changing the DNA code has the potential to cause a mutation and is the basis of common plant-breeding techniques used by scientists, including genetic engineering.

There are three distinct ways the genetic information in the DNA can be changed and thereby generate a mutation that could contribute to evolution. For ease of comparison I will assign the numbers 1 to 3 to these.

Type 1 evolution. This type of evolution involves no new additional genetic information being formed. It most commonly involves the loss of preexisting genetic information that results in changes to the inherited genetic code in the offspring, making it different from the parent. For example, if a mouse population that is carrying genes for both light and dark fur moves to a light-colored sandy area where owls can see and catch the dark mice more easily, after a while there will be fewer dark mice to breed. As the light-colored mice continue to breed, fewer and fewer of them will carry the genes for dark fur, so natural selection for light-colored mice will have occurred. However, some mice may still be carrying the genes for dark fur, and if some of the light-colored mice migrate to a dark soil area after breeding for a while, some dark offspring may now be produced. These now have a better chance of surviving the predator owls, creating a situation where light-colored mice evolve into dark-furred mice.

In this example we have no new genetic information created. Instead we have evolutionary changes produced by natural selection removing genetic information, or changes resulting from much less frequently or rarely expressed genetic information, favoring survival in a new environment. This mechanism explains the typical examples of evidence that are put forward for evolution, such as male guppies evolving brighter colors when they are placed in streams where there are very few predators.⁴ In the high predator population streams the easily seen male guppies are eaten before they can breed, so mainly dull-colored fish breed. Because the guppies came from parents containing a diversity of genetic material, some of the remaining “dull”-colored guppies will be carrying the genes for bright

4. Ibid., p. 133–139. See also E.P. Solomon, L.R. Berg, and D.W. Martin, *Biology*, 7th edition (Belmont, CA: Thomson Brooks/Cole, 2005), p. 349–350.

colors. When some of the dull guppies find themselves in a pond with few predators, the brightly colored guppies survive. But because these fish attract more females, they produce more offspring carrying the bright color genes, and by this process nature selects more brightly colored male fish over dull-colored ones. Again, this evolution of brightly colored male fish involves no new genetic information.

The other important point to note is that in these examples of evolution, and similar examples given in biology textbooks, the changes involved the same type of organism.⁵ The mice were still mice, the guppies were still guppies, the moths were still moths, the frogs were still frogs. There are no examples of moths evolving into flies or vice versa. In other words, the loss of genetic information did not lead to a new type of organism, just a new variant of the same type of organism.

Different types of environmental effects can trigger the natural selection process using existing genetic information. Changes in an organism can be caused by turning on (or turning off) the activity of an existing gene or genes within the DNA of an organism. This means that these genes now make their encoded information available to be replicated, and therefore more genetic information becomes available for the organism to use. Genes may also be down regulated, resulting in less genetic information being available to the organism. For example, in the guppy situation, environmental pressure in the form of predator stress may turn off the genes for color production. The genetic information is still there but is not active. When the predators are removed, the environmental pressure is removed and existing genetic information for colors switches back to on mode.

Genes can be turned off or on by other genes, or by chemicals in the cell's environment. For example, one particular gene X may down regulate or turn off another gene Y. If gene X is damaged by an environmental factor, such as a chemical or radiation and no longer functions to turn off gene Y, gene Y is now activated with its encoded preexisting genetic information, and a new trait such as a new color may appear in the offspring.

For example, consider a publisher reading this report:

MOST SCIENTISTS DO NOT BELIEVE IN EVOLUTION

As a result, the publisher does not publish any books on evolution.

If we take a chemical bleach and white out the single word *NOT*, the information destroyed by our chemical bleach changes the information

5. Solomon, Berg, and Martin, *Biology*, chapters 17–19.

(message) encoded in the sentence. As a result, this new report is sent to the publisher:

MOST SCIENTISTS DO BELIEVE IN EVOLUTION

Our mutation has resulted in a loss of information, but it still makes sense. The publisher reads the mutated report and begins publishing books on evolution. The mutated message has activated a preexisting but dormant action.

The technique of destroying genetic information to produce traits has been used by plant breeders for many decades. In this technique, thousands of seeds are exposed to ionizing radiation or chemicals that damage the DNA molecules, and then the seeds are germinated. Any seeds that actually grow are then examined for possible beneficial traits such as drought resistance or lower glycemic index and so on. For example, if the chemicals knock out the starch granule protein-1 (SGP-1) genes that are responsible for branched chain starch synthesis in the seed, the offspring plants will produce a grain (e.g., corn) that has less branched starch and hence a lower glycemic index (i.e., better for diabetics) than normal corn.

One of the reasons plant breeders collect seeds from isolated and primitive locations where very little plant breeding and selection has taken place is because these seeds are likely to contain a larger diversity of pre-existing genetic information, compared with domestic varieties. Knocking out genes in these wild species increases the possibility of producing a beneficial trait in the offspring. However, in all these cases we are dealing with the loss of preexisting genetic information. No new genetic information has been created.

Changes in the cell's physical environment that put physical pressure on the shape of the large DNA molecule can also affect the activity of genetic information. Thus, for bacteria, even environmental changes around a cell that affect the physical shape of the coiling of the large DNA molecule can affect turning on or off a gene (gene expression). In this way, bacteria can cope with sudden and severe changes in their environment and survive. This capability uses preexisting genetic information. No new information is being created.⁶

6. C.J. Dorman, "DNA Topology and the Global Control of Bacterial Gene Expression: Implications for the Regulation of Virulence Gene Expression," *Microbiology*, vol. 141 (1995): p. 1271–1280. See also G.W. Hatfield and C.J. Benham, "DNA Topology-mediated Control of Global Gene Expression in *Escherichia coli*," *Annual Review of Genetics*, vol. 36 (2002): p. 175–203.

Changes in DNA as a result of an error when the cell's DNA is replicated can also occur, resulting in a cell with slightly altered DNA. The displacement of a small section of DNA from one place in the code to another place can also cause changes. All these mechanisms can produce mutations that result in type 1 evolution.

In the TV documentary *The Genius of Charles Darwin*, part 1, Oxford University professor Richard Dawkins asserts that women in Nairobi resistant to HIV are evidence for the “unstoppable force of natural selection” being observed by modern science.⁷ However, this is a classic example of a mutation that involves the loss of genetic information. The observed resistance to HIV occurs as the result of a mutation in the human CCR5 gene in the women, which is caused by the deletion or removal of 32 base pairs of information. This loss of genetic information results in a nonfunctioning HIV receptor (that is a way for a virus or biological factor to enter a cell) together with reduced expression of the receptor that stops or slows the transmission of the disease.⁸

In this case, the mutation in the women’s cells has a definite beneficial effect, but it is due to the loss of preexisting genetic information. It is not an example of how new purposeful genetic information could arise that is necessary for the evolution of new organs such as an eye or a leg, let alone a new type of organism. So in no way is it an example of even a small successful variation (i.e., mutation) of the type required to produce new types of organisms. This is the case with just about every example that is cited in biology textbooks or evolution documentaries — they are simply cases of type 1 evolution where species have lost already existing genetic information.

In the majority of cases, mutations are actually harmful,⁹ and many are responsible for genetic or inherited diseases.¹⁰ Many cancers and malignancies in both animals and humans also can be traced to type 1 mutations,¹¹ and even the CC5Delta 32 mutation cited by Professor Dawkins as being a beneficial example has now been associated with an increased risk of developing

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7. Richard Dawkins, *The Genius of Charles Darwin*, part 1, TV documentary shown August 4, 2008, Channel 4, UK.
 8. S. Venkatesan, A. Petrovic, D.L. Van Ryk, et al., “Reduced Cell Surface Expression of CCR5 in CCR5Delta 32 Heterozygotes Is Mediated by Gene Dosage, Rather Than by Receptor Sequestration,” *Journal of Biological Chemistry*, vol. 277, no. 3 (2002): p. 2287–2301.
 9. A. Orr, “Testing Natural Selection,” *Scientific American* (January 2009): p. 30–36.
 10. S.E. Antonarakis, M. Krawezak, and D.N. Cooper, “Disease Causing Mutations in the Human Genome,” *European Journal of Pediatrics*, vol. 159, supplement 3 (2000): p. S173–S178.
 11. L.A. Loeb, J.H. Bielas, and R.A. Beckman, “Cancers Exhibit a Mutator Phenotype: Clinical Implications,” *Cancer Research*, vol. 68, no. 10 (2008): p. 3551–3557.

a serious liver disease.¹² Thus, Type 1 evolution is the most common type of evolution observed and is usually the type of evolution described in biology textbooks and museum displays as evidence that evolution is a fact.¹³ However, this type of evolution cannot produce new kinds of organisms. It cannot be a mechanism to explain the existence of the millions of kinds of animals and plants that have been discovered.

Type 2 evolution involves the transfer of new genetic information from one organism into another organism. That is, additional new genetic information enters the DNA of an organism via, for example, virus-like proteins or by plasmids that can carry specific genes. For example, plasmid R100, which is made up of 90,000 nucleotide code base pairs, carries genes for the resistance to sulphonamide, streptomycin, and several other antibiotics. This plasmid can transfer itself from a harmless *Escherichia* bacteria to a harmful *Salmonella* bacteria. The insertion of these genes means a new antibiotic-resistant *Salmonella* species would evolve. Similarly, the potentially lethal strain of *Escherichia coli* referred to as *E. coli* O157:H7 is believed to have evolved from a nonpathogenic *E. coli* bacteria as a result of the transfer of toxin genes from some other bacteria. In fact, many of the food poisoning bacteria that now concern food processors are believed to have evolved in the past 50 years or so as a result of the transfer of toxin genes and acid-resistant genes between bacteria.¹⁴

Type 2 evolution is not a case of totally new genetic information being created but rather simply the transfer of preexisting genetic information from one organism to another. It can produce a new strain of an organism but not a new type of organism.

It is interesting to note that in all species there are mechanisms in place to preserve the integrity of the species. Some of these mechanisms prevent two different species from mating and producing a new type of organism. This is an example of a type of anti-evolution mechanism observable in nature. For example, in sexual reproduction involving an egg and sperm, the surface of the egg contains specific proteins that bind only to specific complementary molecules on the surface of sperm cells of the same species. Any hybrid embryos that do form usually either abort or develop into sterile adults.

A similar type of molecular recognition system occurs in plants, which means that pollen grains blowing in the wind do not germinate on the

12. R. Eri, J.R. Jonsson, D.M. Pandeya, et al., “CCR5-Δ32 Mutation Is Strongly Associated with Primary Sclerosing Cholangitis,” *Genes and Immunity*, vol. 5 (2004): p. 444–450.

13. Orr, “Testing Natural Selection,” p. 30–36.

14. K.A. Bettelheim, “Enerohaemorrhagic *Escherichia coli*: A New Problem, an Old Group of Organisms,” *Australian Veterinary Journal*, vol. 73, no. 1 (1996): p. 20–26.

stigma (the female part of a flower) of a different plant species.¹⁵ Natural hybrids are examples of type 2 evolution and again simply involve the transfer of preexisting genetic information.

Type 3 evolution would involve the generation of totally new useful genetic information within the DNA code of an organism by some supposed process in nature, which results in a completely new function that has never occurred before. An example would be a worm evolving jointed legs so it could walk or developing eyes so it could see. These new features, when they first form, would require massive amounts of new genetic information to encode for all the parts of the legs, their control mechanisms, and programming of the brain to use them. Similarly, with the first eye, all the components, the lens, focusing mechanisms, the optic nerve, the blood supply, and so on would have to be encoded for in the DNA of the organism. Biophysicist Dr. Lee Spetner, who taught at both Harvard and John Hopkins Universities, points out that this type of evolution — that is, type 3 evolution — has never been observed.¹⁶ In fact, there is no proven mechanism that can explain the formation of the large quantities of new genetic information required to produce major phenotypic changes such as the appearance of jointed limbs during the proposed evolution of, for example, arthropods, that is, crustaceans, insects, and spiders. These significant challenges in explaining how this type of evolution could have taken place are now a major and fundamental area of study in biology. As a widely used biology text states:

One concern of macroevolution is to explain evolutionary novelties, which are large phenotypic changes. . . . Studies of macroevolution also seek to discover and explain major changes in species diversity through time.¹⁷

One leading educational website puts it even more bluntly:

Biologists are not arguing about these conclusions [that many biologists believe life on earth has evolved]. But they are trying to figure out how evolution happens — and that's not an easy job.¹⁸

15. Solomon, Berg, and Martin, *Biology*, p. 130.

16. Lee M. Spetner, *Not by Chance! Shattering the Modern Theory of Evolution* (New York: Judaica Press, Inc., 1997), p. 107. See also A. McIntosh, "Just Add Energy," 2007, <http://www.apologetics.org/JUSTADDENERGY/tabid/82/Default.aspx>.

17. Solomon, Berg, and Martin, *Biology*, p. 377.

18. Evolution 101, 2009, "The Big Issues," <http://evolution.berkeley.edu/evosite/evo101/VIIBigissues.shtml>.

To date, evolutionists have no known and proven explanation for these so-called novelties, yet type 3 evolution is the very type of evolution that underpins Darwin's theory of evolution and is necessary to generate a new class of organisms.

One of the most recent books arguing that there is evidence for Darwin's theory is *The Greatest Show on Earth: The Evidence for Evolution* by Oxford University professor Richard Dawkins. In this work of 470 pages there is only one example cited as evidence for type 3 evolution. This presumed evidence for new meaningful information entering the genome of an organism is found on page 131.¹⁹ Here, Dawkins asserts that some experiments done by bacteriologist Richard Lenski and coworkers constitute evidence for type 3 evolution. So let us look in more detail at this important claim by Dawkins.

Dr. Richard Lenski and a team of researchers at the Department of Microbiology and Molecular Genetics at Michigan State University studied mutations in 12 separate but initially identical populations of the bacteria *Escherichia* for more than three decades. During this time the bacteria had gone through tens of thousands of generations and experienced billions of mutations. This was equivalent to having the possibility of attempting just about every possible point mutation in the 4.6 million nucleobase pairs in the DNA of the bacteria. Yet the only significant evolutionary type change was that after more than 31,500 generations, one of the populations had incurred a mutation that enabled the bacteria to use the chemical "citrate" as a source of food. (*E. coli* bacteria cannot normally use citrate, which is a particular characteristic of this species). However, *E. coli* has the internal metabolism to utilize citrate — it just lacks a transporter molecule. In the citrate-utilizing mutant strain, a mutation has led to the genetic information being available to generate the transporter molecule. Dr. Lenski and co-workers are not sure of the mechanism that produced the change in genetic information. One explanation they suggest is that a once-functional transporter gene silenced by previous mutations was activated. Another explanation, which they think is more likely, is that "an existing transporter has been co-opted for citrate transport."²⁰

Both possible mechanisms proposed revolve around the use of existing genetic information, and that the potential to produce the new protein was

19. Dawkins, *The Greatest Show on Earth*, p. 131.

20. Z.D. Blount, C.Z. Borland, and R.E. Lenski, "Historical Contingency and the Evolution of a Key Innovation in an Experimental Population of *Escherichia coli*," *Proceedings of the National Academy of Sciences*, vol. 105, no. 23 (2008): p. 7899–7906.

already encoded for in some latent manner within the DNA. This means that it is type 1 evolution.

So the one and only piece of evidence that Professor Dawkins could put forward to support the claim that type 3 evolution can occur turns out to be most likely an example of type 1 evolution, and is definitely not a proven example of type 3 evolution. After tens of thousands of generations, the bacteria were still bacteria — in fact, they were still *E. coli* bacteria.

Dr. Lemski and coworkers also reported other evolutionary changes during their studies. For example, successive generations grew faster and grew larger cell sizes than their ancestors, and three genes in each population were observed to undergo gene substitution. Ten populations developed changes in the physical coiling of their DNA, which is known to affect gene expression. Variations in fitness levels also evolved between the populations. Four of the populations — that is, one-third of the populations — evolved defects in their DNA repair mechanisms that lead to higher mutation rates.

Despite the billions and billions of possible individual mutations that would have occurred during the more than 44,000 generations of the 12 *E. coli* bacteria populations Dr. Lemski's team has been studying, the most significant evolution result was the production of one new transporter molecule, which was most probably already latently encoded for within the DNA of the organism. The *E. coli* bacteria was still *E. coli* bacteria. It had not evolved into another species of bacteria. It had not evolved into another genus of anaerobic gram negative rods like Shigella or Salmonella. It had not evolved a nucleus. In other words, all the billions of mutations had not produced major new genetic information.

Furthermore, studies published in 2008 by Dr. Lemski and co-researchers now show that natural selection is actually a very poor mechanism for optimizing mutation rates in the real world type scenarios, where fitness to survive in the environment is complex.²¹

Yet type 3 evolution requires lots and lots of new genetic information to be produced so it can select the best for survival. The evolution of a common yeast such as *Saccharomyces cerevisiae* (brewer's yeast), for example, requires a huge increase in genetic information from, say, around 4.6 million DNA base pairs found in a single-celled bacterium such as *E. coli*, to 12.1 million bases encoding the genetic information in the yeast. The yeast also

21. J. Clune, D. Misevic, C. Ofria, et al., "Natural Selection Fails to Optimise Mutation Rates for Long-Term Adaptation on Rugged Fitness Landscapes," *PLoS Comput Biology*, vol. 4, no. 9 (2008): e1000187.

has about 6,000 genes, nearly 50 percent more than the number occurring in *E. coli*. The yeast genes on average are also much larger (that is, they consist of much more genetic information) compared with the genes in simple single-celled bacteria. If bacteria were to evolve into a yeast, these thousands of new genes all containing thousands of base pairs of new code all have to form by random mutations. And a yeast is still a single-celled organism!

For a multi-celled organism to have evolved requires an even greater amount of new genetic information to be created. The information encoded in a roundworm is contained on 97 million DNA base pairs spread over about 19,000 genes. For a yeast to evolve into a roundworm requires the creation of 13,000 extra genes of new genetic information by random mutations. And the roundworm genes are made up of thousands more base pairs of encoded information compared to yeast genes. That is, they are far more complex in terms of their information content.²² And we are still near the bottom of the evolutionary tree — we are still only up to worms! Yet the amount of totally new genetic information to make these low organisms in the evolutionary tree is enormous. According to the theory of evolution, all this new genetic information arose by chance as a result of successive random mutations over time.

I would like to emphasize that totally “new” genetic information is required for the theory of evolution to work. That is, genetic information that has *not* existed previously is required to evolve a bacterium into a yeast like *Saccharomyces cerevisiae*. The yeast (as a single-cell organism) has a very different structure, with the DNA concentrated in the nucleus. Also, this particular yeast comes as two types A and B, and cells of type A only mate with cells of type B. So the introduction by random mutations of thousands of highly complex new genetic codes of new genetic information is required for a bacteria to evolve into a yeast. However, this evolution has never been observed even though millions of generation cycles have occurred in bacteria colonies in laboratories around the world over the past four decades. Also, on the basis of the levels of mutations observed by Dr. Lemski’s team and the probability calculations we have shown in the previous chapter, the probability of all this new genetic information arising by chance is so close to zero as to be impossible. And we have discussed but one small step near the bottom of the evolutionary tree relating to organisms that turn over new generations very rapidly.

22. Human Genome Project Information, *Functional and Comparative Genomics Fact Sheet*, last modified September 19, 2008. See http://www.ornl.gov/sci/techresources/Human_Genome/faq/compgen.shtml, accessed 1/13/2010.

Organisms higher up the evolutionary tree not only have enormously larger genetic complexity but also take much longer to reach the age of reproduction. Most bacteria double in one to three hours, and in the laboratory *E. coli* can produce a new generation every half an hour. For many mammals and reptiles a new generation may take many months or even longer to mature to the age when they can mate and reproduce. This means it takes thousands of times longer for mutations to accumulate in the gamete (reproduction cells), compared with the lab bacteria. Also, the random non-directed mutations have to produce sufficient new genetic information to code unique individual genetic information, which has characterized the DNA of the teeming millions of different species that have ever lived. This includes all the extinct species that we know about as well as all the intermediate species, whose supposed fossils we have not yet discovered. Also, these higher animals have even more complex DNA. Mouse DNA has around 2,600 million base pairs and 25,000 genes, with an average size of 100,000 bases, which means that a mouse gene is 20 times more complex in its code compared to a roundworm. In addition, the mouse also has 30 percent more genes than the worm.²³

The mouse is just one of 5,487 mammals, each of which has different genetic information. That is, a rhinoceros has different genes in its DNA, a cow has different genes in its DNA, a bear has different genes in its DNA, and each different type of bear has different DNA with different new genes. Each of all these different genes contains tens of thousands of pieces of unique code, which the theory of evolution indicates must come into existence as a result of chance random mutations. And we have not considered the totally new genes in each of 9,990 species of birds, or the totally new genes in each of 8,734 species of reptiles, or the totally new genes in each of 31,153 species of fish. Neither have we considered the totally new genes that characterize each of the 100,000 different species of insects, nor the billions of different genes, each made up of thousands of pieces of DNA base code that characterize each of the 1,700,000 or so other species on this planet. And this is not to mention all the billions of different genes that existed in the past that have been lost due to extinction.

Not only have scientists not observed any of this new genetic information being generated, but on the basis of probability there is simply not enough time in the supposed four billion years of evolution for all the genetic information required in the genomes of all the millions of different species of bacteria, fungi, plants, and animals to evolve as a result of random

23. Ibid.

mutations. If the evolution of a simple cell is statistically impossible, as we saw in the first chapter, the evolution of these higher organisms is even more impossible. Examples of these probability calculations have been set out and explained in detail by Dr. Lee Spetner, who for many years taught information theory at Johns Hopkins University. Spetner shows that not only is the random generation of new genetic information to produce a new species statistically impossible, but on the basis of probability theory and information theory, most random mutations are going to produce changes that affect the DNA code in a way that makes sections of the code less usable, with resultant deleterious effects on the organism.²⁴ This is exactly what we observe happening in the laboratory. As University of Rochester biology professor H. Allen Orr points out, “The overwhelming majority of random mutations are harmful — that is, they reduce fitness; only a tiny minority are beneficial, increasing fitness.”²⁵

For example, missing sections of genes and errors in DNA duplications are associated with a wide range of diseases, from cystic fibrosis to Huntington’s disease to familial high cholesterol. Lists of around 10,000 examples of gene mutations or deletions suspected of causing human genetic diseases are listed on the Johns Hopkins online Mendelian Inheritance in Man website.²⁶

In cancer research, malignancies are characterized by mutations, and in cancer cells the mutation rate is much greater than in normal cells. In fact, most organisms have genes whose role is to preserve the genetic information against mutations and repair damaged DNA so that mutations are minimized. Where DNA repair genes are down regulated by some factor, the risk of cancer and other diseases is increased.²⁷

So what we actually observe in organisms are mechanisms to minimize mutations. These are mechanisms that minimize diversity outside of that which has been already coded for in the DNA. When mutations do occur, they often lead to disease or death of the organism. So where Darwin assumed that mutations would be nature’s way to maximize diversity for survival, which would in turn constitute the platform for evolution, we observe that, in fact, the very opposite is true. And as Spetner points out, “On theoretical grounds random mutations cannot form the basis of evolution.”²⁸

24. Spetner, *Not by Chance!* p. 85–160.

25. Orr, “Testing Natural Selection,” p. 30–36.

26. <http://www.ncbi.nlm.nih.gov/Omim/mimstats.html>; see also, <http://www.hugo-international.org>.

27. Loeb, Bielas, and Beckman, “Cancers Exhibit a Mutator Phenotype: Clinical Implications,” p. 3551–3557.

28. Spetner, *Not by Chance!* p. 120.

Another aspect to consider in regard to mutations is the “bottleneck effect.” In relatively small populations, for example, 100 or so individuals, mutations accumulate as a result of in-breeding and form a bottleneck of damaged DNA that eventually leads to the extinction of the population. A new, fitter species does not evolve; instead the population dies out unless fresh genetic information is introduced via breeding with another population of the same species to release the bottleneck. Reducing the accumulation of mutations is thus a key factor in saving endangered species from extinction.²⁹

The statistical improbability of evolution becomes more obvious when we consider the enormous amount of detailed genetic information encoded in the unique DNA of each species that is foundational to the millions of different types of plants and animals inhabiting the earth.

An Australian government-commissioned report published in 2009 noted that there were 1,899,567 different species reported in the published scientific literature.³⁰

This list included the following:

- 5,487 different species of mammals
- 9,990 different species of birds
- 8,734 different species of reptiles
- 6,515 different species of amphibians
- 31,153 different species of fish
- 47,000 different species of crustacean (that is, crabs, lobsters, etc.)
- 100,000 or thereabouts of different species of insects
- 102,248 different species of arachnida (that is, spiders, scorpions, ticks, and mites, etc.)
- 85,000 or thereabouts of different species of mollusca (that is, snails, shellfish, squid, and octopus, etc.)
- 310,129 or thereabouts of different species of plants including 12,272 algae species
- 98,998 different species of fungi
- 7,643 different species of bacteria

Additionally, there are 1,086,670 other known types of organisms.

29. J. Sanford, J. Baumgardner, W. Brewer, et al., “Mendel’s Accountant: A Biologically Realistic Forward-time Population Genetics Program,” *Scalable Computing: Practice and Experience*, vol. 8, no. 2 (2007): p. 147–165.

30. A.D. Chapman, *Numbers of Living Species in Australia and the World*, Department of the Environment, Water, Heritage and the Arts, Canberra, Australia, 2009, p. 7–11.

This breathtaking diversity of life comes about as a result of each organism containing quite different genetic information. According to the theory of evolution, all this new information to produce all the different types of eyes, arms, legs, and wings, the different types of feathers and skin, the different types of leaves and flowers, the different types of reproductive systems has to arise by chance. And this information is so complex that it is taking teams of scientists years to try to figure out how it works — which genes do what and so on. In fact, the diversity of the genetic information is such that the genomes (DNA) of two different strains of a singular species of *E. coli* bacteria were found to be different by 72,304 pairs of information encoding nucleotide bases.³¹ If there is this much difference between two strains of the same species of bacteria that are single-celled organisms containing a lesser amount of genetic information than other higher organisms, it is almost impossible for the human mind to comprehend the magnitude of the different genetic information on this planet at this time.

It has been estimated, based on the diversity of species in the fossil record, that somewhere between 98 and 99 percent of all the species that have ever existed are now extinct.³² In other words, the genes that have made up the unique and different DNA of 100 to 200 million different species of life have somehow been created in the past. According to the proponents of evolution, most of these life forms have evolved over the past 600 million years.³³ That means that new species would have evolved on average every three to five years. Given the millions of species that now exist in the world, the potential to observe new genetic information being created over the past 50 years of scientific observation should be quite high. But not a single example of some new intermediate arm or leg system or some intermediate new superior eye, or some new intermediate “anything” with totally new genetic information evolving, has been reported in the literature.

While about 18,000 new species are being described in the scientific literature each year, they are fully formed, already-existing species that are being discovered — mainly in remote wild regions of our planet.³⁴ They are not evidence of new genetic information evolving. On the other hand,

31. H. Jeong, V. Barbe, C.H. Lee, et al., “Genome Sequences of *Escherichia coli* B Strains REL606 and BL21(DE3),” *Journal of Molecular Biology*, vol. 394, no. 4 (2009): p. 644–652.

32. Evolution 101, “Patterns in Macroevolution,” 2009, <http://evolution.berkeley.edu/evo101/VIBPatterns.shtml> p 2.

33. G. Lawton, “Uprooting Darwin’s Tree,” *New Scientist* (January 24, 2009): p. 34–39.

34. A.D. Chapman, *Numbers of Living Species in Australia and the World*, Department of the Environment, Water, Heritage and the Arts, Canberra, Australia, 2009, p. 3.

scientists are observing the continuous loss of genetic information as more and more species become extinct.

The eminent biologist E.O. Wilson has estimated that the earth is currently losing about 0.25 percent of its remaining species each year.³⁵

This extinction trend, as well as data being collected by the International Union for the Conservation of Nature and Natural Resources (IUCN),³⁶ together with the evidence of mass extinctions in the past recorded in the fossil species of the world, point to the continuous loss of genetic information over time. This loss of genetic diversity has been highlighted recently by Professor Alan Cooper, director of the Australian Centre for Ancient DNA (ACAD), who has stated: “In contrast [to the proposal that the loss of genetic diversity at the end of the last Ice Age may not have been as extensive as previously thought], ancient DNA studies have revealed that the loss of genetic diversity in many surviving species appears to have been extremely severe.”³⁷ In other words, what we see in the real world is the massive loss of preexisting genetic information.

In this chapter I have attempted to give an overview of the evidence that is currently available to us in regard to evolution. It is evidence we can check here and now. The following has been shown from this study:

- No confirmed examples of type 3 evolution have been observed and reported in the scientific literature.
- Biologists are still trying to figure out a mechanism that could explain type 3 evolution. There is currently no known and proven mechanism. In other words, scientists still have no explanation for how the massive amount of genetic information that we observe around us came into existence.
- On the basis of mathematical calculations, mutations cannot produce the new genetic information for type 3 evolution to occur.
- Organisms have mechanisms in place to reduce mutation rates by repairing DNA; also, there are mechanisms in place to prevent mutations that would result from interspecies breeding. In other words, organisms have mechanisms that serve to minimize evolutionary changes.

35. Cited by J.C. Avise, S.P. Hubbell, and F.J. Ayala, “In the Light of Evolution II: Biodiversity and Extinction,” *Proceedings of the National Academy of Sciences*, vol. 105, suppl. (2008); see <http://www.pnas.org/content/105/suppl.1/11453.full>.

36. See <http://www.iucnredlist.org/>.

37. Press release, December 10, 2009, University of Adelaide; see <http://www.adelaide.edu.au/news/news37301.html>.

12 Reasons Why Evolution Cannot Explain the Origin of Life on Earth

- Even simple single-celled organisms have extremely complex genetic information.
- A huge amount of different genetic information has existed in the past, and most of it has been permanently lost.
- Scientists continue to observe the permanent loss of existing genetic information.

The theory of evolution proposes that in the past there were populations of simple single-celled organisms that evolved into more complex organisms as a result of acquiring complex genetic information from random mutations. This process has never been observed, and on the basis of our current knowledge of biochemistry and probability it is absolutely impossible. That is, new types of organisms cannot evolve by random mutations. Moreover, more organisms have existed in the past than the present, so what we actually observe in the fossil record are extinctions, not evolution. The evidence for this is explored in more detail in the next chapter.





Chapter 5

The Fossil Record – Evidence for Extinction, Not Evolution

Today, one of the main reasons for many scientists believing in evolution is the existence of fossils of animals and plants in rocks that have been dated as being millions of years old. This position is presented in most biology textbooks. In this chapter we will examine the fossil evidence to see if it provides any evidence for evolution.

Fossils are the remains or imprints or molds of long dead plants and animals found preserved in some way, usually in rocks, amber, tar, or in below-freezing conditions. Sometimes animals have been entombed in lava. In a lava flow above Blue Lake in the state of Washington there is a detailed mold of the body of a rhinoceros that is so detailed that even the folds in the skin and the eyes can be recognized. The majority of fossils, however, are found in sedimentary rocks such as mudstone, limestone, sandstone, shale, and coal. These rocks have been laid down or formed by processes involving the action of water. Since plants and animals decay or rot relatively rapidly or may be eaten by scavengers, the preservation in most cases has to be by some quick process such as rapid burial, while they are still alive or very soon after dying. This process leaves molds or imprints of the organism. After the rock hardens, the organic organism usually

decomposes, dissolves, and leaches away. By making a plaster cast of the mold remaining in the rock, paleontologists can discern what the original animal or its shell or bone was like. In the case of footprints, trails, and burrows in soft surfaces such as sand or mud, which would quickly wash away or be disturbed by wind or other weathering processes, rapid hardening of the surface material by some process together with rapid burial is required.

Sometimes after bone or shell or wood is buried it turns to stone by the process of petrification. Minerals such as silica seeping underground fill microscopic voids in the bone or wood, sometimes also replacing the cell structures molecule by molecule. This eventually results in the original bone or wood turning to stone — the latter commonly being referred to as petrified wood. Under certain conditions, organic tissues such as cellulose (e.g., wood and leaf matter) or flesh, which are largely made of carbon, hydrogen, and oxygen, break down, leaving just a carbon residue on the rock surface, which paints as it were the original outline of the animal or leaf.

Fossils can include unaltered remains and bones. For example, extinct mammals such as the woolly mammoth have been found in ice or in the frozen ground of the Arctic. The Beresovka mammoth, found in eastern Siberia in 1901, had uneaten food in its mouth and clotted blood in its chest, indicating very rapid preservation. Entire carcasses of the extinct woolly rhinoceros have also been found in oil seeps in Poland.¹

The use of fossils to estimate the age of rocks was developed during the 17th to 19th centuries as part of the development of the science of stratigraphy. In 1669, a Danish physician by the name of Niels Stensen (or Nicolaus Steno) proposed that rock strata or rock layers are deposited sequentially, so that in an undisturbed sedimentary succession, each layer of rock is younger than the layer beneath it. This sequence may be overturned or inverted by subsequent earth movements. Thus, strata that are either perpendicular to the horizon or inclined to the horizon were at one time parallel to the horizon. Also, if some body of rock or discontinuity such as a fault cuts across a stratum or rock layer, it must have formed after that stratum was laid down. These stratigraphic laws have become basic principles that geologists use to determine the age relationships of rock layers.

Just over a century later, in 1799, a British geologist by the name of William Smith proposed that the sequences of strata could be correlated from one area to another. For example, the strata sequences in England

1. C.O. Dunbar, "Fossil," *McGraw-Hill Encyclopedia of Science and Technology* (New York: McGraw-Hill Book Company, 1960), Vol. 5, p. 473. See also, I.P. Tolmachoff, "The Carcasses of the Mammoth and Rhinoceros Found in the Frozen Ground of Siberia," *Transactions of the American Philosophical Society*, vol. 23 (1929): p. 11-74.

could be correlated with those in France by comparing the fossils in the individual layers. Smith had been working with a long sequence of formations of fossil rich alternating limestones and shales in the southern part of England. After collecting a large number of rock samples, he perceived that each of the rock layers or strata carried a unique assemblage of fossils that could be used to recognize a particular strata in any rock outcrop. What Smith proposed became known as the *law of faunal succession*. This law together with Steno's law of superposition of strata led to the conclusion that fossils in the lower strata are older than fossils in the higher layers.

Foundations for a new paradigm for the earth sciences were laid by Scottish geologist James Hutton, who in 1785 published a work called *Theory of the Earth* in which he presented his *principle of uniformitarianism*. Hutton proposed that the earth had been gradually changing over a very long period of time and was continuing to change in the same way. Thus the geological processes observed in the present could be used to explain the past.

Three decades later another British geologist, Charles Lyell, studied the fossils in the European Alps, and conceived the idea of dividing the geological rock layer system into groups characterized by the proportion of recent to extinct species of marine shells. Lyell had noticed that the fossils in the highest and hence more recent layers seemed to be more complex than the fossils in the lower older strata. This suggested to Lyell that the type of fossil could therefore be used to position the order of deposition of a particular group of rock layers relevant to rock layers in another location.

He proposed names for these groups that later became universally adopted by geologists: Eocene, meaning “dawn of recent”; Miocene, “less of recent”; and Pliocene, “more of recent.” He published a table of shells corresponding to the classifications. His idea of a correlation between the fossil content of the rock layers and geological time was first published in Lyell's 1830–1833 work *The Principles of Geology*. It pioneered the concept of the geologic column, which was developed further over the following decades by Lyell and other geologists. Lyell had adopted Hutton's uniformitarianism view and proposed that the rock layers had formed as a result of geological heat and pressure processes acting on sediments from the weathering of rocks that had accumulated slowly in river deltas, lakes, and seas. Lyell carried out his own observations to estimate the slow rates of geological processes and calculated the subsequent long ages for geological formations.

One of Lyell's most influential long age calculations, which was subsequently used to demolish scientific belief in the biblical Flood, was his calculation of the age of the Niagara Falls gorge. In Lyell's time, geology

at Oxford University was still taught in the context of the biblical Flood occurring about 4,500 years ago.² Archbishop James Ussher had calculated from the biblical record and then best-known dates for the rule of King Solomon that the worldwide Flood occurred around the year 2349 B.C.³

When Lyell visited the falls in 1841, he had been told by a local inhabitant that the falls retreat about three feet per year. However, Lyell assumed that this was an exaggerated claim and estimated that a recession rate of around one foot per year was more likely.⁴ Since the gorge was around 35,000 feet long, he calculated that it must be around 35,000 years old. This figure was widely accepted as an actual measurement and served as a “proof” in the minds of many scientists that the world must be much older than the dates calculated from the biblical account.⁵ It is revealing to note that the rate of one foot per year was based on a personal estimate or “conjecture” by Lyell and not on the basis of scientific measurement, yet it had a profound effect on the scientific worldview in terms of the acceptability of long ages for rocks and the fossil record. Subsequent measurements after 1841 showed that the rate of erosion was actually much faster at around four to five feet per year.⁶ For example, if Lyell had based his calculation on an actual measurement of five feet per year, he would have determined the age of the canyon as only 7,000 years, which would not have posed such a threat to biblical dating. In fact, if the rate was faster in the past such as when floodwaters were previously receding, an even shorter age becomes very acceptable.

Given that we do not actually “know” what the recession rates were prior to the 18th century (indeed they may have been much faster at times and slower at other times), we cannot actually “know” the age of the canyon by this method. In fact, the current official government of Ontario position on the age of the falls is that they are 12,500 years old. However, this figure is not calculated from erosion rates but comes from general age estimates based on theories of glacial activity in the area during a past ice age, which also suggest that the water flow over the falls has varied substantially over time.⁷

2. I.T. Taylor, *In the Minds of Men* (Toronto, Canada: TFE Publishing, 1984), p. 66.

3. James Ussher, *The Annals of the World*, 1658, revised and updated by L. Pierce and M. Pierce (Green Forest, AR: Master Books, 2003), p. 22.

4. C. Lyell, *Principles of Geology*, tenth edition (London: John Murray, 1867), Vol. 1, p. 361.

5. Taylor, *In the Minds of Men*, p. 82–83.

6. W.M. Tovell, *The Niagara River* (Toronto, Canada: Royal Ontario Museum Publication, 1979), p. 16.

7. See <http://www.niagaraparks.com/media/geology-facts-figures.html>.

Even though Lyell had no actual proven scientific evidence for his long ages, his theories about the age of rocks continued to gain wide acceptance. On the basis of measured current rates of erosion of rocks and the accumulation of alluvial sediments, Lyell estimated the rate at which the different rock strata possibly formed. By measuring the thickness of the strata, the period of time corresponding to the individual rock layers or strata could be calculated. Because Lyell had observed that there were sedimentary strata thousands of meters thick that contained millions of fine layers, Lyell came to the conclusion that the lower strata must have been formed millions of years earlier. It followed that the fossils in these layers must also be millions of years old.

Using this methodology, it was possible to estimate the individual time periods for various particular fossil strata corresponding to the different sections of the “geological column.” By adding up these time periods, the total age of the rocks in the different sections of the “column” could be calculated. Thus, particular fossils could be assigned to particular time periods and subsequently used to date rocks that contained those particular fauna.

No single region contains a complete record of geological time, although the layers of the Grand Canyon, for example, display rock layers that in terms of conventional geological time would correspond to hundreds of millions of years of the geologic column. However, since parts of the geological record occur all over the world, the part of the record that is preserved in one region is compared with the record in another region. Any partially overlapping pattern of sequences — for example, multiple alternate layers of limestone and shale with similar fossils — could be used to establish a correspondence between the two sections of the record. In this way the geologic column has been built up by the collaboration of geologists throughout the world.

The corresponding geologic time scale was calculated on the basis of the measured total thickness of sedimentary rock and assumed rates of erosion and sedimentation based on the assumption of uniformitarianism — that is, it was assumed that these rates have remained essentially constant over hundreds of millions of years. Until the development of radiometric dating, which is discussed in more detail in a later chapter, the estimates of geological time varied by as much as a factor of ten.⁸

The present-day geologic time scale assumes that the earth is 4.5 billion years old and divides this time period into eons, eras, periods, and epochs.

8. J.L. Kulp, “Geological Time Scale,” *McGraw-Hill Encyclopedia of Science and Technology*, Vol. 6, p. 135.

The Precambrian Eon dates from 4,500 million years (m.y.) to 542 m.y.
The Phanerozoic dates from 542 m.y. to present.

The Phanerozoic is divided into three eras:

- Paleozoic Era dates from 542 m.y. to 251 m.y., which in turn is divided into seven periods:
 1. Cambrian 542 m.y.–488 m.y.
 2. Ordovician 488 m.y.–444 m.y.
 3. Silurian 444 m.y.–416 m.y.
 4. Devonian 416 m.y.–359 m.y.
 5. Mississippian 359 m.y.–318 m.y.
 6. Pennsylvanian 318 m.y.–299 m.y.
 7. Permian 299 m.y.–251 m.y.
- Mesozoic Era dates from 251 m.y. to 65.5 m.y., which in turn is divided into three periods:
 1. Triassic 251 m.y.–199.6 m.y.
 2. Jurassic 199.6 m.y.–145.5 m.y.
 3. Cretaceous 145.5 m.y.–65.5 m.y.
- Cenozoic Era dates from 65.5 million years to the present, which in turn is divided into two periods:
 1. Tertiary 65.5 m.y.–1.8 m.y., which is divided into five epochs:
Paleocene, Eocene, Oligocene, Miocene and Pliocene
 2. Quaternary 1.8 m.y.–present, which is divided into two epochs: Pleistocene and Holocene⁹

This new geology paradigm is based on unproven radiometric dating results, together with the assumptions of uniformitarianism and hundreds of millions of years' time periods for life on earth. The often-asserted observation that fossils in the oldest rocks seemed to be less complex biologically than the fossils in the younger rocks, in conjunction with an expanded "scientific" time frame for the history of the earth, served as a suitable foundation for the development of the theory of evolution. Consequently, most university texts now cite the fossil record as the evidence that evolution has occurred.¹⁰ So let us now examine the scientific evidence from the fossil record in more detail.

9. E.J. Tarbuck and F.K. Lutgens, *Earth Science*, 12th edition (Upper Saddle River, NJ: Pearson Education, International, 2009), p. 10, 328.

10. See, for example, E.P. Solomon, L.R. Berg, and D.W. Martin, *Biology*, seventh edition (Belmont, CA: Thomson Brooks/Cole, 2005), p. 389–401.

Firstly, it is important to note that virtually all the fossils used as evidence for evolution have been found in sedimentary rocks. That is, fossils are mainly found in rocks that formed under water.

Secondly, these rocks are found all over the world. This means water deposition of these rocks was occurring regularly everywhere for supposedly hundreds of millions of years, burying millions upon millions of animals and plants.

Thirdly, for the fossilization process to occur, these plants and animals had to be buried rapidly so that they would not rot or decay, or be eaten or break up under weathering conditions. Many of the animals are more than a few millimeters in size — and require large amounts of rapid sediment to bury them, as do especially large fish and whales and dinosaurs. In other words, fossils usually would only form under what we would call catastrophic conditions. It would actually be very difficult for fossils to form under slow uniformitarian conditions where a few millimeters of sediment are being deposited slowly. Uniformitarianism assumes conditions in the past like the present. But we do not observe large numbers of plants and animals being fossilized under present conditions.

Fourthly, the fossil record shows that a huge number of different types of plants and animals existed in the past that no longer exist today. In fact, as we have already discussed in a previous chapter, it has been estimated on the basis of the fossil record that 98 to 99 percent of the different types of species that once existed are now extinct. In other words, the fossil record is evidence of a much larger variety of plants and animals existing in the past that are now extinct. So the fossil record is a record of the extinction of preexisting life forms.

Over the past 2,000 years, scientific observations have been recorded. We do not see footprints left on sandy beaches being fossilized. Nor do we find evidence of recent fossilization of starfish, crabs, seaweeds, or washed-up dead sea birds occurring around our seashores or river deltas. Nor have the recent massive floods in Queensland, Australia, for example, which covered an area estimated to be the size of the state of New South Wales, led to the first stage of fossilization of thousands of kangaroos, lizards, or other animals. We have not read in our newspapers of reports of natural events that have fossilized thousands of penguins or polar bears or whales or locusts or fish or rabbits. Nor did the prairie killing to near extinction of thousands of bison (American buffalo) for sport in North America during the 19th century result in the formation of large numbers of bison fossils. In other words, we do not observe fossils forming in the conditions that

produce the regular annual alluvial deposits we see today, which presumably correspond to conditions that Lyell assumed for his calculations of great ages. The existence of massive fossil beds that contain remains of large animals and fish indicates that catastrophic processes occurred in the past, and that we cannot use the uniformitarian assumptions to calculate the age of fossils and life on earth.

For example, there are many huge fossil beds, some thousands of feet thick, containing thousands and millions of fossil organisms. The most likely explanation is that these fossil deposits must have formed under massive catastrophic conditions, involving processes on an enormously much larger scale than anything we have observed happening on earth during the last several thousand years.

University of Sydney-educated research geologist Dr. Andrew Snelling describes a number of examples of massive fossil graveyards that illustrate the scale and magnitude of the fossilization processes of the past.¹¹ For example, extensive fossil graveyards are found in the Morrison Formation and its equivalents that stretch from New Mexico in the south to Canada in the north, over an area of 579,150 square miles (1.5 million square km). This formation consists of layers of limestone, mudstone, siltstone, and sandstone, with the latter conglomeratic layers containing abundant dinosaur remains, including relatively pristine, semi-articulated skeletal segments. Fossil remains of many different types of dinosaurs have been found, including the well-known stegosaurs and the giant sauropod dinosaurs that grew up to 98 feet (30 meters) or more in length. Imagine the catastrophic conditions that must have wiped out and buried these giant animals. Furthermore, buried with the dinosaurs remains are fossils of fish, frogs, salamanders, lizards, crocodiles, turtles, crayfish, and clams, as well as pterosaurs, the flying lizards often referred to as pterodactyls. These massive fossil beds tell us that the same types of animals that exist today existed in the past with animals like the dinosaurs, which are now extinct.

An important point to note with regard to this extensive fossil graveyard is that giant land-dwelling dinosaurs, as well as water-dwelling animals, were buried in a massive conglomeratic sandstone formation deposited by rapidly moving water.¹²

Another spectacular fossil dinosaur graveyard has been found in the Nemegt Basin of Mongolia, where hundreds of well-preserved articulated

11. A.A. Snelling, *Earth's Catastrophic Past* (Dallas TX: Institute for Creation Research, 2009), Vol. 2, p. 487–577.

12. Ibid., p. 571.

skeletons of dinosaurs have been found buried together with skeletons of mammals, lizards, and birds. Many of the skulls are virtually complete with the lower jaws still joined, that is, in articulation, and even ear parts are well preserved.

In the Cedarberg Mountains of South Africa, the Soom Shale formation contains thousands of exceptionally well-preserved fossils of brachiopods, nautiloids, arthropods, and conodonts in locations spread over hundreds of miles. These fossils are so well preserved that the sensory organs, walking appendages, fibrous muscular masses, and even gill tracts of the arthropods (shrimp-like animals) are remarkably preserved, as are the complete feeding apparatuses of the conodonts.

The Cow Branch formation of shales that occurs in the Virginia-North Carolina border area of the United States contains an abundance of complete insect fossils. There are also fossils that have preserved the shape of the soft parts of backboned animals, and many articulated specimens of aquatic reptiles have been fossilized, complete with outline of the muscles on the tail and ligaments in the webbed hind feet. There is a mixture of terrestrial, freshwater, and seawater organisms buried together and fossilized in a highly preserved state. As Dr. Snelling points out, these shale fossil deposits are consistent with catastrophic deposition and burial, as insects do not simply die, fall into a body of water, and sink with dying fish to be gradually covered up by slowly accumulating sediments.¹³

One of the most spectacular examples of the massive size of the catastrophic conditions that prevailed on the earth leading to the extensive destruction of life and its subsequent burial and fossilization are the chalk beds assigned to the Cretaceous period in the geological column. These beds, which include the famous White Cliffs of Dover, stretch from Ireland across Europe to Turkey, Egypt, and Israel, and are also found in parts of the United States such as Texas and Kansas, and on the coast of Western Australia. This is a global distribution of uniform beds of chalk up to 328 feet (100 meters) or more thick made up of countless microscopic remains of coccolithophores and other tiny creatures. It also contains fossils of other larger marine creatures such as gastropods, ammonites, and extinct squids known as belemnites.

The eminent United States Geological Survey geologist and paleontologist Dr. William A. Cobban notes that the deposition of massive chalk deposits across the world corresponds to “the time of the greatest flooding of the earth’s surface,” and that the close of this period was marked “by the

13. Ibid., p. 543–544.

extinction of the dinosaurs, flying reptiles, and huge marine reptiles, as well as the ammonites and certain other groups of marine mollusks.”¹⁴ In fact, the fossil record is a record of mass extinctions under marine conditions. As Dr. John Avise and coworkers from the Department of Ecology and Evolutionary Biology at the University of California point out, the fossil record shows that there were massive extinctions at the end of the Ordovician period, and during the Devonian, Permian, Triassic, and the Cretaceous periods.¹⁵

Therefore, the strata or fossil beds corresponding to these geological periods represent a massive burial of animals so catastrophic that it permanently removed to extinction large numbers of species of animals. A summary of the effects of these extinctions can be found, for example, on the Ottawa-Carleton Geoscience Centre website.¹⁶

The extinction assigned to the near end of the Ordovician period resulted in the disappearance of one-third of all brachiopod and bryozoan families, as well as numerous groups of conodonts, trilobites, and graptolites. In total, more than 100 families of marine invertebrates, as well as much of the reef-building fauna, were destroyed.

The extinction assigned to the latter part of the Devonian period affected 70 percent of marine invertebrates, including reef-building organisms. More extinctions also occurred among the brachiopods, trilobites, and conodonts, as well as jawless fish and placoderms.

The so-called Permian mass extinction is the greatest mass extinction evident in the fossil record, with 90 to 95 percent of marine species being eliminated. Those fauna wiped out included fusulinid foraminifera, trilobites, fugose and tabulate corals, blastoids, acanthodians, placoderms, and pelycosaurs. Other groups of organisms that lost substantial numbers of species included bryozoans, brachiopods, ammonoids, sharks, bony fish, crinoids, eurypterids, ostracodes, and echinoderms.

The second largest extinction is assigned to the end of the Cretaceous period, as mentioned above. This mass extinction has generated more than usual public interest mainly because the dinosaurs became extinct in the fossil record at this time. Other types of organisms that were wiped out during this catastrophic event include the pterosaurs, the vast majority of

14. W.A. Cobban, “Cretaceous,” *McGraw-Hill Encyclopedia of Science and Technology*, Vol. 3, p. 542.

15. J.C. Avise, S.P. Hubbell, and F.J. Ayala, “In the Light of Evolution II: Biodiversity and Extinction,” *Proceedings of the National Academy of Sciences of the USA*, vol. 105, suppl. 2008, p. 11453–11457. See: <http://www.pnas.org/content/105/suppl.1/11453>.

16. <http://park.org/Canada/Museum/extinction/extincmenu.html>.

birds, belemnoids, ammonoids, marine reptiles, and rudist bivalves, as well as many species of plants.

Geologists conventionally date these water-based extinctions as occurring millions of years apart on the basis of the assumed uniformitarian time scale. But as we have noted, if these worldwide mass extinctions and burials only occur under catastrophic marine conditions, the rock formations must have formed in a very short period of time — days and weeks — like after the Mount St. Helens eruption of May 18, 1980. After the eruption, flows of hot gas and pumice fragments moving at an estimated 93 miles (150 kilometers) per hour produced laminated strata of the form that would normally be interpreted by geologists as taking many thousands of years to form, but which actually formed in just a few hours. For example, a 65-foot (20-meter) thick bed of multiple strata was deposited during a single evening on June 12, 1980. Two years later, on March 19, 1982, a small eruption melted snow within the crater and displaced water which formed a 20-mile (32-kilometer) long mudflow, cutting a new 140-foot (43-meter) deep canyon through solid rock where there had been no canyon. Thus geologists were able to observe a miniature Grand Canyon form in a single day under catastrophic conditions.¹⁷

When we examine the fossil record we see the evidence of catastrophe on a much, much larger scale — a scale that involved marine and volcanic catastrophes throughout the world. In other words, the fossil evidence suggests that all these animals were wiped out in one enormous worldwide flood event — not half a dozen worldwide floods millions of years apart, or thousands of local floods occurring every ten million years or so. The rock formations that formed after the Mount St. Helens eruption clearly prove that the uniformitarianism assumption cannot be used to calculate the ages of the rocks. These must be, in fact, very much younger than the millions of years conventionally assigned to them. Once we move away from the assumed uniformitarianism paradigm, the fossil record becomes clear evidence for a global catastrophic flood that wiped out the living flora and fauna on earth.

Scientists holding to long ages for the geological column continue to try to work out what sort of geological or environment mechanisms were responsible for the mass extinction of animals in the past.¹⁸ But recent fossil finds of more than 3,000 dinosaur footprints ranging in length from 4 to 32 inches (10 to 80 cm), including those of tyrannosaurs, coelurosaurs, and

17. John Morris and Steven A. Austin, *Footprints in the Ash: The Explosive Story of Mount St. Helens* (Green Forest, AR: Master Books, 2005), p. 52–53, 62, 74–76.

18. R.K. Bambach, “Phanerozoic Biodiversity Mass Extinctions,” *Annual Review of Earth and Planetary Sciences*, vol. 34 (2006): p. 127–155.

hadrosaurs (duck-billed dinosaurs), all facing the same way, strongly suggest these animals were fleeing some catastrophe.¹⁹ Other fossils on display in museums, such as that of an ichthyosaur (an extinct marine reptile) giving birth (Stuttgart Museum fur Naturkunde) or a perch fish swallowing a herring (Princeton Museum of Natural History), are clear indicators of very rapid burial and fossilization.²⁰

In 2005, Dr. Mary Schweitzer, associate professor of marine, earth, and atmospheric sciences at North Carolina State University and also at the N.C. Museum of Natural History, and coworkers reported finding exceptionally well-preserved sauropod dinosaur eggshells at a site in Argentina. The researchers suggest that since the soft tissue of embryos in an egg breaks down very quickly after death, the rate of mineralization must have been “virtually instantaneous” to preserve and fossilize the soft tissues.²¹

In other words, what the fossil record tells us is that all over the surface of the earth we have layers of rock that were laid down very rapidly under massive water flows, trapping and burying untold numbers of plants and animals, which ultimately resulted in the extinction of 98 to 99 percent of the different types of species. Simple organisms to large creatures were fossilized. Because very rapid conditions are required to produce these enormous fossil beds, these formations must be very, very much younger than the geologic column ages — probably only thousands of years old.

This interpretation of a relatively recent age for fossils is further supported by the finding of proteins, DNA, and soft tissue such as cartilage, surviving in dinosaur fossils. These biomolecules break down naturally fairly rapidly in the environment and cannot survive for millions of years. For example, based on current research observations, if the average rock temperature was 10°C, DNA would not be detectable after 20,000 years. If the average temperature was 20°C, the DNA would have completely broken down and not be detectable after about 2,500 years, and collagen would not be detectable after 20,000 years.²²

Yet, in 1990, scientists from the University of California reported extracting DNA from fossil leaf samples found in rocks from the Clarkia fossil beds of Idaho. According to the geologic column, these beds are from

19. <http://news.bbc.co.uk/2/hi/science/nature/8502076.stm>.

20. I.T. Taylor, *In the Minds of Men* (Toronto, Canada: TFE Publishing, 1984), p. 88–89.

21. M.H. Schweitzer, L. Chiappe, A.C. Garrido, et al., “Molecular Preservation in Late Cretaceous Sauropod Dinosaur Eggshells,” *Proceedings of the Royal Society B: Biological Sciences*, vol. 272, 2005, p. 775–784.

22. C. Nielsen-Marsch, “Biomolecules in Fossil Remains, Multidisciplinary Approach to Endurance,” *The Biochemist* (June 2002): p. 12–14.

the Miocene period and dated as being 17–20 million years old.²³ Since this first discovery, other scientists have confirmed the existence of recoverable DNA sequences in leaf fossils from the Clarkia beds.²⁴ However, because DNA fragments could be recovered, the rocks of the fossil beds can only be thousands of years old!

In 1991, scientists at the life sciences division of the Los Alamos National Laboratory in New Mexico extracted proteins from the fossil backbone of a sauropod dinosaur (*Seismosaurus*). It had just been excavated from the Morrison Formation in New Mexico, which, according to the geological column dating is 150 million years old.²⁵

In 1997, Dr. Mary Schweitzer and coworkers from Montana State University reported finding a piece of *Tyrannosaurus rex* bone containing red blood cells with hemoglobin.²⁶ Following this controversial find, Schweitzer and coworkers began looking for more examples of soft tissue in dinosaur specimens and found elastic flexible tissues within the hind limb of another *Tyrannosaurus rex* skeleton. Their discovery included flexible bone matrix, hollow and pliable blood vessels, and material like blood and bone cells. The researchers concluded that unfossilized soft tissue remains were definitely present in the dinosaur limb.²⁷

Meanwhile, other researchers also began looking for evidence of surviving soft tissue in remains of dinosaurs. Protein-like material was subsequently found in the bones of an Iguanodon dinosaur, conventionally dated as 120 million years old, that is, around twice the supposed age of the *Tyrannosaurus rex* remains. The recovered organic material was still able to induce an antibody response to the protein.²⁸

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- 23. E.M. Golenberg, D.E. Giannasi, M.T. Clegg, et al., *Letters to Nature*, vol. 344 (April 12, 1990): p. 656–658.
 - 24. S. Kim, D.E. Soltis, P.S. Soltis, and Y. Suh, “DNA Sequences from Miocene Fossils: An NDHF Sequence and an RBCL Sequence of *Persea Pseudocarolinesis* (Lauraceae),” *American Journal of Botany*, vol. 9 (2004): p. 615–620.
 - 25. L.R. Gurley, J.G. Valdez, W.D. Spall, et al., “Proteins in the Fossil Bone of the Dinosaur, *Seismosaurus*,” *Journal of Protein Chemistry*, vol. 10 (February 1991): p.75–90.
 - 26. M.H. Schweitzer, M. Marshall, K. Carron, et al., “Heme Compounds in Dinosaur Trabecular Bone,” *Proceedings of the National Academy of Sciences of the USA*, vol. 94, 1997, p. 6291–6296.
 - 27. M.H. Schweitzer, J.L. Wittmeyer, J.R. Horner, and J.K. Toporski, “Soft-Tissue Vessels and Cellular Preservation in *Tyrannosaurus rex*,” *Science*, vol. 307 (2005): p. 1952–1955; and M.H. Schweitzer, J.L. Wittmeyer, and J.R. Horner, “Soft Tissue and Cellular Preservation in Vertebrate Skeletal Elements from the Cretaceous to the Present,” *Proceedings of the Royal Society B*, vol. 274, 2007, p. 183–197.
 - 28. G. Embry, A.C. Milner, R.J. Waddington, et al., “Identification of Proteinaceous Material in the Bone of the Dinosaur Iguanodon,” *Connect Tissue Res*, vol. 44, suppl. 1 (2003): p. 41–46.

The discovery of these examples of preserved soft tissues throws serious doubt on the supposed tens of millions of years for the age of these fossils. This is because the current experimental knowledge that we have about the stability of biological material indicates that it could not possibly survive for millions of years without breaking down. In fact, realizing this, some scientists have attempted to dispute the findings. However, in 2009 very strong evidence that the millions of years ages for the geological column are wrong was published in the May 1 issue of the prestigious American journal *Science*. Scientists from North Carolina State University had gone looking for a sample of dinosaur fossil that had been preserved rapidly by burial deep under sandstone. They found such a fossil under 23 feet (7 meters) of rock in the Judith River Formation in eastern Montana, and recovered the femur from a duck-billed dinosaur, *Brachylophosaurus canadensis*. Analysis of the leg bone revealed soft tissues and soft bone matter from which collagen proteins and bone cells were isolated, and parts of DNA sequences were identified. Because previously published papers reporting soft tissues in *Tyrannosaurus rex* fossils had been controversial, all results in this recent study were independently verified by researchers at the Beth Israel Deaconess Medical Center, Harvard University, and Montana State University.²⁹

This finding of soft tissue in a dinosaur fossil from rocks dated at 80 million years old in terms of the geologic time scale is first-class evidence that the rocks and fossils of the geological column cannot be millions of years old. It is also evidence that evolution has not occurred.

More evidence that evolution has not occurred comes from the sudden appearance of new types of animals in the fossil record, without evidence of evolutionary intermediate species. For example, in Precambrian rocks, which are assigned as being more than 540 million years old, we find very few types of organisms — just fossils believed to be of bacteria and algae. But when we come to the rocks of the late Precambrian assigned around 600 m.y., we suddenly find fossils of jellyfish, corals, and anemones — similar to species that survive today. These animals have very different genetic information to algae, yet there is no evidence of intermediate species in the rocks lower down, showing there is no evidence of their evolution. Even more outstanding is the sudden appearance of fossils of a little segmented animal about three inches (seven centimeters) long, with a head and legs, called spriggina, which are found in late Precambrian dated rocks in Australia, Africa, and

29. M.H. Schweitzer, W. Zheng, C.L. Organ, et al., “Biomolecular Characterisation and Protein Sequences of the Campanian Hadrosaur B. *Canadensis*,” *Science*, vol. 324 (May 1, 2009): p. 626–631.

Russia.³⁰ The amount of new genetic information to encode for a head and tail and multiple body segments is enormous. There is no fossil evidence of intermediate organisms with partly developed bodies, and no known explanation for how such massive amounts of new genetic information could arise in such a relatively short period of geologic time.

Then bordering right on the late Precambrian are the Cambrian rocks, which contain fossils of fully formed highly genetically diverse animals, yet without any fossils of the evolutionary intermediates. For example, in the Cambrian rocks we find fossils of segmented worms, snails, shellfish, sea urchins, conodonts, nautiluses, and trilobites. Trilobites, for example, have eyes and segmented legs. The amount of new genetic information to produce eyes with all the details, components, and focusing mechanisms, as well as legs with all their mechanical and nerve parts, is enormous. Yet there is no fossil evidence of animals with partly developed eyes or legs. The fully formed animals just suddenly appear, and fossils of trilobites in particular are quite common in Cambrian rocks.³¹

According to the theory of evolution, highly complex animals such as trilobites and nautiloids must have evolved over very long periods of time. Yet there is no evidence of their evolution. In Norway, under the lower Cambrian trilobites, there is 4,000 feet of strata that contain no fossils. In Morocco, under the lower Cambrian trilobites, there are 3,000 feet of strata containing archaeocyathid (reef-building organisms) fossils, and under this strata there is as much as 10,000 feet of limestone that contain only stromatolites, that is, fossils of algae. In the Inyo Mountains of California there are strata more than 14,000 feet thick that contain fossils of trilobites and archaeocyathids. Then under this formation is 7,000 feet of unfossiliferous strata. Professor W. Charles Bell, former professor of geology at the University of Texas, points out that similar patterns of thousands of feet of non-fossil-containing strata immediately underlying Cambrian-trilobite-containing strata also occur in Australia and Eastern Asia.³² In other words, in thousands of meters of conformable strata we find no evidence of evolution — just the sudden appearance of fully formed complex animals. Professor Bell further points out that the Cambrian fossil record contains representatives of every important invertebrate animal phylum suddenly appearing with no fossil evidence of evolution.³³

30. C. Walker and D. Ward, *Smithsonian Handbooks: Fossils* (New York: Dorling Kindersley, 2002), p. 44.

31. Ibid., p. 56–65; see also: <http://www.palaeos.com/Invertebrates/Molluscs/Mollusca.htm>.

32. W.C. Bell, “Cambrian,” *McGraw-Hill Encyclopedia of Science and Technology*, Vol. 2, p. 425.

33. Ibid., p. 426.

This fossil record shows a sudden huge increase in the diversity and complexity of genetic information. Consider the Cambrian nautiloids, for example. These animals belong to the Cephalopoda group of intelligent predator mollusks, which include squids, octopus, and cuttlefish. Paleontologists from the Swedish Museum of Natural History have found nautiloids in Cambrian rocks that had a better and more sophisticated design of jet propulsion system than nautiloids found in rocks deemed to be millions of years later in the evolutionary time scale.³⁴ Thus, what the fossil record reveals is highly sophisticated fully developed life forms, even in the deepest fossil-containing rocks.

It is also significant that nautilus species still exist today, as do many other animal groups found in the fossil record. This highlights the point that while we observe organisms becoming extinct at the present time, and that the fossil record shows extinctions in the past, we also observe that organisms reproduce the same organism. In other words, the organisms that don't become extinct continue on the same. The fossil record tells the same story. Fossil sea pens found in Precambrian rocks replicate the sea pens found living today on the ocean floor. The fossil coelacanth fish found in the cretaceous strata are the same as the coelacanth fish found living in the Indian Ocean today. In fact, many of the fossils of starfish, shrimp and lobsters, horseshoe crabs, dragonflies, water bugs, fish, rays, many different types of sharks, salamanders, frogs, alligators, crocodiles, lizards, turtles, birds, and mammals found in the same rock strata in which we find the dinosaur fossils look virtually the same as their modern counterparts living today.³⁵

In other words, the fossil record shows that all these animals continued to produce the same type of offspring and the species have continued on unchanged to the present time. From this, it is evident that evolution has not occurred.

Further fossil evidence that evolution has not happened comes from studies of ancient DNA that show that diversity in DNA was much greater in the past. This means there is fossil evidence that we are losing genetic information, not evolving it. For example, Professor Alan Cooper at the Australian Centre for Ancient DNA found from the study of bones of ancient horse species that the extinct giant Cape zebra was simply a large

34. H. Mutvei, Y-B. Zhang, and E. Dunca, "Late Cambrian Plectronocerid Nautiloids and Their Role in Cephalopod Evolution," *Palaeontology*, vol. 50, no. 6 (2007): p. 1327–1333.

35. Carl Werner, *Living Fossils — Evolution: The Grand Experiment*, Vol. 2, (Green Forest, AR: New Leaf Press, 2008). This work contains an extensive collection of photographs of fossils from the dinosaur era together with their living forms.

variant of the modern Plains zebra. In a recent press release, Professor Cooper commented, “Ancient DNA studies have revealed that the loss of genetic diversity in many surviving species appears to have been extremely severe.” He also said, “Overall, the new genetic results suggest that we have underestimated how much a single species can vary over time and space, and mistakenly assumed more diversity among extinct species of megafauna.”³⁶

In other words, some of the so-called evolution reported in the literature has simply been the result of the loss of preexisting genetic information — not new genetic information arising somehow by chance.

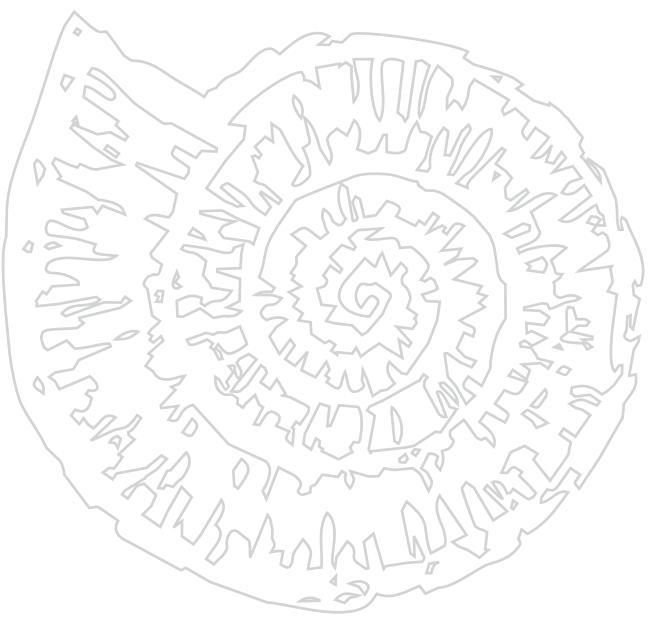
Thus, the fossil record provides no direct evidence for evolution. Rather, fossils and the sedimentary layers that contain them provide evidence for a catastrophic global flood that wiped out preexisting life.

The evolutionary model relies heavily on long ages with gradual slow changes over long periods of time. These long time periods are supported by radiometric dating results. However, the finding of rapidly deteriorating soft tissues and DNA in dinosaur and other fossils seriously questions the validity of the millions of years of the radiometric dates assigned to these organisms. Furthermore, in a following chapter I will point out that these dating methods have very serious interpretation problems and cannot be relied upon to give the actual age of a rock.

The evolutionary model also assumes that genetic information gradually built up over long periods of time. However, the fossil record shows that massive amounts of complex genetic information suddenly appears in the fossil record with no evidence of incremental developmental genetic information. Furthermore, much larger amounts of genetic information existed in the past than exists today, and the fossil record shows the catastrophic destruction of huge amounts of this genetic information as a result of massive scale water movements and subsequent rapid burial under water-borne sediments.

The fossil evidence that we have observed to date refutes the long-age uniformitarian model and powerfully supports the biblical and other catastrophic Flood narratives preserved in ancient traditions around the world. More fossil evidence that evolution has not occurred is discussed in the following chapter.

36. University of Adelaide press release, December 10, 2009; see <http://www.adelaide.edu.au/news/news37301.html>.



Chapter 6

The Missing Fossils of Evolutionary Intermediates – Evidence That Evolution Never Occurred

One of the important claims of the proponents of evolution is that the fossil record provides perhaps the most direct and extensive evidence documenting the occurrence of evolution.¹ We are told that there are preserved remains of organisms that demonstrate the intermediate steps showing genetically simple ancient life forms slowly changing over time to form an increasing number of genetically more complex or genetically different organisms. For example, Dr. Richard Dawkins, in his latest book on the evidence for evolution, describes the evolutionary scenario that all life originated in the sea, then at various stages sea creatures evolved into land creatures, which eventually evolved into the reptiles, insects, birds, and mammals we see today. He claims, “Fortunately, the transitional stages of our exodus, as fish emerged on to the land, are beautifully documented in

1. E.P. Solomon, L.R. Berg, and D.W. Martin, *Biology*, 7th edition (Belmont, CA: Thomson Brooks/Cole, 2005), p. 339; see also National Academy of Sciences and Institute of Medicine, *Science, Evolution and Creationism* (Washington, DC: National Academy Press, 2008), p. 22–25.

the fossil record.”² But are they, really? Let us consider the fossil evidence more closely.

The current university text *Evolution* reminds us that evolutionary processes are based on mutations, and that the key processes in evolution involve random genetic drift, the flow of genes from one place to another, and natural selection.³ For a fish-type creature with gills and fins to evolve into a land-dwelling vertebrate (backbone)-type creature with lungs, legs, and feet and a weight-bearing shoulder and pelvic structure requires an enormous amount of new purposeful genetic information to be formed by chance mutations. That is, when the gamete cells of a male and female fish combine to form a new living fish embryo, that embryo has to have DNA carrying new extra genetic information that will produce a small mutation, giving it an advantage in survival. This is an essential requirement for progression toward the development of lungs or feet and so on. As we have noted in earlier chapters, not only is there no known mechanism for producing new meaningful genetic information, but also it has never been observed to occur.

Now the change from gills to lungs involves an enormous amount of new genetic code in the form of thousands and thousands of new information-encoding nucleotide bases. These new genes not only have to somehow be formed by mutations, but these random chemical events have to somehow fortuitously accumulate over time to eventually produce the first working lung. The evolution from gills has to involve genetic code for new physical structures and body cavities, new membranes, new muscles, new blood vessels, new nervous system pathways, and new blood chemistry with its associated new molecules and their required new enzyme pathways. The new code needed to produce these molecules is so complex that the best teams of scientists cannot write new code. In other words, the smartest human minds today could not write a code to produce a new type of working lung in a fish.

Simultaneously, in order for the evolved lungs to be put to advantage and to enable the creature to leave the sea and move about on land, the first weight-bearing pelvic structure and legs and feet have to evolve. This requires even more new genetic code to form as small step mutations of new code in each successive mutated embryo. Consequently, millions of random, undirected processes have to produce totally new combinations of millions of nucleotide bases that will encode for new bone structures, new

2. Richard Dawkins, *The Greatest Show on Earth: The Evidence for Evolution* (London: Bantam Press, 2009), p. 161.

3. N.H. Barton, D.E.G. Briggs, J.A. Eisen, and N.H. Patel, *Evolution* (Cold Spring Harbour, NY: Cold Spring Harbour Laboratory Press, 2007).

joints, new muscles, tendons, ligaments, blood vessels, nerve pathways, and connections in the brain to be able to control these new appendages.

The usual evolutionary explanation for the rise of amphibians with legs indicates that fish who could use their fins to drag themselves from one swamp to another or from a drying up lake to another deeper one could survive droughts better and so on.⁴ It is proposed that a series of fin mutations eventually produced fins that could enable the fish to propel itself along the ground and that further mutations over time developed leg and foot bones that could support the weight of the body of a fish. These sorts of mutations are not observed in fish today, and environmental changes and physical activity do not generate new genetic codes. Physical factors can up or down regulate existing genes, but they cannot produce the new genetic code to grow the new bones. Also, since the amount of new code required to produce the new bone structures and associated limb anatomy changes is very large and the evolutionary model says that this change occurred in many small steps, we should expect to find much fossil evidence of these small changes called transitional forms in the fossil-bearing strata. However, these theoretical transitional fossils have not been found, and even evolutionists admit that the absence of fossilized fish gradually becoming amphibians is a conspicuous gap in the fossil record.⁵

Also, some of the transitions should be easy to spot in the fossils we find. For example, in bony skeleton fish, the head and shoulder girdle constitute a single mechanical unit that is firmly attached to the vertebral column. However, in amphibians the head is not connected to the shoulder girdle, which allows easier feeding and movement on land. Despite many fish and amphibian fossil finds, no fossil evidence of the incremental detachment of the head from the shoulder girdle has been found.⁶

Sometimes it is claimed that the extinct amphibian *Ichthyostega* is an example of a transitional species between fish and amphibian vertebrate.⁷ As I have mentioned, fish and amphibians are very different in their bone structures and many other features. *Ichthyostega* has some bone structures similar to an extinct type of bony skeleton fish called *Eusthenopteron*. But whereas these fish have fins with small bones embedded in muscle with no attachment to the backbone, the *Ichthyostega* has distinct feet and legs with its

4. Dawkins, *The Greatest Show on Earth*, p. 165.

5. Ibid., p. 164.

6. P. Garner, “The Fossil Record of ‘Early’ Tetrapods: Evidence of a Major Evolutionary Transition?” *Journal of Creation*, vol. 17, no. 2 (2003): p. 111–117; see also, www.creation.com/tetrapod.

7. Dawkins, *The Greatest Show on Earth*, p. 166–168.

pelvic bones attached to the backbone. Also, it has a different shaped head and a long tail compared to the fish species. In fact, *Ichthyostega* is fully an amphibian vertebrate, not an intermediate transitional mutant.

When we look for transitional fossils leading to the development of fish, they also are missing. Writing about the class of fish *Osteichthyes* that have bony skeletons and are supposed to be the ancestors of the amphibians, Dr. Reeve M. Bailey, professor of zoology at the University of Michigan, points out that they suddenly appear fully formed in the Middle Devonian strata. He goes on to write, “It seems clear then that the history [evolutionary ancestry] of the group extends further back than the fossil record thus far reveals.”⁸

The sudden appearance of fully formed species in the fossil record without apparent evolutionary ancestors and mutant intermediate species is a major problem for evolutionists. For example, Dr. David M. Raup, curator of geology at the Field Museum of Natural History in Chicago, and past president of the Paleontological Society, observes that present-day geologists do not actually find the gradual unfolding of life in the geological record. Instead they find species appearing in the geological sequences very suddenly, showing little or no change during their existence in the geological record, and then they are no longer found.⁹

What Dr. Raup is reporting is that geologists find fossils preserved in the rocks of the past, which do not change in form across the successive rock strata. They do not show signs of evolution up the rock layers. In fact, as I discuss later in this chapter, we find fossils of organisms that are identical to present-day organisms, yet are supposedly many millions of years old. That is, we observe from the fossil record that organisms do not evolve into new species — they stay the same.

I have already explained in chapter 4 that in the examples commonly given in textbooks as observed examples of evolution, such as moths, guppies, and so on, the organisms are still moths or guppies. There is no observation of the formation of any new type of animal or new mutation involving a new genetic code. Yet the fossil record shows new organisms containing massive amounts of new genetic code just suddenly appearing in the geological strata without any apparent gradually changing ancestors. Then these fully formed creatures stay the same in the fossil record until they disappear from the record and are either extinct, like the dinosaurs, or still surviving today,

8. R.M. Bailey, “Osteichthyes,” *McGraw-Hill Encyclopedia of Science and Technology* (New York: McGraw-Hill Book Company, 1960), Vol. 9, p. 442.

9. D.M. Raup, 1979, *Conflicts between Darwin and Palaeontology*, Field Museum of Natural History, Bulletin 50, 1979, p. 22–29, cited by A.A. Roth, *Origins: Linking Science and Scripture* (Hagerstown, MD: Review and Herald Publishing Association, 1998), p. 182–183.

like crocodiles. This important observation directly challenges the claims of the textbooks that the fossil record provides direct evidence of evolution.

Dr. Raup's observations are also noted by other scientists. For example, flying organisms fall into four main groups: insects, flying reptiles (pterosaurs — now extinct), birds, and bats. Flying is a highly specialized function requiring many features besides wings, so we would expect the gradual evolution of flight to leave some evidence in the fossil record. However, insect authority Dr. Robin Wootton, from the University of Exeter, notes that when fossil insects first appear in the geological column, flying is fully developed.¹⁰ This requires huge amounts of new purposeful genetic code to somehow suddenly arise as a result of random mutations. It involves thousands and thousands of new information-encoding nucleotide bases to somehow be added to the DNA of the embryo of an organism via mutations to produce a new organism — an insect — that can fly. Not only is this impossible from a probability basis, but there is no evidence of any gradual development in the fossil record.

University of Michigan-trained zoologist Dr. Ariel Roth, who served as the editor of the journal *Origins* for more than 20 years, points out that flying pterosaurs, birds, and bats also suddenly appear as fully developed flying creatures in the fossil strata.¹¹ A large number of major anatomical changes are needed to develop flight. For example, in birds we have hollow bones reinforced with cross members to reduce weight yet retain sufficient strength. They have a specialized respiratory system that enables air to be fed directly into air sacs connected to the heart, lungs, and stomach. These changes would have all required huge amounts of new information in the genetic code to somehow arise from random mutations. But again, there is no evidence in the fossil record of the transitional mutants that should have formed. That is, there is no fossil evidence of the gradual evolution of the anatomical changes required to produce birds.

Feathers, which characterize all birds, further illustrate this point. The feathers of birds are supposed to have evolved from the scale of some ancestral reptile.¹² Yet feathers have very different complex structures compared to known scales. The feather is very wind resistant because of an ingenious system of barbs and barbules forming ridges and hooks that act like Velcro but go one stage further and allow sliding as well. However, there is more to the feather system. This delicate lattice structure would soon become frayed

10. R.J. Wootton, "Flight: Arthropods," in D.E.G. Briggs and P.R. Crowther, editors, *Palaeobiology: A Synthesis* (Oxford: Blackwell Scientific Publications, 1990), p. 72–75.

11. Roth, *Origins: Linking Science and Scripture*, p. 185.

12. Ibid.

unless there was also oil to lubricate the sliding joint made by the hooked and ridged barbules. In birds, this oil is supplied by the preening gland and also serves to waterproof the feathers so the bird can fly in the rain or when wet. For the feather system to work, a huge amount of new genetic information has to somehow arise in the DNA of the organism to encode new types of cells. These must then produce all the intricate structures of the feathers and the preening gland so that they become fully operational for flight. There is no evidence in the fossil record of creatures with mutant scales developing into feathers.¹³ Instead, we only find fossils of creatures with feathers fully developed, such as the much-discussed reptile-bird *Archaeopteryx*.¹⁴

Another clear example of the missing intermediates in the fossil record is turtles. Dr. Roth points out that in the evolution of the turtle many intermediate stages should be found in the fossil record, but none are found — only fully formed turtles.¹⁵ Another example involves the horned dinosaurs. We find thousands of fossils of dinosaurs but no fossils showing the transitional or mutant development of horns.¹⁶

There is an even more pronounced lack of fossil evidence for evolution in the plant kingdom. The flowering plants appear suddenly, fully formed and in abundance in the fossil record.¹⁷

Another approach is to examine the appearance of fossils in the rock strata. In the lowest strata, known as the Precambrian, fossils are fairly rare and are mainly of algae, bacteria, and some small odd marine organisms. But then we come to the next layers of rock known as the Cambrian where we find huge numbers of fossils of developed organisms. For example, by the 1990s researchers had collected more than 73,000 specimens from the Cambrian Burgess Shale of the Canadian Rockies, which is famous for the excellent preservation of soft-bodied organisms.¹⁸ These fossils have preserved much of the fine structures of the organism so we can learn a lot about their anatomical details.

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13. A.H. Brush, “On the Origin of Feathers,” *Journal of Evolutionary Biology*, vol. 9 (1996): p.133; see also, Barbara J. Stahl, *Vertebrate History, Problems in Evolution* (New York: Dover Publications, 1985), p. 349–350.
 14. A.J. Charig, F. Greenaway, A.C. Milner, C.A. Walker, and P.J. Whybrow, “Archaeopteryx Is Not a Forgery,” *Science*, vol. 232 (1986): p. 622–626.
 15. Roth, *Origins: Linking Science and Scripture*, p. 182.
 16. Duane T. Gish, *Evolution: The Challenge of the Fossil Record* (El Cajon, CA: Creation-Life Publishers, 1986), p. 124.
 17. A.H. Knoll and G.W. Rothwell, “Palaeobotany: Perspectives in 1980,” *Palaeobiology*, vol. 7, no. 1 (1981): p. 7–35.
 18. D.E.G. Briggs, D.H. Erwin, and F.J. Collier, *The Fossils of the Burgess Shale* (Washington, DC: Smithsonian Institution Press 1994).

In the lower Cambrian rock we also find fossils of fully developed trilobites that have hard shells, as well as legs and eyes.¹⁹ These animals had quite complex eyes comprised of tubes pointing in many different directions. These tubes had lenses that focused light from any distance.²⁰ Trilobites would require an enormous amount of new genetic code to program their cells to produce the complex structures of this organism, yet despite the abundance of trilobite fossils we find no fossil evidence of their evolution. Other organisms found in the lower Cambrian rocks include sponges, jellyfish, corals and anemones, worms, horseshoe crabs, snails, lamp shells (brachiopods), and sea urchins, to name some of the more commonly known species.²¹ Even possible vertebrate fossils (that is, animals with a developed backbone system) have also been reported in lower Cambrian rocks, which shows these advanced animals were living at the time these rocks were deposited.²² This sudden appearance and abundance of such a diversity of organisms is referred to by paleontologists as the Cambrian explosion. These fossils are a major problem for evolutionists to explain, as there is no fossil evidence of their evolutionary ancestors. Yet according to evolutionary theory, these creatures should have taken a very long time to evolve and there should be an abundance of fossils of the intermediate mutations.

The absence of missing fossils cannot be explained by missing strata. This is because there are plenty of examples where hundreds of feet of unfossiliferous Precambrian strata conformably (that is, without evidence of erosion or geological disruption between layers) underlie trilobite fossil-rich Cambrian rocks.²³ Cambrian strata even contain fossils of fully developed shrimp-like animals such as *Waptia fieldenensis*, and multi-segmented and multi-legged creatures such as *Marrella splendens*. Small vertebrates in the form of cartilaginous fish have also been found, and there is an abundance of squid-like cephalopods called nautiloids.²⁴ These latter creatures were very similar to present-day nautiluses, which are known to be intelligent, aggressive hunters with sophisticated jet propulsion systems.²⁵

19. W.C. Bell, "Cambrian," *McGraw-Hill Encyclopedia of Science and Technology*, p. 424–427.

20. K. Towe, "Trilobite Eyes: Calcified Lenses," *Science*, vol. 179 (March 9, 1973): p. 1007–1011.

21. Roth, *Origins: Linking Science and Scripture*, p. 164–165.

22. X.G. Zhang and X.G. Hou, "Evidence for a Single Median Fin-fold and Tail in the Lower Cambrian Vertebrate, *Haikouichthys Ercaicunensis*," *Journal of Evolutionary Biology*, vol. 17 (2004): p. 1162–1166.

23. Bell, "Cambrian," *McGraw-Hill Encyclopedia of Science and Technology*, Vol. 2, p. 425.

24. Solomon, Berg, and Martin, *Biology*, p. 393–395.

25. J.B. Wood, "Fossil Cephalopods," Bermuda Institute of Ocean Sciences, 2010, <http://www.thecephalopodpage.org/FosCeph.php>, accessed 5/3/2010; see also, <http://www.ucmp.berkeley.edu/taxa/inverts/mollusca/cephalopoda.php>.

The thousands of different types of organisms that are found in these Cambrian rocks each have their own unique DNA — the genetic code that programs the cells that make up that organism. The gamete cells of an organism contain the same basic code so that the same species is reproduced. Chicken eggs only hatch out chickens, and platypus eggs only hatch out platypuses.

The theory of evolution requires that chance mutations in the genetic codes of some algae or similar organism produced offspring with mutations. After an unknown number of subsequent mutations occurred in sufficient propinquity to produce offspring, followed by a further unknown number of mutations and reproduction cycles, the thousands of different types of worms, sponges, jellyfish, trilobites, and nautiloids that we find as the fossils in the Cambrian rocks are supposed to have developed. As I have already discussed in the previous chapters, mutations are rarely beneficial, are usually infertile,²⁶ and are not known to produce new genetic information. So there is no known explanation of how such huge amounts of complex genetic code could form. There is also no evidence of the required mutations in the fossil record.²⁷

On the other hand, there is very strong evidence from the fossil record that species do not mutate and that they reproduce after their kind within the limits of normal genetic variation. For example, the live coelacanth fish caught off South Africa in 1938 looked exactly like the coelacanths in the fossil record.²⁸

University of Missouri-educated biologist and physician Dr. Carl Werner and his science graduate wife, Debbie, have completed a huge project of photographing fossil specimens in museums and comparing them with photographs of modern-day animals. Their work has been published as two 260-page illustrated works complete with high-quality color photographs under the titles *Evolution: The Grand Experiment*, Volume 1, and *Living Fossils — Evolution: The Grand Experiment*, Volume 2.²⁹ The latter work provides prima-facie photographic evidence that, like the coelacanths, the fossil specimens of organisms that have survived through to the present time are essentially unchanged — hence the title *Living Fossils*.

26. D.H. Erwin and J.W. Valentine, “‘Hopeful Monsters,’ Transposons, and Metazoan Radiation,” *Proceedings of the National Academy of Sciences*, vol. 81, 1984, p.5482–5483.

27. Roth, *Origins: Linking Science and Scripture*, p. 86.

28. Dawkins, *The Greatest Show on Earth: The Evidence for Evolution*, p. 163.

29. Carl Werner, *The Quest for an Answer, Evolution: The Grand Experiment*, Volume 1 (Green Forest, AR: New Leaf Press, 2009); and Carl Werner, *Living Fossils, Evolution: The Grand Experiment*, Volume 2 (Green Forest, AR: New Leaf Press, 2009).

Their examples, photographs of fossils and museum displays of creatures and plants found in the same strata as the dinosaurs, are presented alongside photographs of their currently living counterparts and include brittle stars, sea urchins, sea biscuits, starfish, sea cucumbers, crinoids, feather stars, shrimp, lobsters, crayfish, crabs, horseshoe crabs, termite nests, dragonflies, katydids, water skaters, waterbugs, woodwasps, beetles, scorpionflies, mayflies, crickets, cockroaches, scallops, clams, mussels, cockscomb oysters, snails, nautiloids, elephant tusk shells, lamp shells, sea cradles, earthworms, tube worms, sponges, corals, sturgeon fish, coelacanths, lungfish, garfish, bowfin fish, eels, herring, orange roughy, angel sharks, rays, hagfish, salamanders, alligators, crocodiles, boa constrictor snakes, lizards, turtles, avocet (a modern-day type bird found fossilized with a *Tyrannosaurus rex* and a Triceratops dinosaur at Hell Creek, Montana), various mammals, Sequoia seed cones, Cook pine cones, redwood branches, cycads, maidenhair tree (ginkgo), ferns, horsetails, mosses, rhododendrons, lilies, sassafras, poplars, and other trees and plants.

The examples that Carl and Debbie Werner have collected are not exhaustive but rather serve to show that there are many examples of animals and plants that we know lived at the same time as the dinosaurs existed, where the surviving species look the same as the fossils. That is, they show no evolution. Dr. Werner also reports that between 100 million and 200 million fossils have been collected and are in museums worldwide.³⁰ During the course of his research and filming of the *Evolution: The Great Experiment* video series, he has met with and interviewed many museum curators and discussed the fossil evidence, much of which is not on display but in museum storerooms. For example, many readers may not be aware of the large number of mammal species found with dinosaurs. Paleontologists have found more than 430 mammal species in the dinosaur fossil layers, which show that these animals coexisted with the dinosaurs.³¹ However, Dr. Werner reports that he did not see a single complete mammal skeleton from the dinosaur layers on display in any of the 60 museums he visited. He also reports that the dinosaur rock layers provided representative fossil examples of all the major animal phyla living today, including birds, which are supposed to have evolved from the dinosaurs. They also provide fossils from every major plant division living today. From his comprehensive study of the fossils in museums, compared with living plants and animals,

30. Ibid., Vol. 1, p. 77.

31. Z. Kielan-Jaworowska, R.L. Cifelli, and Z.X. Luo, *Mammals from the Age of Dinosaurs: Origins, Evolution, and Structure* (New York: Columbia University Press, 2004).

he concludes that the fossil record does not provide the evidence that evolution has occurred.³²

I have discussed how the textbooks assert that the fossils provide direct evidence for evolution and that popular science writers like Richard Dawkins claim that there is abundant evidence from the fossils for evolution. But when we examine the actual evidence, we discover that the fossil evidence for evolution is seriously lacking. This lack of evidence has been recognized by paleontologists for some time. For example, the authoritative Harvard University paleontologist Professor Stephen J. Gould conceded that there was an absence of fossil evidence for the intermediary stages required for the major evolutionary transitions. He also admitted the uselessness of anything short of completion in every stage of evolutionary development by asking, “Of what possible use to a reptile is 2 percent of a wing?”³³ Other shortcomings in the fossil evidence have been pointed out by the eminent Harvard University-educated paleontologist Barbara J. Stahl.³⁴

I have discussed how Dr. David M. Raup, curator of geology at the Field Museum of Natural History in Chicago and past president of the Palaeontological Society, points out that geologists do not actually find evidence for evolution in the fossil record. Dr. Ariel A. Roth, who served as the editor for the journal *Origins* for more than 20 years, writes in the conclusion of his extensively footnoted 380-page book on the evidence for our origins, “It surprises me that the concept of evolution persists in view of the paucity of firm evidence to support it.”³⁵

This knowledge of the major shortcomings of the so-called evidence for evolution is not being taught to biology students nor made widely known to the general public. In fact, the standard reference textbooks for biology and evolution continue to omit any in-depth discussion of these major objections to the theory. Harvard University professor Stephen J. Gould also points out that the evolutionary trees that adorn our textbooks are based mainly on inference, not on the evidence of fossils.³⁶

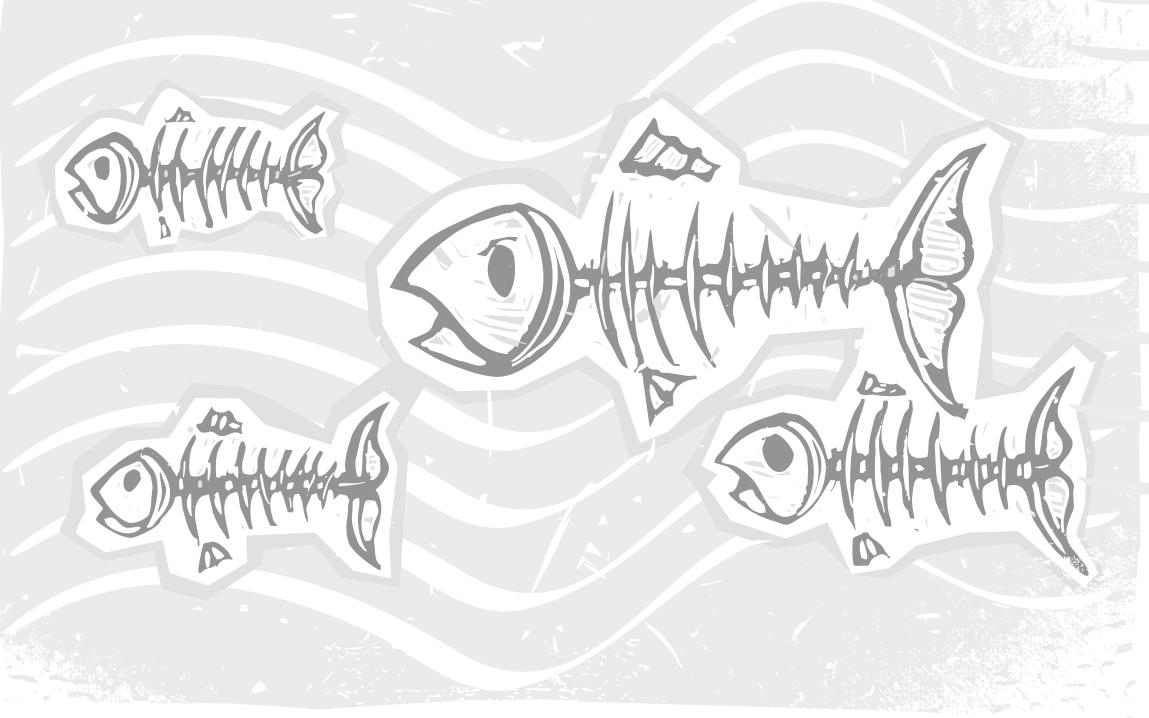
32. Werner, *Living Fossils, Evolution: The Grand Experiment*, Volume 2, p. 241–243.

33. Stephen Gould, “Is a New and General Theory of Evolution Emerging?” in M. Ruse, editor, *But Is It Science?* (Buffalo, NY: Prometheus Books, 1988), chapter 12, p. 177–194, cited by Colin Mitchell, *The Case for Creationism* (Alma Park, Grantham: Autumn House Limited, 1994), p.129.

34. Stahl, *Vertebrate History, Problems in Evolution*.

35. Roth, *Origins: Linking Science and Scripture*, p. 362.

36. Stephen J. Gould, *The Panda’s Thumb: More Reflections in Natural History* (New York: W.W. Norton and Co., 1980), p. 181.





Chapter 7

The Geological Evidence for a Catastrophic Global Flood

Much of the surface of our planet is covered with rock strata that formed under water. This observation is not contended by geologists. Standard geology reference books state that sedimentary rocks, which are laid down mainly by the action of water, cover about 75 percent of the earth's surface. Shale, sandstone, and limestone account for more than 95 percent of these sediments. The rest of the earth's surface is covered by either heat-altered sedimentary rocks such as marble or igneous (volcanic) rocks, which in many cases later spewed out over underlying previously deposited sedimentary rocks. In total, however, the sedimentary rocks make up only about 5 percent of the volume of the earth's crust. From these figures it becomes apparent that, generally speaking, sediments are spread as a relatively thin layer over the surface of the earth.¹

Two questions follow: "Was this thin layer of sediments that essentially covers the surface of the earth laid down over hundreds of millions of years as a result of repeated local flood events, the rising and falling sea

1. R. Siever, "Sedimentary Rocks," *McGraw-Hill Encyclopedia of Science and Technology* (New York: McGraw-Hill Book Company, 1960), Vol. 12, p. 129–135; J.H. Zumberge, *Elements of Geology*, 2nd edition (New York: John Wiley and Sons, 1963), p. 44.

levels, and volcanic and earthquake disturbances of lakes and seas? Or were these strata laid down over a relatively short period of time as a result of one massive worldwide flood event?" Observations of formations in the geological strata, such as huge beds of water-deposited limestone, the more than one mile deep (nearly two kilometers) layers of water-deposited sediments that surround the Grand Canyon, and the discovery of massive burials of fossil graveyards, along with thousands of other deposits, have been significant. The development of theories to explain them remains a major study in the field of geology.

In recent times there has been a growing recognition of the role of large-scale catastrophes in shaping the earth's surface. For example, the eminent geologist Professor Derek Ager, of the University College of Swansea, argues that the rock strata around the world suggest that there have been periods of slow gradual change (known as gradualism in the uniformitarian model) punctuated by occasional huge natural disasters.² One of the important observations of Professor Ager is that often the same particular combination of layers of sedimentary strata are found around the world. For example, in Britain, Greenland, the Canadian Rockies, and Australia, fossiliferous lower Cambrian strata conformably overlay (that is, with very little signs of erosion) a particular type of sandstone layer known as quartzite, which does not contain fossils. This in turn unconformably overlays a great variety of different types of Precambrian rocks. Professor Ager points out that it is not just this layer of quartzite that is found just about everywhere but there are other associated recognizable strata combinations such as a basal conglomerate (rounded pebbles and boulders cemented together with sandstone), followed by marine shales and thin limestones.³ That is, layers of rock containing fossils of many different types of organisms have been buried in water-deposited sediments overlaying sedimentary rocks, with the same pattern of deposition worldwide. The striking similarity of the pattern of strata suggests that the same environmental conditions prevailed across the world. This means much of the world must have been covered with water at these times. It is difficult to imagine that the same pattern would be deposited if the strata were the result of local events occurring hundreds, thousands, or even millions of years apart in the different locations. If such was the case, we would expect evidence of intermittent erosion

2. Derek V. Ager, *The New Catastrophism: The Importance of the Rare Event in Geological History* (Cambridge, UK: Cambridge University Press, 1995); see also Derek V. Ager, *The Nature of the Stratigraphic Record*, third edition (Chichester, NY: John Wiley and Sons, 1992).

3. Ager, *The Nature of the Stratigraphic Record*, p. 11.

taking place, forming gorges, canyons, and valleys. However, Dr. Ager notes that these strata overlay conformably, that is, with very few signs of erosion.

In chapter 5, I discussed the massive chalk deposits across the world corresponding to a time of great flooding of the earth's surface and the extinction of the dinosaurs, flying reptiles, and huge marine reptiles, as well as many other marine organisms.⁴ From the conventional dating of these strata, there are over 400 million years between the worldwide flooding in the Cambrian period and the worldwide flooding in the Cretaceous period. However, according to current conventional interpretation of the geologic column, there were also massive extinctions caused by flooding a number of times in the intervening time period. That is, there were massive water burials of organisms in flood-associated extinction events separated by tens and even hundreds of millions of years. Evidence of these extinctions is observed in the strata corresponding to the end of the Ordovician period, during the Devonian period, during the Permian period, and during the Triassic Period of the geological column.⁵ That is, massive worldwide flood-associated events are recorded also in the intermediate strata. The question remains, however: Do we interpret the formation of these deposits in terms of many localized flood events occurring relatively concurrently around the world at intervals separated by tens of millions to hundreds of millions of years, or does this evidence point to one large more recent worldwide flood event?

One of the first clues we have for a global flood is the evidence of widespread sedimentary deposits around the world that contain fossils of organisms that lived on land. For example, in the Zion National park, Utah, home of the Kolob Arch — the world's longest natural arch — can be seen outcrops of the Shinarump conglomerate. This sedimentary rock, which contains pebbles and sandstone, also contains fossil wood. While it is usually less than 100 feet (30 m) thick, it spreads as an almost uniform layer over a massive 97,000 square miles (250,000 square km).⁶

The material contained in this deposit would require an enormous force of water to move it and spread it as almost continuous deposit over such

4. W.A. Cobban, "Cretaceous," *McGraw-Hill Encyclopedia of Science and Technology* (New York: McGraw-Hill Book Company, 1960), Vol. 3, p. 542.

5. J.C. Avise, S.P. Hubbell, and F.J. Ayala, "In the Light of Evolution II: Biodiversity and Extinction," *Proceedings of the National Academy of Sciences of the USA*, vol. 105, suppl., 2008, p. 11453–11457; see <http://www.pnas.org/content/105/suppl.1/11453>; see also R.K. Bambach, "Phanerozoic Biodiversity Mass Extinctions," *Annual Review of Earth and Planetary Sciences*, vol. 34, 2006, p. 127–155.

6. H.E. Gregory, *Geology and Geography of the Zion Park Region, Utah and Arizona*, U.S. Geological Survey Professional Paper No. 220, p. 65.

a wide area. But the Shinarump conglomerate is just one member of the Chinle formation, a part of the Chinle group of sedimentary rocks that are spread over an estimated massive 310,000 to 890,000 square miles (800,000 to 2.3 million square km).⁷

Another land animal fossil-bearing rock example is the famous dinosaur fossil-bearing Morrison Formation of the western United States, which extends an estimated 580,000 square miles (1.5 million square km) from Texas to Canada, yet has an average thickness of only about 328 feet (100 m).⁸ This represents another massive flow of sediment over a vast area that buried land animals. Such relatively thin, widespread sedimentary rock deposits are consistent with catastrophic flood deposition rather than slow, gradual sedimentary formation.

Coconino Sandstone Formation, which can be seen exposed in the Grand Canyon, is another example. This deposit, with an average depth of around 500 feet (150 m), covers a massive 200,000 square miles (520,000 square km), including its associated sandstones.⁹ The lower half of the Coconino Sandstone contains hundreds of fossilized footprint trackways of amphibians or reptiles. Studies of these footprints have shown that in almost all cases the trackways are going uphill.¹⁰

These puzzling trackways have been the subject of a number of studies, with the weight of evidence from experimental studies suggesting they were made underwater and not on dry sand dunes.¹¹

Another important clue in the Coconino sandstone is the cross bedding that suggests rapidly flowing water formed underwater sand dunes. The shape and size of these dunes indicates they were formed by water currents of around 5 feet (1.5 m) per second. These velocities are somewhat

7. S.G. Lucas, “The Chinle Group: Revised Stratigraphy and Biochronology of Upper Triassic Non-marine Strata in the Western United States,” in M. Morales, editor, *Aspects of Mesozoic Geology and Paleontology of the Colorado Plateau*, Museum of Northern Arizona Bulletin, No. 59, 1993, p. 27–50.

8. L.F. Hintze, *Geologic History of Utah*, Brigham Young University Geology Studies Special Publication No.7, 1988, p. 51.

9. A.A. Snelling, *Earth’s Catastrophic Past* (Dallas, TX: Institute for Creation Research, 2009), Vol. 2, p. 509.

10. C.W. Gilmore, “Fossil Footprints from the Grand Canyon: Second Contribution,” *Smithsonian Miscellaneous Collections*, vol. 80, no. 3, 1927, p. 1–78, cited by A.A. Roth, *Origins: Linking Science and Scripture* (Hagerstown, MD: Review and Herald Publishing Association, 1998), p. 221.

11. L.R. Brand and T. Tang, “Fossil Vertebrate Footprints in the Coconino Sandstone (Permian) of Northern Arizona: Evidence for Underwater Origin,” *Geology*, vol. 19 (1991): p. 1201–1204; see also, R. Monastersky, “Wading Newts May Explain Enigmatic Tracks,” *Science News*, vol. 141 (1992): p. 5.

characteristic of deep ocean currents we observe today or currents generated by tsunami-type events.¹²

The overall picture that we get from this formation in stone is that of animals moving rapidly uphill in fast-flowing water. The water is moving a massive amount of sand over a huge area of hundreds of thousands of square miles, which rapidly buried and preserved the animal tracks.

The volume of sand in just the Coconino Sandstone formation alone is estimated to be in the order of 10,000 cubic miles (42,000 cubic km).¹³ However, there is no nearby source of this sand — it must have been carried hundreds and hundreds of miles by fast-flowing massive water currents from some origins in the north. The cross bedding evidence of fast-flowing water is found in the exposed Grand Canyon's Supai group of sandstone formations, which are several strata below the Coconino layer. Again, there is no nearby source of these massive deposits of sand, which must have been transported very large distances by huge water flows.¹⁴

The Navajo Sandstone of southern Utah, seen in the spectacular mesas of Zion National Park, presents a similar scenario of a massive formation of water-deposited sand with no nearby source. However, this sand contains small amounts of zircon with inclusions of uranium, enabling identification of the source of the sand. By matching the mineral characteristics of the sand, scientists have suggested that the source of the sand was probably rocks in the Appalachian Mountain areas of Pennsylvania and New York, and possibly former mountains in Canada.¹⁵ If this hypothesis is correct, then massive flows of water transported huge volumes of sand more than 1,200 miles (2,000 km) across what is now North America.

The conventional geology interpretation is that these deposits formed slowly over millions of years — but there are no known gradual geological processes that can explain the transport and deposition of such huge volumes of sand over such large distances. On the other hand, the above

12. R.C. Blakey and R. Knepp, "Pennsylvanian and Permian Geology of Arizona," in J.P. Jenney and S.J. Reynolds, editors, "Geologic Evolution of Arizona," *Arizona Geological Society Digest*, vol. 17 (1989): p. 313–347; see also, Snelling, *Earth's Catastrophic Past*, Vol. 2, p. 505–510.

13. Ibid.

14. J.S. Shelton, *Geology Illustrated* (San Francisco, CA: W.H. Freeman, 1966), p. 280.

15. J.M. Rahl, P.W. Reiners, I.H. Campbell, et al., "Combined Single-Grain (U-th)/He and U/Pb Dating of Detrital Zircons from the Navajo Sandstone, Utah," *Geology*, vol. 31, no. 9 (2003): p. 761–764; see also, S.R. Dickinson and G.E. Gehrels, "U-Pb Ages of Detrital Zircons from Permian and Jurassic Eolian Sandstones of the Colorado Plateau, USA: Paleogeographic Implications," *Sedimentary Geology*, vol. 163 (2003): p. 29–66.

evidence all points to catastrophic movements of water on a scale never recorded in the past 3,000 years or more.

Another problem for the uniformitarian model is the lack of canyons, gorges, valleys, and gullies preserved in the strata. If the sedimentary deposits around the world formed over hundreds of millions of years, we would expect to find evidence of erosion over time, resulting in the periodical creation of irregular surfaces. But many times when sedimentary layers are exposed, such as in road highway cuttings, beach cliffs, and river canyons, there is very little evidence of erosion between the layers. Many readers will have seen pictures of the walls of the Grand Canyon where there is layer upon layer of conforming — almost parallel — almost horizontal — strata. For example, on the extreme eastern wall there is a 3,600-foot (1,200-m) cliff of exposed flat strata — showing one layer on top of another with no signs of significant erosion. This strata sequence, which begins with the Cambrian-dated Tapeats Sandstone, continues up to the late Permian-dated Kaibab Limestone, covering a period of around 300 million years. In other words, we have expansive sedimentary layers requiring huge water flows to deposit them, being laid down over hundreds of millions of years, with no signs of significant erosion occurring. Yet the present topography is highly eroded and irregular. If the millions of years had actually occurred, why are the tops of the under layers not highly irregular like the present topography that we now observe?

Another problem involves the missing geological layers. For example, between one set of parallel sedimentary layers there is about a 100-million-year gap where the Ordovician and Silurian layers should be. They are missing, yet there is virtually no sign of erosion.¹⁶ In between other sets of horizontal layers there is a proposed 14-million-year gap, again with no significant signs of erosion.¹⁷

Of course, the Grand Canyon is not the only place where we find parallel horizontal sedimentary layers supposedly laid down millions of years later with no signs of significant erosion between the strata, even though in most cases huge masses of water-transporting sediments are involved. The logical explanation is that these strata were deposited at the same time or in a relatively short succession of days or months, giving no time for erosion to occur. If they were really deposited millions of years apart, we would see massive evidences of irregular erosion between the contact planes.

16. S.S. Beus, “Temple Butte Formation,” in S.S. Beus and M. Morales, editors, *Grand Canyon Geology* (Oxford and New York: Oxford University Press, 1990), p. 107–117.

17. R.C. Blakey, “Supai Group and Hermit Formation,” in Beus and Morales, *Grand Canyon Geology*, p. 147–182.

Geologists have long been aware of these types of gaps. Dr. Ariel Roth, who served as director of the Geoscience Research Institute at Loma Linda University in California, discusses other examples from around the world. These include the problems the European Alps and Australian coal deposits pose for the uniformitarian long-age model, and how they best fit the global flood model.¹⁸

Many instances of strata in a different order to that in the “geological column” show that much of the various fossil strata comprising it were laid down simultaneously in one enormous global event. There are some outstanding examples of this found around the world. For example, at Lochseite in Switzerland, Jurassic rocks claimed to be 180 million years old conformably overlie Eocene rocks claimed to be 60 million years old. How can rocks higher up in the strata be 120 million years older than the rocks underneath them? The conventional geological explanation is called “overthrusting.” It is assumed that subterranean forces have pushed the lower older layers up and over the younger layers. There are many geological formations where this is a reasonable explanation, and the formation I have just described is called the Glarus overthrust. However, for this particular location it is suggested that the older rocks have been pushed 21 miles (34 km) over the younger ones, yet there is no evidence of unconformity.¹⁹ That is, the top layers are sitting on top of the lower layers without signs of massive erosion, rupturing, or piling up and rippling of the strata, even though these massive rock layers would have had to slide 21 miles over one another. This does not seem reasonable, and it was reported in the geology literature some years ago that overthrusts of more than a one-half mile are unlikely to be sustained. The reason is that the enormous strain required to push slabs of strata over distances of more than a fraction of a mile are such that the strain would be automatically relieved by a succession of ruptures, and the sliding of smaller slabs one over another. This would form imbricated (overlapping tile-like) structures, rather than a large mobile slab of strata moving over a passive underlying block.²⁰

The absence of imbrication in the Glarus formation suggests that the strata were simply laid down in the order they are in. That is, the top Jurassic

18. A.A. Roth, “Those Gaps in the Sedimentary Layers,” *Origins* (GRI), vol. 15 (1988): p. 75–92; see also, A.A. Roth, “Implications of Paraconformities,” *Geoscience Reports*, vol. 36 (2003): p. 1–5.

19. Colin Mitchell, *The Case for Creationism* (Alma Park, England: Autumn House Limited, 1994), p. 100.

20. A.D. Lawson, “Folded Mountains and Isostasy,” *Bulletin of the Geological Society of America*, vol. 38 (1927): p. 253–273.

rocks are not 120 million years older than the Eocene rocks but, together with the fossils they contain, are the same age.

Another example is in the Franklin Mountains near El Paso, Texas, where Upper Ordovician limestone dated at 450 million years old overlies Lower Cretaceous strata dated at 130 million years old, yet there is no evidence of overthrusting.

In the Glacier National Park of southern Alberta and Chief Mountain, Montana, and extending about 500 miles (800 km) along the Rocky Mountains, there is an area of several thousand square kilometers where the fossil order is very different and does not follow the conventional evolutionary pattern. In this area we find Precambrian limestones (dated as greater than 600 million years old), Cambrian (dated around 500 million years old), and other Paleozoic sediments lying conformably over Cretaceous shales containing dinosaur fossils (dated 100 million years old). Geologists attempt to explain this change in the fossil order by hypothesizing a massive overthrust from the west sliding rocks eastward over distances of 30 to 60 miles (50 to 100 km). This is referred to as the Lewis overthrust. However, not only is there no evidence of imbrication or rupturing, but there is also no evidence of the huge amount of frictional heat that would have been generated, which would have changed the structure of the rock surfaces (metamorphism) along the contact zone.²¹

It seems unreasonable to assume that thousands of square miles of sedimentary strata deposited 400 million years beforehand could then be pushed along over the top of other strata without major signs of rupturing and other frictional effects. Also, as we shall see in a later chapter, erosion losses in those intervening 400 million or so years would have been enormous and enough to erode the Rocky Mountains away entirely many times over. But the concept of overthrusting illustrates the extent to which scientists will hypothesize an explanation to try to preserve the fossil record of evolution in the face of conflicting evidence.

The most reasonable explanation consistent with the observed data is that the fossil layers were simply laid down in the order they are in under massive flood conditions, and that Cambrian and Cretaceous fossils originally existed at the same time.

In Arizona, the Permian rocks of Empire Mountain, which date greater than 200 million years, overlie Cretaceous sediments dating around 100 million years. In this particular location, the Permian deposits are in deep grooves eroded in the underlying Cretaceous material. However, no

21. Mitchell, *The Case for Creationism*, p. 100.

projections are planed off and there are no gouge marks, slickensides, or brecciation. In places, the deposits are described as being like the meshing of gears. It is extremely hard to imagine how this gear-like structure could form as the result of the older layer being pushed up over the other. As retired geographer and international government consultant Dr. Colin Mitchell points out, the obvious explanation in all these cases of apparently out-of-order strata is that the concept of fossil evolution is at fault. The rocks were laid down originally in the order in which they now occur.²²

Another problem for the long ages, uniformitarian geological model for the formation of the vast sedimentary deposits is the occurrence of polystrate fossil trees. These are fossils of trees that have been fossilized in an upright position and that transverse many sedimentary strata. For example, the cliffs at Joggins in Nova Scotia reveal abundant polystrate tree fossils, as does the hillside at Specimen Ridge in the Yellowstone National Park in the USA. The Joggins site in particular attracted the attention of early geologists such as C. Lyell and J.W. Dawson, who reported fossilized animal remains within some of the preserved upright trees.²³ Recent investigations of this site have revealed fossilized tree trunks up to 16 feet (5 m) tall and 30 inches (75 cm) in diameter and over 100 individual specimens of 11 different types of vertebrates, including amphibians and reptiles, as well as snails, millipedes, worms, and a mayfly.²⁴ Many of the tree trunks are hollow and filled with sediment that washed in, taking with it animals trapped in the sediments by the speed of the moving water. The presence of cross bedding in the sandstones inside the hollow trunks confirms the rapid water flow.²⁵

Fossilized remains of reptiles and amphibians were also found in the external adjacent strata, showing clearly that the many layers of sediment that buried these large tree trunks in the vertical position were being deposited very rapidly by fast-moving water.

Numerous examples of near vertical fossilized trees traversing strata have been reported in the literature, particularly in association with coal deposits in many parts of the world, including Antarctica.²⁶

22. Ibid.

23. J.W. Dawson, "On the Results of Recent Explorations of Erect Trees Containing Animal Remains in the Coal-formation of Nova Scotia," *Philosophical Transactions of the Royal Society of London*, vol. 173 (II), 1882, p. 621–654.

24. A.C. Scott and J.H. Calder, "Carboniferous Fossil Forests," *Geology Today*, vol. 10, no. 6 (1994): p. 213–217.

25. C.F.K. Diessel, *Coal-bearing Depositional Systems* (Berlin: Springer-Verlag, 1992), p. 390.

26. D.I.M. Macdonald and J.E. Francis, "The Potential for Cretaceous Coal in Antarctica," in P.J. McCabe and J.T. Parrish, editors, *Controls on the Distribution and Quality of Cretaceous Coals*, The Geological Society of America Inc., Bolder, Colorado, 1992, p. 385–393.

Not far from where I live north of Sydney are the famous Newcastle Coal Measures. University of Sydney-trained research geologist Dr. Andrew Snelling reports that these coal measures contain repeated strata, with fossilized upright tree trunks. (I have personally seen some of these near Swansea.) Some of these tree trunks are sitting on top of one coal seam, penetrating the sedimentary horizons above and right up through the next coal seam. Dr. Snelling notes that miners have reported upright coalified logs up to 30 feet or more in length, penetrating several coal seams and the layers of sandstone and other sediments between them.²⁷

One of the commonly observed features of these fossils is that they usually have no root system of any magnitude attached, nor is there usually evidence of soil that they could grow on. Dr. Snelling also notes that even though fossil tree trunks may be many meters long, the tops of the trees have never been found preserved with them. In every case, the tops of the trees have been broken off, and frequently so has the bottom section. This suggests that in many cases the trees were broken off and transported to the location where they were rapidly buried in an upright position. Evidence for this scenario comes from the observation that thousands of trees floated upright in Spirit Lake after the 1980 volcanic explosion of Mount St. Helens in Washington state.²⁸ Derek Ager, emeritus professor of geology at the University College of Swansea in Wales, also suggests that observations of upright tree fossils are evidence for very rapid sedimentation in the past.²⁹

Very rapid sedimentation was associated with the Mount St. Helens eruption. Stratified layers up to 425 feet (130 m) thick formed as a result of mud flows and volcanic ash fallout. One such deposit over 100 feet (30 m) thick, which formed in one day on June 12, 1980, contained a 26-foot (8-m) thick layer composed of over 100 thin layers. This was overlain by a 16-foot (5-m) thick mudflow deposit and underlain by a 26-foot (8-m) thick ash deposit. Similar multilayered deposits have also been observed to form after hurricanes and storms.³⁰ These deposits show how under the catastrophic conditions of a proposed global flood scenario involving massive water movements and volcanic activity, geological formations that would be interpreted as having great age under

27. Snelling, *Earth's Catastrophic Past*, p. 566–567.

28. H.G. Coffin, “Erect Floating Stumps in Spirit Lake, Washington,” *Geology*, vol. 11 (1983): p. 298–299.

29. Derek V. Ager, *The New Catastrophism* (Cambridge, UK: Cambridge University Press, 1993), p. 49.

30. Steven A. Austin, editor, *Grand Canyon, Monument to Catastrophe* (Santee, CA: Institute for Creation Research, 1994), p. 37–38.

the conventional uniformitarian long-age geological model can actually be formed in a very short period of time.

The discovery of ancient river channels under the sands of the Sahara Desert, some as large as the Nile River valley, together with fossils of animals such as crocodiles and hippopotamuses, as well as evidence of human habitation including fishhooks and harpoons, indicates that this area was once a much wetter area.³¹ We also know that in the past many lakes were much larger than they are today. For example, the Great Salt Lake of Utah was about 17 times larger than it is today. Other examples are Lake Chad in north Africa, which was once over 600 miles long (nearly 1,000 km) and required a water intake about 16 times greater than at present, and Lake Manly, a 590-foot (180-m) deep lake that once filled part of California's Death Valley.³² These are further indicators of a very wet past. We also have abundant evidence of extensive glaciation and vast ice sheets forming in the past when much of the mega fauna such as the woolly mammoths became extinct.

Moist, warm conditions, followed by an ice age, followed by gradual warming is the very scenario predicted by the global flood model proposed by meteorologist Michael Oard.³³

However, glaciologists subscribing to long ages have constructed dating methods that appear to give ice layers at the Arctic and Antarctic regions existence extending back hundreds of thousands of years. To interpret the data over such a long period of time, they have to hypothesize as many as 30 successive ice ages. To try to account for these climate changes, the controversial Milankovitch hypothesis or “astronomical theory” was developed. This theory proposed that slight periodic changes in the earth’s precession and tilt cycles would result in slight changes in the heat radiation received at the earth’s surface and could trigger these multiple ice ages. However, there are serious problems with the astronomical theory. Firstly, the changes in radiation levels are so small as to not be effective in triggering an ice age.³⁴

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31. H.J. Pachur and S. Kröpelin, “Wadi Howar: Paleoclimatic Evidence from an Extinct River System in the Southeastern Sahara,” *Science*, vol. 237 (1987): p. 298–300; B.D. Shaw, “Climate, Environment and Prehistory in the Sahara,” *World Archaeology*, vol. 8, no. 2 (1976): p. 142.
 32. R.L. Hooke, “Lake Manly Shorelines in the Eastern Mojave Desert, California,” *Quaternary Research*, vol. 52 (1999): p. 328–336; A.J. Sutcliffe, *On the Track of Ice Age Mammals* (Cambridge, MA: Harvard University Press, 1985), p. 22.
 33. Michael J. Oard, *An Ice Age Caused by the Genesis Flood* (El Cajon, CA: Institute for Creation Research, 1990), p. 97; see also, Michael Oard, *Frozen in Time* (Green Forest, AR: Master Books Inc., 2004).
 34. J. Jouzel, J.R. Petit, and D. Raynaud, “Palaeoclimatic Information from Ice Cores: the Vostok Records,” *Transactions of the Royal Society of Edinburgh*, vol. 81, 1990, p. 349–355.

Secondly, on the basis of the long-ages interpretation of the ice core data, there was an ice age every 100,000 years. However, there are no known changes in the radiation reaching the earth that corresponds to that time cycle.³⁵ A detailed critique of the Milankovitch mechanism and interpretations of ice core data has been compiled by retired U.S. government weather service meteorologist Michael Oard.³⁶

Again we have the situation of a long-age hypothesis that does not fit the observed data. But there is more.

Further evidence for the flood model comes from the observation that the Greenland ice cores show only one ice age. Multiple ice ages do not show up.³⁷ The global flood-ice age model also has been shown to provide a very reasonable and logical explanation for the ice age extinction of the mega-fauna, and the deposition of ice at the poles over a relatively short period of time. Its explanation of why the deserts that occur around latitude 30 degrees were wet and lush during the Ice Age again concurs with observed data.³⁸

In fact, it has been argued that the post-Flood Ice Age model is the only scientific model that has been able to successfully explain the development of ice sheets where we know they once existed.³⁹

There is much more evidence for the current land forms such as rivers that cut through mountain ranges like the Gordon River Splits in Tasmania, mainly resulting from an enormous global flood, followed by the subsequent up-thrusting of the present-day mountain ranges. For a more detailed and heavily referenced source of information, the reader is referred to an extensive evaluation of the geological evidence for a catastrophic global flood in the recently published volumes titled *Earth's Catastrophic Past*.⁴⁰

When we consider the overall geology picture of the earth's surface, we have consistent and coherent evidence that the mostly flat or slightly sloping sedimentary strata that cover much of the earth's continents could not

35. D. Paillard, "Glacial Cycles: Toward a New Paradigm," *Reviews of Geophysics*, vol. 39, no. 3 (2001): p. 325–346.

36. Michael J. Oard, *The Frozen Record* (Santee, CA: Institute for Creation Research, 2005).

37. W. Dansgaard, H.B. Clausen, N. Gundestrup, et al., "Dating and Climatic Interpretation of Two Deep Greenland Ice Cores," *Greenland Ice Core: Geophysics, Geochemistry, and the Environment*, Geophysical Monograph, No. 33, 1985, American Geophysical Union, p. 71–76.

38. M. Oard, *Frozen in Time* (Green Forest, AR: Master Books Inc., 2004), p. 33–46, 69–106.

39. L. Vardiman, "An Analytic Young-earth Flow Model of Ice Sheet Formation During the 'Ice Age,'" *Proceedings of the Third International Conference on Creationism*, Creation Science Fellowship, Pittsburgh, PA, 1994, p. 561–568.

40. A.A. Snelling, *Earth's Catastrophic Past*, Volumes 1 & 2 (Dallas, TX: Institute for Creation Research, 2009).

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have been laid down slowly over hundreds of millions of years. Rather, the evidence suggests that there was catastrophic flood, storm, and volcanic activity all over the world at the same time that laid down the sediments that have become known as the geologic column.

In addition to the geological evidence, there is also a substantial amount of historical evidence that this catastrophic global Flood was relatively recent, and this is the subject of the next chapter.



Chapter 8

Historical Evidence for a Worldwide Flood

In the early 1800s at universities such as Oxford and Harvard, the geological interpretation of the rock strata was taught in the context of Noah's Flood.¹ This Flood account was preserved in the ancient Hebrew book *Genesis*, which is believed to have been written by Moses, an adopted heir to the Egyptian throne who lived around 1526 to 1406 B.C.² His account, in summary, describes how around 2303 B.C.³ fountains from deep within the earth opened up and began to spew out flood waters, combining with a 40-day rain event. The water rose and covered the earth, destroying everything living on the land. A man by the name of Noah and his wife and their three sons and their wives, eight people in total, and two of every kind of animal, were saved by going into a very large wooden boat often referred to as Noah's ark (Gen. 6:9–8:18). The Genesis account is written in a substantially factual

1. Ian T. Taylor, *In the Minds of Men* (Toronto, Canada: TFE Publishing, 1984), p. 66, 110, 350.

2. T.D. Alexander, "Introduction to Genesis," *ESV Study Bible* (Wheaton, IL: Crossway Bibles, 2008), p. 39–48; John Ashton and David Down, *Unwrapping the Pharaohs: How Egyptian Archaeology Confirms the Biblical Timeline* (Green Forest, AR: Master Books, 2007), p. 89–95.

3. For details on how this date is calculated from historical records and a comparison of the date calculated by James Ussher in A.D. 1650, see appendix 1.

and historical way, even giving the day and the month that the Flood began. It states that water covered the earth for 150 days and that the water then slowly receded over the next 150 days. It describes the land drying out and Noah's family and the animals leaving the ark after an additional 70 days (Gen. 7:24–8:13).

The Genesis account records Noah being told by “God” that a flood was coming that would destroy the earth, and that “God” told Noah to build the boat to save his family and the animals. Because of the miraculous nature of the account, this “flood” is often regarded as a religious myth. Consequently, most geologists and earth scientists now dismiss the idea of a recent worldwide flood as not being historical or scientific. However, if we examine the information we have available to us at the present time, there is a surprisingly large amount of both historical and scientific evidence to support this report of a catastrophic global flood in ancient times. So rather than glibly dismiss the Genesis record, I beg the reader’s indulgence to examine this evidence in the remainder of this chapter.

Firstly, the traditions of many ancient peoples from all over the world preserve in one form or another the account of a worldwide flood, from which only a few people were saved. Archaeologist professor André Parrot, who served as director in chief of the National Museums of France, explains that there are both legendary type narratives about a massive flood, such as the *Epic of Gilgamesh*, as well as brief references to the Flood as a historic fact, such as in the king lists on the Weld-Blundell Prism.⁴ In the Sumerian narrative of the Flood, a fragment of which was found at Nippur in Babylonia and dated back to the 19th century B.C., the gods decided to send a flood to destroy the human race, but the king Ziusudra is saved in a giant ship that he has built in accordance with instructions given to him by a god who has taken pity on him. In the Assyrian version, found on cuneiform tablets discovered in Nineveh in the library of Ashurbanipal, who lived in the seventh century B.C., a hero by the name of Gilgamish goes in search of Utnapishtim who survived the flood. Utnapishtim tells Gilgamish the story of the flood, how the god Ea advised him to build a vessel to a specified plan and bring his family, craftsmen, and animals into it. A flood and storm is then unleashed and the whole world is submerged and mankind is destroyed. The boat later comes to rest on a mountain and several birds are sent out. When one of the birds, a raven, does not return, the survivors leave the ark.

4. André Parrot, “Flood (in Religion and Myth),” *Encyclopaedia Britannica* (Chicago, IL: William Benton Publisher, 1967), Vol. 9., p. 455–456.

The ancient Greek literature also describes this Flood, which is explicitly mentioned by Pindar, who lived in the fifth-century B.C., with a full version found in the compendium *Bibliotheca of Pseudo-Apollodorus*.⁵ In the Greek account, the god Zeus decides to destroy the human race, but King Deucalion is advised by his father Prometheus to build an ark in which he and his wife can survive. The rains come and flood the land, and after floating for nine days the ark comes to rest on a mountain.

A Roman version is recorded by Ovid in *Metamorphoses Book 1*. Here again the gods decide to destroy humanity, which has become corrupt, by sending a great flood. Only Deucalion and Pyrra were saved in a boat so they could become the new parents of humankind.⁶

The Flood is also mentioned in the Sanskrit *Shatapatha Brahmana* of the sixth century. This story from ancient India tells of Manu, who was advised by a fish that a flood was coming that would destroy the whole of mankind. He was told to build a boat, and during the flood the fish towed the boat to a resting place on a mountaintop.⁷

The Mande people of Mali in central west Africa have a creation myth about an ark that landed on a mountain. This ark contained the original eight ancestors of humans and all the first animals and plants.⁸ The Arandan aborigines of northern Australia have a dreamtime story of creation that has gone wrong and was cleansed by a flood.⁹ The Arikara Indians of the American plains have a story that tells of giants that had no respect for their Creator and were destroyed by a great flood with only a few good giants preserved.¹⁰

David Leeming, professor emeritus of English and comparative literature, and Margaret Leeming, at the University of California at Santa Barbara, describe many other Flood accounts from the traditions of the peoples of the American continents. Examples include the Eskimos; Netsilik people of Greenland; Cheyenne Indians of the American plains; Navajo Indians of the American Southwest, who are believed to have settled there around A.D. 1000; Yuma and Pima Indians of Arizona; Pomo and Salina Indians of California; Ipurina people of Brazil; the ancient Myscas people of Peru; and

5. Apollodorus and R. Hard, translator, *The Library of Greek Mythology* (Oxford World's Classics) (New York: Oxford University Press, 2008).

6. D.A. Leeming and M.A. Leeming, *A Dictionary of Creation Myths* (New York: Oxford University Press, 1994), p. 236.

7. Parrot, "Flood (in Religion and Myth)," p. 455–456.

8. Leeming and Leeming, *A Dictionary of Creation Myths*, p. 180–181.

9. Ibid., p. 14.

10. Ibid., p. 16.

the ancient Quiché Mayan people of Guatemala, whose civilization dates back to at least A.D. 300.¹¹

Like the Genesis record, many of the other accounts of the Flood involve animals, the mention of a rainbow, birds being sent out, a vessel landing on a mountain, and the Flood being worldwide and decreed by the gods due to the wickedness of mankind at the time. Some versions, including the Genesis account, specifically mention eight as the number of people saved.

Professor Parrot also lists sources of Flood stories from regions around the world: China, southern Asia, Sumatra, Borneo, Australia, New Guinea, Polynesia, Melanesia, and both north and south American continents, and in the folklore of eastern Russia, Rumania, Lithuania, and Wales. He points out that in most of the stories there are constant features such as the saving in a vessel of a remnant group of people.¹² Likewise, Dr. Robert Young, LL.D., who compiled a concordance to the Bible in 1879, comments that Noah was called Yao or Fo-Hi (Fu Hsi) in the ancient Chinese literature, and Deucalion, Xisuthrus, etc., in other accounts.¹³

Further Chinese evidence for the historical accuracy of the Genesis record appears to have been preserved in the pictogram symbols of an ancient Chinese script. Stanford University-educated Chinese art historian Dr. Ginger T. Chock and co-authors discuss both these symbols and a number of ancient accounts, concluding that they support the Genesis account, including the Flood and the name of Noah.¹⁴ The Ashmolean Museum of Art and Archaeology, at the University of Oxford, also notes that accounts of a universal Flood occurring in antiquity is widespread around the world in both oral and written sources.¹⁵

Overall, the Genesis account would probably be viewed by most scholars as being the most credible and historically accurate. For example, the country Egypt, referred to in ancient manuscripts as the “land of Egypt,” that is, the land where Egypt settled, and sometimes as the “land of Ham” (Ps. 105:23, 27), is actually named after Noah’s grandson Mizraim, who was the son of Ham, the youngest son of Noah. The name “Egypt,” which is used today, is the modern Greek version of Mizraim. The country of Egypt

11. Ibid., p. 47, 86, 145, 186, 200, 204, 209, 230, 239, 302.

12. Parrot, “Flood (in Religion and Myth),” p. 455–456.

13. Robert Young, *Analytical Concordance to the Holy Bible*, 8th edition (London: Lutterworth Press, 1966), p. 698.

14. E.R. Nelson, R.E. Broadberry, and G.T. Chock, *God’s Promise to the Chinese* (Dunlap, TN: Read Books, 1997), p. 105–119.

15. See: <http://www.ashmolean.org/ash/faqs/q001007.php>.

is often listed on maps as Misr, which is the national Egyptian name.¹⁶ This is very strong evidence that Egypt and Ham were real people, as traditionally in ancient times, towns and countries were named after the actual people who founded them.

The Genesis account is also corroborated by an Egyptian historian by the name of Manetho, who was a priest in the temple at Heliopolis during the Greek era around 270 B.C. According to Herodotus, the Heliopolitans were said to be the most learned of the Egyptians.¹⁷ Manetho recorded the history of Egypt at that time and wrote that “after the flood,” Ham, the son of Noah, begat “Aegyptus or Mestraim,” who was the first to establish himself in the area now known as Egypt at the time when the tribes began to disperse.¹⁸ In one of Manetho’s other works, *Book of Sothis*, he wrote that this dispersion took place five years after the birth of Peleg, who was a great-great-great-grandson of Noah, born 101 years after the Flood.¹⁹ That is, the tribes began to separate about 106 years after the Flood, or roughly around 2195 B.C.

It is revealing that Lempriere’s *Classical Dictionary* states: “According to the calculations of Constantine Manasses, the kingdom of Egypt lasted 1,663 years from its beginning under Misraim the son of Ham, 2188 B.C., to the conquest of Cambyses, 525 B.C.”²⁰ Thus, Manasses, a Byzantine chronicler who lived in the 12th century A.D., also regarded the foundation of Egypt by the grandson of Noah just after the dispersion as a historical fact. His date of 2188 B.C. is in close agreement with the dates that can be calculated from genealogies in the ancient Hebrew manuscripts, using the date of the fourth year of King Solomon’s reign as an historical reference point.

The chronologies of several other ancient civilizations also harmonize with these dates for the dispersion of the tribes that had been centered around the location of Babylon (Gen. 11:8–9).

For example, Thomas Maurice, A.M., who was assistant librarian at the London Museum in the early 1800s, published the following report after

16. *The World Book Great Geographical Atlas* (Sydney, Australia: World Book Australia Pty. Ltd., 1984), p. 181.

17. Manetho, “Manetho’s History of Egypt,” in *Manetho, with an English Translation by W.G. Waddell* (Cambridge, MA: Harvard University Press, 1964), p. xi.

18. *Ibid.*, p. 7.

19. Manetho, “Book of Sothis App. IV,” in *Manetho, with an English Translation by W.G. Waddell*, p. 239; see also James Ussher, *The Annals of the World*, 1658, sections 1657 AM–1762 AM, at <http://www.archive.org/details/AnnalsOfTheWorld>.

20. J. Lempriere, “Aegyptus,” *A Classical Dictionary: Containing a Copious Account of All the Proper Names Mentioned in Ancient Authors*, 8th edition (London: T. Cadell and W. Davies Publishers, 1812), p. AEL.

visiting the ruins of Babylon: “When Alexander conquered Babylon, the Chaldean priests informed Callisthenes that they had recorded on bricks baked in the furnace, astronomical observations that extended back 1,903 years before that period, which was 330 years before Christ, when the conquest was achieved.”²¹ This gives a date of 2233 B.C. for Babylon, which is consistent with a date for the tribes being dispersed from around Babylon about 40 years later.

The fourth-century historian Eusebius of Caesarea recorded that Egialeus, a Greek king, began his reign in 2089 B.C., 1,313 years before the first Olympiad in 776 B.C.²² This appears to be the oldest chronological date assigned to a Greek kingdom. It corresponds to just over 100 years after the dispersion and is a reasonable date, given the distance the tribe had migrated from Babylon. Again, we find that Grecians were referred to as “the sons of Javan,” who was another grandson of Noah, via his second son Japheth (Joel 3:6; Gen. 5:32, 10:1; Isa. 66:19). Javan is also the Hebrew name for Greece, and it is also used to refer to the descendants of Javan and their lands, namely Ionia, Macedonia, Greece, and Syria.²³

Dr. Young notes that Japheth is probably the original of Japetus or Iapetus, whom the Greeks consider to be the ancestor of the human race.²⁴ The Roman historian Josephus also lists many of the tribes of Europe, including Greece, as being descendants from the sons of Japheth and his grandsons, with many geographical locations and towns named after these grandsons and their sons.²⁵ For example, Charles J.F. Dowsett, at the School of Oriental and African Studies at the University of London, points out that ancient Armenian writers call the Armenians descendants of Togarmah or Ashkenaz, the sons of Gomer, who was also a son of Japheth.²⁶ Japheth had another son called Magog. Josephus notes that the Magogites were called Scythians by the Greeks,²⁷ which were a people occupying an area corresponding to southern Russia and the Ukraine. Another one of Japheth’s sons and a grandson of

21. Thomas Maurice, “Maurice’s Observations on the Ruins of Babylon,” *London Review and Literary Journal* (August 1817): p. 145. Note that the figure of 1,903 years can also be found in the medieval Latin translation by William of Moerbeke (A.D. 1215–1286) of a Greek manuscript of Simplicius.

22. Eusebius, *Chronici Canones* (London: Humphredurn Milford, 1923), p. 1–14.

23. R. Young, *Analytical Concordance to the Holy Bible*, 8th edition (London: Lutterworth Press, 1966), p. 437, 534.

24. *Ibid.*, p. 533.

25. Josephus, “The Antiquities of the Jews,” 1.6.1, in W. Whiston, translator, *The Complete Works of Flavius Josephus* (Green Forest, AR: Master Books, 2008), p. 41.

26. C.J.F. Dowsett, “Armenia,” *Encyclopaedia Britannica* (Chicago, IL: William Benton Publisher, 1967), Vol. 2, p. 422.

27. Josephus, “The Antiquities of the Jews,” p. 41.

Noah was Madai (Gen. 10:2), who, according to Josephus, was the father of the Madeans, who are called the Medes by the Greeks and who lived in the region south of the Caspian Sea.

Thus, it can be seen that from the historical perspective of the account in Genesis, the tribes and towns of Europe are directly linked to the grandsons of Noah, which lends more credibility to the account of Noah and the Flood. This connection has been discussed in more detail elsewhere.²⁸ Also, it would be extremely unusual to name towns and regions after fictitious people. Towns and countries are almost always named after real people — especially their founders. Also, the use of terms such as “the land of . . .” strengthens the case for the named persons being real people.

Even in Asia, as L. Carrington Goodrich, professor of Chinese at Columbia University, notes, one of the oldest preserved Chinese chronologies, known as the *Bamboo Annals*, gives the first dynasty in China as beginning 1994 B.C., with the revised, traditional, alternate date for the first dynasty (Hsia) being 2183 B.C.²⁹ Both these dates come after the date for the dispersion of the tribes from Babylon and hence harmonize with the Genesis account.

Further evidence for the historical accuracy of Genesis comes from the discovery in 1974 of an archive of around 20,000 very ancient cuneiform tablets at Ebla in northern Syria. These tablets contain several references to the Canaanites who lived in “the land of Canaan.” Canaan was another son of Ham and grandson of Noah. Canaan was the father of Sidon, and the town he founded later became the chief city of ancient Phoenicia on the east coast of the Mediterranean Sea. The Genesis record also says that the land of Canaan extended from Sidon in the direction of Sodom, Gomorrah, Admah, and Zeboiim as far as Lasha (Gen. 10:6–20). These four towns, which no longer exist and up to this time were only mentioned in Genesis and Hebrew literature, were also found to be named in the tablets, as were towns and regions such as Hazor, Lachish, Megiddo, Gaza, Sinai, Joppa, and Damascus that are well known to historians and archaeologists. The mention of Canaan and the four cities of the plain provide very strong evidence that Genesis contains factual historical information. Details of the Ebla tablets evidence have been explained in more detail by the epigrapher who translated the tablets, Dr. Giovanni C. Pettinato, professor of Assiriology at the University of Rome.³⁰

28. See, for example, B. Cooper, *After the Flood* (Chichester, England: New Wine Press, 1995).

29. L.C. Goodrich, “China,” *Encyclopaedia Britannica*, Vol. 5, p. 575.

30. Giovanni C. Pettinato, *Ebla: A New Look at History (Near Eastern Studies)* (Baltimore, MD: The Johns Hopkins University Press, 1991).

Most of the non-Genesis Flood narratives that have been preserved provide very unrealistic details, such as the people being saved in a basket or the boat being a cube in shape. In other versions, the gods or the people are in the form of different animals, or the Flood lasted only seven days, and so on. However, the Genesis account is far more realistic. For example, the Sumerian flood accounts, such as on the Weld-Blundell Prism and other ancient tablets and manuscripts, contain what is known as the Sumerian king list. This list names eight kings living before the Flood who ruled for very long periods of time — tens of thousands of years, then after the Flood the kings are listed as ruling for much shorter periods of time — hundreds of years.³¹ Before the Flood, the reign of these kings is described as having a large variation between 18,600 years and 43,200 years. After the Flood, the same large random variation in length of reign is listed, but this time the range is between 300 years and 1,500 years, with kings many generations after the Flood still reported as living over 1,000 years.

On the other hand, the Genesis account records a list of eight pre-Flood patriarchs with fairly constant life spans ranging from 895 years to 969 years, and one, Noah's father, living only 777 years. Then after the Flood, the ages decline rapidly. When these ages are plotted on a graph, they approximate an exponential decay curve. Cornell University genetics researcher Dr. John Sanford has plotted the post-Flood life span data recorded in Genesis, in other books of Moses, and other Hebrew historical literature recorded by different authors down through the centuries. These records of the life spans of people during a period of nearly 2,000 years after the Flood fit the shape of an exponential biological decay curve. The calculated correlation coefficient is 0.90, meaning the fit of the data is very good and could not have been easily contrived, as the data comes from different records spanning many centuries. Dr. Sanford points out that not only is the data very consistent with genomic degeneration caused by mutation accumulation, but the curve is actually very similar to theoretical decay curves reflecting genomic degeneration.³² Here again we see that the Genesis account is quite scientifically realistic.

The reader may ask, “Why did longevity suddenly decline after the Flood?” The answer is that while we do not know for certain what caused this effect, we can hypothesize a scientific explanation. The Genesis account

31. J.A. Black, G. Cunningham, J. Ebeling, E. Flückiger-Hawker, E. Robson, J. Taylor, and G. Zólyomi, “The Sumerian King List: Translation,” *The Electronic Text Corpus of Sumerian Literature*, 1998–2006, <http://etcsl.orinst.ox.ac.uk/>, Oxford.

32. John C. Sanford, *Genetic Entropy & The Mystery of the Genome* (Waterloo, NY: FMS Publications, 2008), p. 155.

states that water spewed out from deep within the earth. It also states that the begat ages (when they fathered a child) of these pre-Flood patriarchs was usually 65 years or more (Gen. 5:6–32).³³ We observe today that ground waters contain relatively high levels of what is known as “heavy water” or “deuterium water,” whereas Arctic snow contains the lowest levels of deuterium water.³⁴ When plants are grown in very low deuterium water, they grow more slowly. Researchers from the Hungary Central Research Institute for Physics and the Semmelweis University of Medicine also report that cancer growth is slowed or stopped by deuterium depleted water.³⁵ This research is consistent with the observations that when the deuterium content of water is increased, the number of mutations in the cell DNA increases.³⁶ These mutations result in imperfect replication of the cells and are one of the important reasons why we age and eventually grow old. As the percentage of mutations accumulates, resulting in a corresponding accumulation of compromised cells, we get to the point where major physiological components and biochemical pathways in our bodies become so compromised that something fails and we die of old age.

It stands to reason that if the mutation rate is much lower in a low deuterium environment, that if the water in our cells had a much lower heavy water content, then we would age much more slowly and hence live much longer. This could explain the long life spans recorded for the pre-Flood patriarchs compared with the life spans today. Therefore, we could hypothesize that the water on the earth before the Flood was very low deuterium water, with high deuterium underground water being released into the biosphere during the Flood, resulting in the average level of around 150 parts per million that we observe today in the sea.

This is an example of how the Flood model provides possible scientific hypotheses that can be tested. That is, we could look for evidence that the deuterium content of the water in the past was lower. When looking in the

33. We have to assume that these ages are for the first child.

34. See, for example, P.G. Cook and A.L. Herczeg, *Environmental Tracers in Subsurface Hydrology* (New York: Kluwer Academic Publishers, 2000); E. Mazor, editor, 2003, *Chemical and Isotopic Groundwater Hydrology*, 3rd edition (New York: Marcel Dekker, 2003); W. Epstein and T.K. Mayeda, “Variations of the $^{18}\text{O}/^{16}\text{O}$ Ratio in Natural Waters,” *Geochimica et Cosmochimica Acta*, vol. 4 (1953): p. 213.

35. G. Somlyai, G. Jánésó, G. Jáklí, M. Molnár, I. Somlyai, and K. Krempels, “Application of Deuterium Depletion in Cancer Treatment and Prevention,” *Proceedings of the International Scientific Conference on Nutraceuticals and Functional Foods*, June 8–12, 2009, Zilina, Slovakia, p. 45; see also, A. Kovács, I. Guller, K. Krempels, et al., “Deuterium Depletion May Delay the Progression of Prostate Cancer,” *Journal of Cancer Therapy*, vol. 2 (2011): p. 548–556.

36. Gbor Somlyai, *Defeating Cancer! The Biological Effect of Deuterium Depletion* (Budapest: 1st Books, 2002), p. 27–28.

research literature, we find that evidence of deuterium-depleted water in the past has already been reported.³⁷

The ark described in Genesis is also more realistic than the basket and the cube-type craft mentioned in other accounts. In modern measurements, the ark would have been about 450 feet (140 m) long, 75 feet (23 m) wide, and 45 feet (14 m) high. I have been told that these are very realistic figures in terms of naval architecture and stability at sea — for example, they are similar to kayak dimensions scaled up. The displacement of the ark has been calculated to be around 43,000 tons, with an inside capacity of around 1.4 million cubic feet (39,644 cubic m) and an estimated deck area of 95,700 square feet (8,890 square m).³⁸ This is quite a substantial vessel. Consequently, geologist John Woodmorappe has published a well-researched feasibility study demonstrating that sufficient kinds of animals would fit into and survive on the ark in order to repopulate the earth with the variety of animals that exist today.³⁹

Other evidence for the Flood may come from the observations of mathematician and astronomer George F. Dodwell, who served as South Australian government astronomer at the Adelaide Observatory from 1909 to 1952. In 1922, Dodwell had led an important expedition to the northern part of South Australia to observe a total eclipse of the sun, and thereby verify that light was deflected by the sun's gravitational field.⁴⁰ In the 1930s, Dodwell became aware of a book by British Admiral Sir Algernon F.R. De Horsey that discussed an astronomical theory relating to the tilt of the earth's axis. This theory had been put forward by Major General Professor Alfred W. Drayson, who had served as an astronomer at the Royal Observatory at Greenwich.⁴¹ Professor Drayson reported a possible extra variation in the standard slight precession or wobble of the earth's axis of rotation, in addition to the regular wobble caused by variations in the earth's distance from the other planets as it rotates around the sun. The regular wobble is

37. I.J. Winograd, B.J. Szabo, T.B. Coplen, et al., "Two-million-year Record of Deuterium Depletion in Great Basin Ground Waters," *Science*, vol. 227 (February 1, 1985): p. 519–522.

38. T.D. Alexander, "Genesis 6:15" comment, *ESV Study Bible*, p. 62.

39. John Woodmorappe, *Noah's Ark: A Feasibility Study* (El Cajon, CA: Institute for Creation Research, 1997).

40. G.F. Dodwell and C.R. Davidson, "Determination of the Deflection of Light by the Sun's Gravitational Field from Observations Made at Cordillo Downs, South Australia, During the Total Eclipse of 1922 September 21," *Royal Astronomical Society, Monthly Notices*, vol. 84 (1924): p. 150–162.

41. Algernon DeHorsey, *Draysonia: Being an Attempt to Explain and Popularise the System of the Second Rotation of the Earth as Discovered by A.W. Drayson (1911)* (Whitefish, MT: Kessinger Publishers, 2009), originally published in 1911.

predicted by an astronomical calculation known as “Newcomb’s formula,” after the American astronomer Simon Newcomb, who derived it.

The angle of the earth’s tilt, known as the “obliquity of the ecliptic,” can be easily calculated from the sun’s shadow, being the angle midway between the angle of the sun at the longest day (summer solstice) and the angle of the sun at the shortest day (winter solstice). The position of the sun at these times was often marked on ancient monuments, so theoretically one can calculate the angle of the earth’s tilt corresponding to those times in the past. A number of measurements were recorded by ancient and medieval astronomers, and Dodwell obtained a summary of some of these results, which had been collected by the medieval Belgian astronomer Godefroid Wendelin. This work contained a list of the obliquity of the ecliptic from Thales circa 558 B.C., Eratosthenes circa 230 B.C., Hipparchus 135 B.C., Ptolemy A.D. 126, and several medieval astronomers, including Tycho Brahe, A.D. 1587 up to 1616.

Dodwell plotted their results and found that they fitted a logarithmic sine curve. That is, the curve represented a wobble in the tilt of the earth’s axis that was slowly decreasing over time, which was in addition to that predicted by Newcomb’s formula. Armed with this discovery, Dodwell went on to gather as many measurements of the obliquity of the ecliptic as he could find from solstice markings on ancient monuments and other ancient records. By plotting this data and correcting for Newcomb’s formula variations, he was able to plot a curve that showed that the wobble had essentially died out completely — that is, reached equilibrium — by around A.D. 1850, which was why it had not been noticed by 20th-century astronomers. However, the curve predicted that in the past the wobble had been quite large at around 2,345 B.C. From this, Dodwell proposed that there was a major disturbance of the earth’s rotational axis that occurred around 2,345 B.C., and that produced a wobble that has been slowly decreasing over an interval of 4,194 years (that is, a wobble that can be plotted as a diminishing sine curve in terms of its displacement from the mean axis).⁴²

Dodwell’s date of 2345 B.C., while being very close to the Genesis date for the Flood calculated as being around 2303 B.C., is based on an extrapolation that is heavily influenced by the oldest point on his curve. This corresponds to measurements at the solar temple of Amen-Ra, built by Amenemhet I at Karnak Egypt, which was oriented to the setting sun of

42. George F. Dodwell, “Our Tilted Earth or the Obliquity of the Ecliptic: Ancient, Medieval, and Modern Observations of the Obliquity of the Ecliptic, Measuring the Inclination of the Earth’s Axis, in Ancient Times and Up to the Present,” 1962, at http://www.setterfield.org/Dodwell_Manuscript_1.html.

the summer solstice at the date of its foundation, traditionally assigned as 2045 B.C.

However, Egyptian chronology is problematic and highly controversial. An alternative date for Amenemhet I would be 1703 B.C., which would change Dodwell's extrapolated date to a time a hundred years or so after the biblical date for the Flood.⁴³

Of course, we do not actually know what event caused the major deflection of the earth's axis at this time and what effect it had on the earth. For example, the disturbance of the earth's axis may have been associated with the rapid movement of the continental plates and the production of mountain ranges such as the Himalayas, European Alps, and mountain ranges of the Americas. These are events that, on the basis of the fossil record (that is, the occurrence of fossils high up in these mountain ranges), took place sometime after the Flood. Whatever the event, we know from the obliquity of the ecliptic data that we can measure at the present time that some major physical event that was large enough to produce a significant deflection of the angle of the earth's tilt did occur roughly about the time of or just after the biblical date for Noah's Flood.

When we consider the overall historical evidence that we have, the naming of the nations, the chronological dates for ancient nations, and the Flood accounts preserved in the ancient traditions of many cultures around the world, including the Ebla tablets' records, support for the historical accuracy of the Genesis account is significant. When combined with scientific findings such as the deuterium depletion effect possibly explaining the change in the lifespan after the Flood, and astronomer Dodwell's observations of a major event affecting the tilt of the earth around the time of the Flood, we have considerable consistent historical data collaborating the geological evidence for an historical worldwide Flood.

43. John Ashton and David Down, *Unwrapping the Pharaohs: How Egyptian Archaeology Confirms the Biblical Timeline* (Green Forest, AR: Master Books, 2007), p. 206.



Chapter 9

Erosion Rates, Sedimentation Rates, and Other Evidence in Conflict with Radiometric Dating Ages

One of the foundational assumptions underpinning evolution is the great age of the earth and in particular the hundreds of millions of years assigned to the fossil-bearing strata of the so-called geologic column. However, are the fossils and rocks really that old? Just about every major national park I have visited has a mural of the region with a caption stating that the various rock formations are so many million years old. Similarly, many nature documentaries air commentary to the effect that the particular animals or plants featured evolved so many million years ago.

This wide publicity for the long ages view of earth's history is not surprising, as this assumption is now comprehensively entrenched in secular education. However, the reasons for its widespread support are possibly underpinned by a reluctance to accept a young-earth view, as this would be seen as lending support to the Bible as a reliable historical document. For example, there is now substantial evidence for the severe marginalization of some scientists who subscribe to the view that life on earth must have been intelligently designed, rather than being the result of random processes. I referred to some examples of this type of vilification earlier in this book,

and a documentary illustrating the extent and severity of this intentional censorship of scientists has been prepared by Ben Stein.¹

One of the main reasons for the strong support for the long ages evolutionary view of earth's history comes from published radiometric dating results. So I will discuss this dating method in some detail later in the next chapter. It is important to remember, however, that the radiometric dating method relies on a number of assumptions that cannot be proven. In effect, it is at best only an indicator of relative ages and not absolute ages.

I mention this point now because there is a substantial amount of solid logical evidence that the earth must be young, and that the global Flood was relatively recent, that is, only thousands of years ago, not millions of years. In my view, it is important that the highly controversial rock-dating issue be evaluated in the context of many different dating methods or age indicators available to us. Let us now consider some of these.

The reader may recall from chapter 5 that Hutton used the rates of sedimentation in river deltas to propose the long ages for the formation of the vast sedimentary rock deposits and the fossils they contain. We now have much more accurate data on erosion and sedimentation rates. So let us examine what these research findings indicate.

Plants and animals need water to survive. On the continents, water is provided by falling rain and snow. The excess water drains off the mountains into rivers that enter lakes or oceans. As this rainwater flows, it carries particles of eroded materials from soil and rocks that eventually find their way into rivers. By repeated sampling of the sediment content of river water at its mouth, we can make estimates of the amount of sediment being carried away and the rate at which the nearby topography is being eroded. Sedimentologists have made such estimates for a number of the world's rivers and mountain regions.² Some of these results are in Table 9.1.

In many of the assessments in Table 9.1 the river measurements have not taken into account the bed load in the river — that is, sediments rolled or pushed along the riverbed by the flow of water and not readily observed in the gauging stations. Also, the measuring procedures do not readily account for the extra transport of material that occurs during catastrophic events such as major floods. So actual long-term erosion rates will probably be much faster.

1. See www.exposedthemovie.com; also J. Bergman, *Slaughter of the Dissidents: The Shocking Truth about Killing the Careers of Darwin Doubters* (Port Orchard, WA: Leafcutter Press, 2008).

2. S.H. Beaver, editor, *Geographies for Advanced Study*, 3rd edition, "Geomorphology," by B.W. Sparks (London: Longman Group, 1986), p. 509–510.

Table 9.1 Average Lowering of Drained Topography (inches and millimeters per 1,000 years) by Major Rivers

River Name	Average Lowering inches / mm	River Name	Average Lowering inches / mm
Wei-Ho	53 / 1,350	Yangtse	6.7 / 170
Hwang-Ho	35 / 900	Po	4.7 / 120
Ganges	22 / 560	Garonne and Colorado	.0 / 100
Alpine Rhine and Rhone	13 / 340	Amazon	2.8 / 71
San Juan (USA)	13 / 340	Adige	2.6 / 65
Irrawady	11 / 280	Savannah	1.3 / 33
Tigris	10 / 260	Potomac	0.6 / 15
Isère	9.5 / 240	Nile	0.5 / 13
Tiber	7.5 / 190	Seine	0.3 / 7
Indus	7.1 / 180	Connecticut	0.04 / 1

Let us consider what these erosion rates imply. For example, from table 9.1 we see that around the Colorado River we can expect the topography to be eroded about 4 inches (100 mm) per thousand years. The Colorado River flows through the Grand Canyon, which is up to around a mile (1.6 km) deep and contains fossil-bearing strata going back a supposed 500 million years, with the oldest rocks claimed to range up to 3 billion years old.³ However, on the basis of the current erosion rate, the area should have eroded away in less than 20 million years. So how can the fossil strata be hundreds of millions of years old?

One explanation that could be offered is that these older rocks were buried under younger rocks that have eroded away. Since the rocks at the top of the Grand Canyon are supposedly 240 million years old,⁴ and given an erosion rate of 4 inches (0.1 m) per 1,000 years, they would have to have been buried under about 15 miles (24 km) of sediments to have survived erosion up to the present time. That represents overburden almost three times the height of Mount Everest spread over a vast area of what is now

3. S. Chernicoff and R. Venkatakrishnan, *Geology: An Introduction to Physical Geology* (New York: Worth Publishers, 1995), p. 217.

4. Ibid.

the United States, which would have to have been ultimately eroded away and carried into the ocean.

Alternatively, we could use in our calculation a more widely used estimated average erosion rate for continents of 2.4 inches (60 mm) per 1,000 years.⁵ Using this value, the thickness of overburden would have to be around 9 miles (14.4 km) or almost twice the height of Mount Everest and have extended over a vast area of the North American continent.

This is not a new conundrum for geologists. Since the 1950s, a number of geologists have pointed out that based on estimated erosion rates, the North American continent, which has an average height of around 2,030 feet (620 m), could erode away in just ten million years.⁶ Yet on the basis of radiometric dating, the continents supposedly formed more than 2,500 million years ago.⁷ How can the fossil strata on the continents be so old if we observe such rapid erosion? Cambridge geologist B.W. Sparks points out that the Yellow River (Hwang-Ho) erosion rates could erode away an area with an average height of that of Mount Everest in just ten million years.⁸

Rates of erosion are even higher in the mountains, with some reported rates shown in Table 9.2

We know from the fossil records that there were lush forests and massive amounts of vegetation that became the coal deposits we find around the world. To produce such vegetation, the climate requires much rainfall, which is typically associated with higher rates of erosion such as in the 315 and 750 inches per 1,000-year values given in Table 9.2. During catastrophic events such as those that buried the dinosaurs and forests, erosion rates would have been enormous. This means that the overburden required to preserve the supposedly hundreds-of-millions-of-years-old strata until the present day would be unrealistically thick — many tens of miles or more.

This overburden of younger deposits would have to eventually end up in the oceans. However, 5- or 10-mile (8- or 16-km) thick layers of sediments are not found on the ocean floor as the result of hundreds of millions of

5. S. Judson and D.F. Ritter, "Rates of Regional Denudation in the United States," *Journal of Geophysical Research*, vol. 69 (1964): p. 3395–3401; R.H. Dott Jr. and R.L. Batten, *Evolution of the Earth*, 4th edition (New York: McGraw-Hill Book Co., 1988), p. 155.

6. Ibid.

7. R. Huggett, *Catastrophism: Systems of Earth History* (London: Edward Arnold, 1990), p. 232; A. Kröner, "Evolution of the Archean Continental Crust," *Annual Review of Earth and Planetary Sciences*, vol. 13 (1985): p. 49–74; S.M. McLennan and S.R. Taylor, "Continental Freeboard, Sedimentation Rates and Growth of Continental Crust," *Nature*, vol. 306 (1983): p. 169–172.

8. S.H. Beaver, editor, *Geographies for Advanced Study*, 3rd edition, "Geomorphology," by B.W. Sparks (London: Longman Group, 1986), p. 509–510.

years of erosion. Instead, the average thickness of the sediments on the ocean floor is only about 1,500 feet (450 m).⁹

From this observation we can conclude that the continents could not have been eroding for hundreds of millions of years and the fossil layers cannot be up to 500 million years old. Instead, the evidence strongly suggests that the fossil-bearing sedimentary strata found around the world must be relatively recent.

Table 9.2 Reported Rates of Erosion in Inches and Millimeters Per 1,000 Years in Mountain Regions

Mountain Name	Lowering Rate inches / mm
Hydrographers Range (Papua New Guinea at sea level) ¹⁰	3 / 80
Hydrographers Range (Papua New Guinea at 3,200 feet / 975 meters) ¹¹	20 / 520
Guatemala-Mexico border mountains ¹²	36 / 920
Himalayas ¹³	39 / 1,000
Mount Rainier, Washington ¹⁴	315 / 8,000
Papua New Guinea volcano ¹⁵	750 / 19,000

The relatively thin layer of sediments on the ocean floors can provide us with new clues as to the age of the continents. Oxford and Cambridge University-educated geographer and retired government consultant Dr. Colin Mitchell has estimated the rate at which sediments enter the oceans. Using data for suspended solids carried by rivers and glaciers, contributions from volcanoes and windblown dust, and correcting for solids removed in sea spray, he has calculated that about 26.8 billion tons of solids enter the

9. B.P Luyendyk, “Ocean basin,” Encyclopedia Britannica, Inc., Jan. 11, 2012, <http://www.britannica.com/EBchecked/topic/424338/ocean-basin>. Note average sediment thickness varies between oceans, e.g., in the Pacific it ranges around 1,000–2,000 feet (300–600 m), while in the Atlantic it is about 3,280 feet (1,000 m). In some ocean areas it is only about 320 feet (100 m) thick.

10. B.P. Ruxton and I. McDougal, “Denudation Rates in Northeast Papua from Potassium-argon Dating of Lavas,” *American Journal of Science*, vol. 265 (1967): p. 545–561.

11. Ibid.

12. J. Corbel, “Vitesse de L’erosion,” *Zeitschrift für Geomorphologie*, vol. 3 (1959): p. 1–28.

13. H.W. Menard, “Some Rates of Regional Erosion,” *Journal of Geology*, vol. 69 (1961): p. 154–161.

14. H.H. Mills, “Estimated Erosion Rates on Mount Rainier, Washington,” *Geology*, vol. 4 (1976): p. 401–406.

15. C.D. Ollier and M.J.F. Brown, “Erosion of a Young Volcano in New Guinea,” *Zeitschrift für Geomorphologie* (1971): p. 15–28.

oceans each year.¹⁶ Mitchell uses an older reported value of 3,000 feet (900 m) for the average thickness of sediment on the ocean floor, and calculates that it would take only about 28 million years to deposit the sediments we now find on the ocean floor.¹⁷

Marine biologist Dr. Ariel Roth reports a similar ocean sediment deposition estimate of 24,108 million tons per year, which he obtained from the average of 12 ocean sedimentation rate studies reported in the literature between 1950 and 1993.¹⁸ Using this result and the more recent average ocean sediment thickness value of 1,500 feet (450 m), together with an ocean area of 139.4 square miles (360.9 million square km), and a sediment bulk density of 1.7 tons per cubic yard (2.3 tonnes per cubic meter), the calculated time to deposit the ocean floor sediments is only 15.5 million years. Additionally, the rapid transport of massive amounts of sediment during the catastrophic conditions that buried the animals and plants in the fossil strata would greatly reduce the time taken to accumulate the ocean sediments we observe at the present time.

Material released by volcanoes provides further dating clues. It has been estimated from data from volcanic eruptions between 1940 and 1980 that at the present time volcanoes around the world release on average about one cubic mile (four cubic km) of material onto the earth's surface per year.¹⁹ However, given the much larger number of now-dormant volcanoes, we can estimate that volcanic activity was much greater in the past. Also, some volcanic eruptions have emitted much larger volumes.²⁰ For example, the Tambora (Indonesia) eruption in 1815 ejected an estimated 25–70 cubic miles (100–300 cubic km) of material, and the Lake Taupo (New Zealand) eruption released an estimated 260 cubic miles (1,100 cubic km) of material. However, assuming the modest average value of one cubic mile (four cubic km) of material per year, if the continents are really over 2,500 million years old, then during that time 2,500 cubic miles (10,000 million cubic kilometers) of volcanic material should have accumulated. That is enough to have covered the entire surface of the earth (oceans included) to a depth of 12.2 miles (19.6 km).

16. Colin Mitchell, *The Case for Creationism* (Alma Park, Grantham, England: Autumn House Limited, 1994), p. 78–80.

17. Ibid., p. 80. Note that Mitchell uses an ocean area of 139.4 square miles (360.9 million square km) and a bulk density value for the sediments of 1.7 tons per cubic yard (2.3 tonne per cubic meter).

18. Ariel A. Roth, *Origins: Linking Science and Scripture* (Hagerstown, MD: Review and Herald Publishing Association, 1998), p. 265.

19. Ibid. p. 267–268.

20. S.E. Bryan, I.U. Peate, D.W. Peate, et al., “The Largest Volcanic Eruptions on Earth,” *Earth-Science Reviews*, vol. 102 (3–4) (2010): p. 207–229.

However, it has been estimated that the surface of the earth has only 33 million cubic miles (135 million cubic km) of sediments of volcanic origin.²¹ Using the modest one cubic mile (four cubic km) per year deposition rate, these sediments would be deposited in less than 34 million years. With more frequent and larger volcanic eruptions occurring in the past, this time period would be substantially reduced even further. Again we can see that strong evidence is accumulating that the continents cannot be anything like 2,500 million years old as indicated by the radiometric dating methods. Instead, they have to be less than tens of millions of years old, which greatly reduces the time available for evolution to happen.

There are many other clues suggesting that life on earth is much younger than ages calculated by radiometric methods. For example, we have discussed in chapter 5 how scientists have discovered soft, fresh-looking tissues in dinosaur remains purportedly 80 million years old.²² These protein-based tissue structures are not expected to survive more than tens of thousands of years due to the natural breakdown of the large molecular chains. The discovery of intact protein sequences is quite strong evidence that the dinosaur remains are only thousands of years old, not millions of years old.

For similar reasons, viable bacteria isolated from salt crystals in Permian strata claimed to be 250 million years old strongly suggests that these strata are only thousands of years old in reality.²³

We have also discussed previously how mutations are notoriously harmful to the DNA in living organisms. For example, some years ago it was discovered that human DNA has a high mutation rate and is deteriorating at an alarming rate.²⁴ This means that if humans and their ancestors had existed for as long as evolutionists claim, we should have degenerated to the point of extinction long ago. Calculations based on the accumulation of detrimental mutations in just the mitochondrial DNA genome alone suggest that the evolutionary ancestral line leading to humans would have become extinct after 20 million years.²⁵

21. Roth, *Origins: Linking Science and Scripture*, p. 268.

22. M.H. Schweitzer, “Biomolecular Characterization and Protein Sequences of the Campanian Hadrosaur *B. Canadensis*,” *Science*, vol. 324 (2009): p. 626–631.

23. C.L. Satterfield, T.K. Lowenstein, R.H. Vreeland, et al., “New Evidence for 250 Ma Age of Halotolerant Bacterium from a Permian Salt Crystal,” *Geology*, vol. 33 (2005): p. 265–268.

24. T. Beardsley, “Mutations Galore: Humans Have High Mutation Rates. But Why Worry?” *Scientific American*, vol. 280, no. 4 (1999): p. 32, 36.

25. L. Loewe, “Quantifying the Genomic Decay Paradox Due to Muller’s Ratchet in Human Mitochondrial DNA,” *Genetics Research, Cambridge*, vol. 87 (2006): p. 133–159.

Cornell University genetics researcher Dr. John Sanford points out that when the whole genome is considered, assuming the currently observed mutation accumulation rates, human DNA accumulates a huge 90,000 errors in just 6,000 years. That is, about 0.003 percent of our DNA becomes inoperative in less than 10,000 years. By 6 million years, 3 percent of our DNA or one in every 33 pieces of code would be damaged, and it is inconceivable that a genetic code would still function.²⁶ In other words, we would have died out long before 6 million years. What we observe in research laboratories today is DNA slowly deteriorating, not new DNA evolving. This means we actually observe the very opposite of evolution.

The extremely complex and interdependent biochemistry of all higher organisms such as birds and mammals is encoded for in the DNA of the organism. For example, if the beta cell production code is damaged, we will quickly die from diabetes. If the synthesis code for one of the proteins in the blood-clotting mechanism is damaged, we will soon bleed to death. The outcome is similar for thousands of crucial biochemical pathways. When one biochemical synthesis pathway breaks down, the whole organism is affected. It has also been discovered that parts of the genetic code are themselves interdependent. For example, the genes that code for the micro-RNA make up only about 1 percent all human genes, yet they regulate the protein production for 10 percent or more of the total genetic code.²⁷ Thus, mutations in micro-RNA genes can therefore have much amplified effects in terms of disease. For example, damage to certain micro-RNA genes has been linked to many human proliferative diseases such as leukemia, lymphoma, colorectal cancer, prostate cancer, and several other cancers, as well as the loss of function of the fragile X mental retardation protein (FMRP), which causes fragile X syndrome, the most prevalent form of mental retardation.²⁸

While there are a certain number of back-up systems and repair mechanisms encoded for, these also are vulnerable to mutation damage. For complex organisms like humans, it is likely that extinction would occur at damaged DNA code levels of one in a thousand or possibly even at one in ten thousand, corresponding to only 200,000 years and 20,000 years of accumulated mutations, respectively. That is, on the basis of the accumulated ongoing breakdown of human DNA that we observe at the present time,

26. John C. Sanford, *Genetic Entropy and the Mystery of the Genome* (Waterloo, NY: FMS Publications, 2008), p. 153.

27. B. John, A.J. Enright, A. Aravin, et al., 2004, “Human MicroRNA Targets,” *PLoS Biology*, vol. 2, no. 11, (2004).

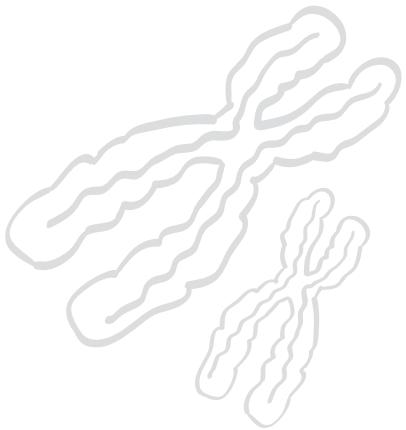
28. Ibid.

homo DNA is unlikely to be more than 200,000 years old and probably less than 20,000 years old.

Further, Cornell University geneticist Dr. John Sandford, who was called as an expert witness in the area of DNA mutation rates, stated at the Kansas State Board of Education Science Hearing, that his best estimate for the age of life on earth was less than 100,000 years.²⁹

The DNA mutation rate data that we observe and measure at the present time indicates very much shorter ages for life on earth, compared with the long ages calculated from radiometric data. I have also shown that present-day data for continental and mountain erosion rates, ocean sediment deposition rates, and volcanic material deposition rates all indicate that the continents cannot be hundreds and thousands of millions of years old. Furthermore, if catastrophic events are factored in, the age of the continents and fossil life on them is shortened further. If a global catastrophic flood model is adopted, which provides a very good fit for just about all the data we observe, the age of the continents and the fossils can be relatively young — only thousands of years. So if we have very strong and consistent evidence that life on earth cannot be anywhere near as old as the radiometric dates suggest, we need to look closely at the radiometric dating methods and in particular the assumptions that underpin them.

29. From transcript. See <http://www.talkorigins.org/faqs/Kansas/kangaroo4.html#p1705>.



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Chapter 10

Radiometric Dating Methods Give Old Ages for Young Rocks, and Other Evidence of Major Problems with This Method of Dating

Radioactivity was first discovered in 1896 when it was found that the element uranium slowly emitted nuclear radiation. Since that time a considerable number of elements have been found to undergo radioactive decay. The half-lives of some radioactive elements were initially measured in the early 1900s, and the first radiometric-based time scale was proposed by A. Holmes in 1913. It was based on relatively coarse measurements. However, a revised edition was published in 1947, based on the dating of uranium found in minerals from five locations at different levels in the geologic column.

Sedimentary strata cannot usually be dated directly by radiometric methods. Instead, the fossil layers are dated by measuring the ages of the surrounding igneous or volcanic rocks. When the geologic column was dated, interpolation of dates between the five points was done on the assumption that the length of the geologic period is proportional to the maximum thickness of

sedimentary rocks formed during that period.¹ This uniformitarianism-based “assumption” of sedimentation rates was used to estimate the dates of the intermediate time periods in the column even though, as we have seen in previous chapters, there is clear evidence of a catastrophic past in the earth’s history. Holmes’ dates for the various sections of the geological column continued to be used until the early 1960s when subsequent new data was obtained. Since that time, the ages assigned to the various strata have been updated in accordance with new radiometric dating results.

Radiometric dating relies on a number of assumptions — it is not a direct dating method. For example, in the uranium-thorium-lead dating method, uranium atoms with an atomic weight of 238 (uranium isotope 238, or simply uranium 238) decay via a series of isotopes to lead 206. The half-life for this reaction, that is, the time for half the unstable uranium 238 to decay into the stable lead 206, has been measured as being 4.47 billion years. Uranium 235 has a half-life of 0.704 billion years and decays via a series of isotopes to lead 207. Thorium 232, with a measured half-life of 14.1 billion years, likewise decays to lead 208.

Other commonly used isotope dating systems are rubidium-87 to strontium-87 with a half-life of 48.8 billion years, potassium-40 to argon-40 with a half-life of 1.25 billion years, samarium-147 to neodymium-143 with a half-life of 106 billion years, and the well-known carbon-14 to nitrogen-14 with a half-life of just 5,730 years.

Rocks are dated by very accurately measuring the concentration of the various isotopes of radioactive elements they contain. From the ratios of the mother-daughter elements and equations for the rate of nuclear decay, the age of the rock can be calculated. That is, for a simple system, the “model” age of the rock T (millions of years) would be given by the following formula:

$T = (t/0.693) \ln\{(B+1)/A\}$ where t is the half-life in millions of years, A is the concentration of radioactive parent atoms, B is the concentration of stable daughter atoms, and ln is the natural logarithm to the base e, that is, 2.71828, etc.

In more complicated systems involving more parent and daughter isotopes, calculations of age can still be made, but the mathematics is considerably more complicated. For example, sometimes there is need to take into account by estimation the effect of stray neutrons from other radioactive material.

1. J.L. Kulp, “Geological Time Scale,” *McGraw-Hill Encyclopedia of Science and Technology*, Vol. 6 (1960), p. 135–137.

The radioactive dating method relies on a number of assumptions. These are as follows:

1. That when the rock was formed there were no daughter atoms present. That is, that all the daughter atoms present are the products of the radioactive decay of the parent.
2. That over the claimed time period — usually tens to thousands of millions of years — none of the parent or daughter element has been physically removed, for example, by leaching.
3. That during the same period no additional parent or daughter element has accumulated that cannot be accounted for by a known radioactive process.
4. That the rate of decay has not changed in the past.

To reduce the errors from assumptions 1 to 3, a technique called isochron dating has been developed, whereby ratios of parent and daughter isotopes for different minerals from the same rock sample are calculated and plotted against each other. The age of the rock can then be calculated from the slope of the line. If a good straight-line fit is obtained, the result is considered reliable, and minimal losses of material are assumed. However, the isochron technique does not make the method bulletproof as we still have no way of knowing if other processes, such as the past mixing of younger and older rocks in the molten state, have affected the result. This is well illustrated by the number of cases where isochron dating of the same rock by different isotope methods gives wildly differing ages.

The isotope geology text by G. Faure cites a number of cases. One example is Pleistocene to recent lava dated as less than 1.6 million years old from its position in the rock layers, which has been dated as 773 million years old, using rubidium-strontium dating. Upper Miocene to Pliocene lava was dated at 5 to 9 million years old by potassium-argon dating and dated at 31–39 million years old by rubidium-strontium dating. In another case, lava dated stratigraphically as Pliocene to Holocene, that is, less than 5.3 million years old, gave rubidium-strontium-dated ages of 570 million years and 870 million years. Another Pliocene to Holocene rock was dated as being 1.5 billion years old by the rubidium-strontium method and a Miocene to Holocene assigned rock (that is, less than 24 million years old) was dated as 1.2 billion years old by the rubidium-strontium method.²

2. G. Faure, *Principles of Isotope Geology*, second edition (New York: John Wiley and Sons, 1986), p. 145–147.

A technical discussion of the assumptions associated with mixing line interpretation of results and other attempts to explain widely differing radioactive dating results on the same rocks is given by research geologist Dr. Andrew Snelling.³

More recently, that is, since 1997, multiple sample isochron dating studies using very careful methods of chemical analysis have yielded similar discordant results. For example, at Somerset Dam in Queensland, Australia, 15 rock samples from a conventionally dated Jurassic-Triassic intrusion (that is, supposedly 216 million years to 225 million years old) gave potassium-argon “model” ages ranging from 183 million years to 252 million years, with an isochron date of 174 million years, yet the error of the dating method was estimated to be only \pm 9 million years. When dated by the rubidium-strontium isochron method, an age of 393 million years was obtained. When dated by the samarium-neodymium isochron method, an age of 259 million years was calculated. The lead-lead dating method gave an age of 1,425 million years \pm 1,000 million years for the same rock intrusion.⁴ So how old would you say the intrusion was? 174 million years? 1,425 million years? Some date in between? Or some different date altogether?

Another example is the dating of the Cardenas Basalt in the eastern Grand Canyon in Arizona. The conventional age from previous radiometric dating was $1,103 \pm 66$ million years. Potassium-argon “model” ages, as dated from radioisotope analyses by the Geochron Laboratories, Cambridge, Massachusetts, ranged from 577 ± 12 million years to $1,013 \pm 37$ million years, with an isochron method age of 516 ± 30 million years. Ages calculated from radioisotope analyses by the isotope laboratory at the University of Colorado in Boulder, Colorado, gave rubidium-strontium-based isochron ages of $1,111 \pm 81$ million years for 19 samples and 892 ± 82 million years for 22 samples. Samarium-neodymium measurements from the same laboratory gave a calculated isochron age of $1,588 \pm 170$ million years, while lead-lead measurements gave an isochron age of $1,385 \pm 950$ million years.⁵ So how old is the basalt — 516 million years? 1.588 billion years? Or — you pick an age?

A similar spread of calculated ages was obtained from the very careful dating of 20 or so samples from the Brahma amphibolite rocks near

3. L. Vardiman, A.A. Snelling, and E.F. Chaffin, editors, *Radioisotopes and the Age of the Earth, “Isochron Discordances and the Role of Inheritance and Mixing of Radioisotopes in the Mantle and Crust,”* by Andrew A. Snelling (El Cajon, CA: Institute for Creation Research and Chino Valley, AZ: Creation Research Society, 2005), p. 393–524.

4. Ibid., p. 405–414.

5. Ibid.

the base of the Grand Canyon. The rubidium-strontium age was $1,240 \pm 84$ million years, the samarium-neodymium age was $1,655 \pm 40$ million years and the lead-lead age was $1,883 \pm 53$ million years.⁶ In this case, we have over 600 million years' difference in the ages calculated for the same rocks.

Another interesting case is the stark contrast between the age of zircon grains in the Jemez granodiorite of New Mexico, which date as 1.5 billion years old by the uranium-lead dating method, and date at only about 6 thousand years old by the uranium-helium diffusion method of dating.⁷

There are also examples where rocks of historically known ages record very old dates when dated by radiometric dating. For example, historically recent (that is, only centuries old) lava flows in Hawaii were dated as being up to 3.34 billion years old.⁸ Recent historically dated volcanic rocks from the Azores, Tristan da Cunha, and Vesuvius, although known to be only hundreds of years old, dated as ranging from 100 million years old to 10.5 billion years old using uranium-lead dating.⁹ Geologists explain away these anomalous dates as representing much older mantle sources of the rock. However, they ignore the implications that this really makes radiometric dating meaningless.

A very careful radiometric dating study of lava flows from the 1949 and 1954 eruptions of the Mount Ngauruhoe volcano on the north island of New Zealand was undertaken in the late 1990s. Two or three rock samples weighing two to three kilograms each were collected from each of the following lava flows: February 11, 1949; June 4, 1954; June 30, 1954; and July 14, 1954, as well as two samples from the February 19, 1975, eruption avalanche deposits. Sub-samples were sent to the PRISE Laboratory in the Research School of Earth Sciences at the Australian National University in Canberra for rubidium-strontium, samarium-neodymium and lead-lead isotopic analyses. The rubidium-strontium isochron gave an apparent age of 133 ± 87 million years; the samarium-neodymium isochron gave an apparent

6. Ibid., p. 416–418.

7. D.R. Humphreys, S.A. Austin, J.R. Baumgardner, and A.A. Snelling, “Recently Measured Helium Diffusion Rate for Zircon Suggests Inconsistency with U-Pb Age for Fenton Hill Granodiorite, EOS,” *Transactions of the American Geophysical Union*, vol. 84, no. 46 (2003): Fall Meeting Supplement, Abstract V32C-1047.

8. J.F. Evernden, D.E. Savage, G.H. Curtis, and G.T. James, “Potassium-argon Dates and the Cenozoic Mammalian Chronology of North America,” *American Journal of Science*, vol. 262 (1964): p. 145–198. Also see many examples discussed in A.P. Dicken, *Radiogenic Isotope Geology* (Cambridge, UK and NY: Cambridge University Press, 1995).

9. S.P. Clementson, “A Critical Examination of Radioactive Dating of Rocks,” *Creation Research Society Quarterly*, vol. 7 (1970): p. 137–141.

age of 197 ± 160 million years; and the lead-lead isochron gave an apparent age of $3,908 \pm 390$ million years.¹⁰

If rocks known to be less than 100 years old date as being hundreds of millions of years old and billions of years old, how can we really know the age of any rocks from radiometric dating results? Rocks dating as being hundreds of millions of years old could be any age if, in fact, they are simply reflecting some isotopic mixing of different rock from different parts of the mantle.

Another factor that is assumed is that decay rates have been constant. Some years ago it was suggested that changes in physical pressure can change the rate of decay.¹¹ Also from Einstein's general theory of relativity, changes in gravity affect the rate of nuclear decay. For example, atomic clocks work on radioactive decay rates. An atomic clock at the National Bureau of Standards in the high altitude mountains of Boulder, Colorado, runs about 5 microseconds faster per year. This is because of the lower gravity at that high altitude, compared to the same atomic clock near sea level at the Royal Observatory in Greenwich, England.

We do not know how gravitational and other forces may have affected the rate of decay in the past. However, we do have geological evidence of accelerated radioactive decay in the past, which also would give the appearance of much greater age to rocks dated by these methods. It includes research scientists' reports on accumulation and diffusion rates from radioactive decay observed in Precambrian granitic rocks at Fenton Hill in New Mexico. These suggest that hugely accelerated rates of radioactive decay occurred in the recent past, that is, only thousands of years ago.¹² Other studies of the comparison of uranium-238 radiohalos and polonium radiohalos in granites and metamorphic rocks have suggested that these particular types of rock signatures must have formed relatively recently as a result of accelerated nuclear decay.¹³

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10. R.L. Ivey Jr., editor, *Proceedings of the Fifth International Conference on Creationism*, “The Relevance of Rb-Sr, Sm-Nd, and Pb-Pb Isotope Systematics to Elucidation of the Genesis and History of Recent Andesite Flows at Mt. Ngauruhoe, New Zealand, and the Implications for Radioisotopic Dating,” by A.A. Snelling (Pittsburgh, PA: Creation Science Fellowship Publishers, 2003), p. 285–303. See <http://www.answersingenesis.org/articles/aid/v5/n1/mt-ngauruhoe-isotope>.
 11. W.K. Hensley, W.A. Bassett, and J.R. Huizenga, “Pressure Dependence of the Radioactive Decay Constant of Beryllium-7,” *Science*, vol. 181, no. 4104 (1973): p. 1164–1165.
 12. L. Vardiman, A.A. Snelling, and E.F. Chaffin, editors, *Radioisotopes and the Age of the Earth*, “Young Helium Diffusion Age of Zircons Supports Accelerated Nuclear Decay,” by D.R. Humphreys (El Cajon, CA: Institute for Creation Research and Chino Valley, AZ: Creation Research Society, 2005), p. 25–100.
 13. Ibid., “Radiohalos in Granites: Evidence for Accelerated Nuclear Decay,” by A.A. Snelling, p. 101–208.

These findings seriously challenge the validity of the assumption, as used in radiometric dating calculations, that decay rates have been constant for billions of years. It also implies that real ages are going to be very much younger than radiometric dating ages based on long half-life isotopes.¹⁴

There are other methodological assumptions that are applied to radiometric dating. These include some scientists' suggestions that if the radiometric age is not consistent with stratigraphic data, the radiometric date is not reliable.¹⁵ When this criteria is applied, it amounts to a circular reasoning bias, thus raising questions concerning the number of radiometric dates that have not been published because they did not concur with the standard geologic column age, or those perhaps re-dated to fit with widely supported evolutionary theories. For example, a volcanic deposit in Kenya called the KBS Tuff, which was rich in fossils, was originally dated at around 212–230 million years old. However, because this date did not match the fossil record dating, the deposit was re-dated by the same researchers using different samples and a new age of 2.61 million years was obtained.¹⁶

However, famous anthropologist Dr. Richard Leakey found a modern-looking human-like skull below the KBS Tuff in a layer that had been dated around 2.9 million years.¹⁷ Primitive tools had also been found in the KBS layer, and there was a lot of interest in determining the date of the KBS Tuff. Fossil horizons similar to those found below the KBS strata studied at the Omo River in Ethiopia had been dated at a much younger 2 million years. A subsequent study by researchers at the University of California, Berkeley, redated the KBS Tuff at a correspondingly younger 1.6 million years.¹⁸

Over the next five years, further dating studies were carried out and the tuff was again re-dated by Australian university researchers. They reported ages of 1.87 million years and 1.89 million years, which were consistent with

14. Ibid., "Summary of evidence for a Young Earth from the RATE Project," by L. Vardiman, S.A. Austin, J.R. Baumgardner, et al., p. 735–772.

15. D.L. Thurber, W.S. Broecker, R.L. Blanchard, and H.A. Potratz, "Uranium-series Ages of Pacific Atoll Coral," *Science*, vol. 149 (1965): p. 55–58.

16. F.J. Fitch and J.A. Miller, "Radioisotopic Age Determinations of Lake Rudolf Artefact Site," *Nature*, vol. 226, issue 5242 (April 18, 1970): p. 226–228.

17. F.J. Fitch, I.C. Findlater, R.T. Watkins, and J.A. Miller, "Dating of the Rock Succession Containing Fossil Hominids at East Rudolf, Kenya," *Nature*, vol. 251 (September 20, 1974): p. 213–215.

18. G.H. Curtis, R.E. Drake, T.E. Cerling, and J.H. Hampel, "Age of KBS Tuff in Koobi Fora Formation, East Rudolf, Keyna," *Nature*, vol. 258 (December 4, 1975): p. 395–398.

the estimated age for the mammal fossils on the basis of the evolutionary time scale.¹⁹

Dr. J.L. Kulp, professor of geochemistry at Columbia University, who helped collate revised dates for the geological column, proposed that for practical purposes the half-life of the radioisotope system chosen must be the same order of magnitude as the time span to be measured. He suggested that for ancient rocks, isotopes with half-lives of hundreds of millions of years should be chosen.²⁰ Assuming the age of the rock initially probably influences the result somewhat and again may introduce a bias. For example, following this principle, coal and diamonds, which are essentially carbon in different forms, would never be analyzed by carbon-14 dating. This is because they generally are assumed to be hundreds of millions of years old and out of the range of carbon-14 with its half-life of only 5,730 years.

Life on earth is based on compounds made from carbon-12. Plants in particular have a high carbon content and, when fossilized, can form coal. Plants get their carbon from carbon dioxide gas that forms a small percentage of the earth's atmosphere. Atomic particles called neutrons, which result from cosmic rays' interactions in the upper atmosphere, sometimes knock out a proton from the common nitrogen-14 atoms, transmuting a small number of them into radioactive carbon-14 atoms. Only about one carbon atom in a trillion carbon atoms is radioactive. These atoms subsequently emit a beta particle (electron), decaying back into nitrogen-14 atoms over time.

While plants and animals are alive they have essentially the same ratio of carbon-14 to carbon-12 as found in the atmosphere. (There is also a small percentage, approximately 1 percent, of carbon-13 atoms that are stable like carbon-12.) However, when plants or animals die and are buried, they cease to exchange carbon-14 with the atmosphere, and the level of carbon-14 slowly decreases as per the earlier decay formula. Consequently, after around 5,730 years, only about half as much carbon-14 would be expected. It follows that if a sample analyses tests as only having half as much carbon-14, it would be said to have an age of around 5,700 years. However, this assumes that the carbon-14 content of the atmosphere remains constant over time, and we have already seen that this is dependent on whether or

19. I. McDougall, R. Maier, P. Sutherland-Hawkes, and A.J.W. Gleadow, "K-Ar Age Estimate for the KBS Tuff, East Turkana, Kenya," *Nature*, vol. 284 (March 20, 1980): p. 230. See also: A.J.W. Gleadow, "Fission Track Age of the KBS Tuff and Associated Hominid Remains in Northern Kenya," *Nature*, vol. 284 (March 20, 1980): p. 225–230.

20. J.L. Kulp, "Rock (Age Determination)," *McGraw-Hill Encyclopedia of Science and Technology*, Vol. 11 (1960), p. 591–594.

not the flux of cosmic rays reaching the earth has been constant in the past. Cosmic rays are made up of high-energy protons that are positively charged, hence their impact on the atmosphere is affected by the earth's magnetic field. Cosmic ray intensities from the solar system and outer space may have varied considerably in the past, and the earth's magnetic field has also varied significantly in the past. For example, the earth's magnetic dipole moment has decreased 6.5 percent since the year 1900.²¹

If cosmic ray activity was lower at times in the past, measurements made at the present time would give much greater ages than their real age.

The accurate measurement of the ratio of carbon-14 to carbon-12 was also problematic up until the early 1980s when accelerator mass spectrometer (AMS) methods became available.

In the late 1990s, Australian research geologist Dr. Andrew Snelling had a number of fossilized wood samples from strata conventionally dated as being from 40 million to 250 million years old, according to the geologic column. However, the carbon-14 dating ages, as determined by a commercial dating laboratory using AMS technology, gave ages ranging from $20,700 \pm 1,200$ years and $44,700 \pm 950$ years.²²

Subsequently, an emergency medicine physician with an interest in carbon 14 dating, Dr. Paul Giem, published a review of the carbon-14 dating results for about 70 AMS measurements of fossils reported between 1984 and 2001. From their position in the rock strata, the fossil carbon specimens dated as being much older than 100,000 years and in many cases millions of years old.²³ None of these samples should have had any measurable carbon-14, yet they typically gave ages around 40,000–50,000 years. Dr. Giem observed that many samples, even though taken from very different geological time periods, gave a similar carbon-14 age. This fits well with the creation-flood model that propounds that most of the different fossil layers were formed at essentially the same time. Secondly, the persistence of carbon-14 in such a large number of widely differing fossil specimens from different locations strongly suggests that the fossils could be nowhere near as old as the geologic time scale claims. For example, Dr. Giem points out that by 300,000 years there would be not a single atom of carbon-14 left in a one-gram sample of fossil carbon. Therefore, in samples such as coal, which are tens of millions to hundreds of millions of years old, there

21. K. Kudela and P. Bobik, "Long-term Variations of Geomagnetic Rigidity Cutoffs," *Solar Physics*, vol. 224 (2005): p. 423–431.

22. Vardiman, Snelling, and Chaffin, editors, *Radioisotopes and the Age of the Earth*, "¹⁴C Evidence for a Recent Global Flood and a Young Earth," by J.R. Baumgardner, p. 589.

23. Paul Giem, "Carbon-14 Content of Fossil Carbon," *Origins* (GRI), vol. 51 (2001): p. 6–30.

should be no detectable levels of carbon-14. The fact that carbon-14 is detected in these samples clearly proves that these coal samples must be less than 300,000 years old, and in practical analysis terms have to be less than 100,000 years old. In other words, the coal-bearing strata cannot be anywhere near as old as the standard geologic column ages assigned to them.

Dr. Giem's work was followed in the early 2000s by a very careful study of the carbon-14 content of a range of coal samples from different parts of the United States. Ten samples were obtained from the U.S. Department of Energy Coals Sample Bank at Pennsylvania State University. The samples had been collected as 180-kilogram fresh samples from active coal mines and stored under argon gas. The samples were from deposits assigned to the Eocene, Cretaceous, and Pennsylvanian periods in the geologic column. That is, they were assigned ages ranging from around 40 million years to around 300 million years. These coal samples were carefully analyzed by precise AMS techniques and corrected for standard background effects. The samples all gave measurable levels of carbon-14 and gave calculated ages ranging between just 44,000 years and 57,000 years.²⁴ These results leave no time for evolution to occur and seriously challenge the ages assigned to the geologic column. The author of the report, Dr. John Baumgardner, a geophysicist and retired technical staff member from the Theoretical Division of the Los Alamos National Laboratory, points out that if a much higher carbon content in the biosphere existed in the past, as evidenced by the extensive deposits of coal and limestone, cosmic ray-generated carbon-14 would have been much lower than today's levels.

If an estimated lower and more realistic value for the carbon-14 level in the past is used in the calculation, an even lower average age of around 5,000 years is obtained for these coal samples, which would support the historical evidence for a global Flood.²⁵

A follow-up study was then carried out on diamonds believed to be between 1 billion and 3 billion years old on the basis of uniformitarian timelines. If the diamonds actually were this old, they should have absolutely no detectable carbon-14. It has been suggested that thermal neutrons generated by other radioactive elements such as uranium and thorium, etc., could generate carbon-14 in the earth's crust. This possibility has been considered, but the level produced would be so small as to be well below the level of

24. Vardiman, Snelling, and Chaffin, editors, *Radioisotopes and the Age of the Earth*, “¹⁴C Evidence for a Recent Global Flood and a Young Earth,” by J.R. Baumgardner, p. 587–609.

25. Ibid., p. 588.

carbon-14 detectable by AMS, and therefore it cannot be an explanation of any observed result.²⁶

Five kimberlite pipe diamonds, four from De Beers mines in Botswana and one from Kimberley in South Africa, together with an alluvial deposit diamond from Guinea, were carefully analyzed by the AMS method and found to contain measurable carbon-14 levels. The results gave an average carbon-14 dating age of only 55,700 years.²⁷ A further six alluvial diamonds from Namibia were then dated by the same researchers. All contained measurable carbon-14 levels, some at slightly higher levels.

Subsequent studies reported in 2007 by University of California researchers obtained similar results. They dated several diamonds using the high-precision Keck Carbon Cycle AMS spectrometer and obtained carbon-14 ages ranging from of 64.9 ± 0.4 thousand years to 80.0 ± 1.1 thousand years. Six fragments from a single diamond gave 69.3 ± 0.5 to 70.6 ± 0.5 thousand years.²⁸

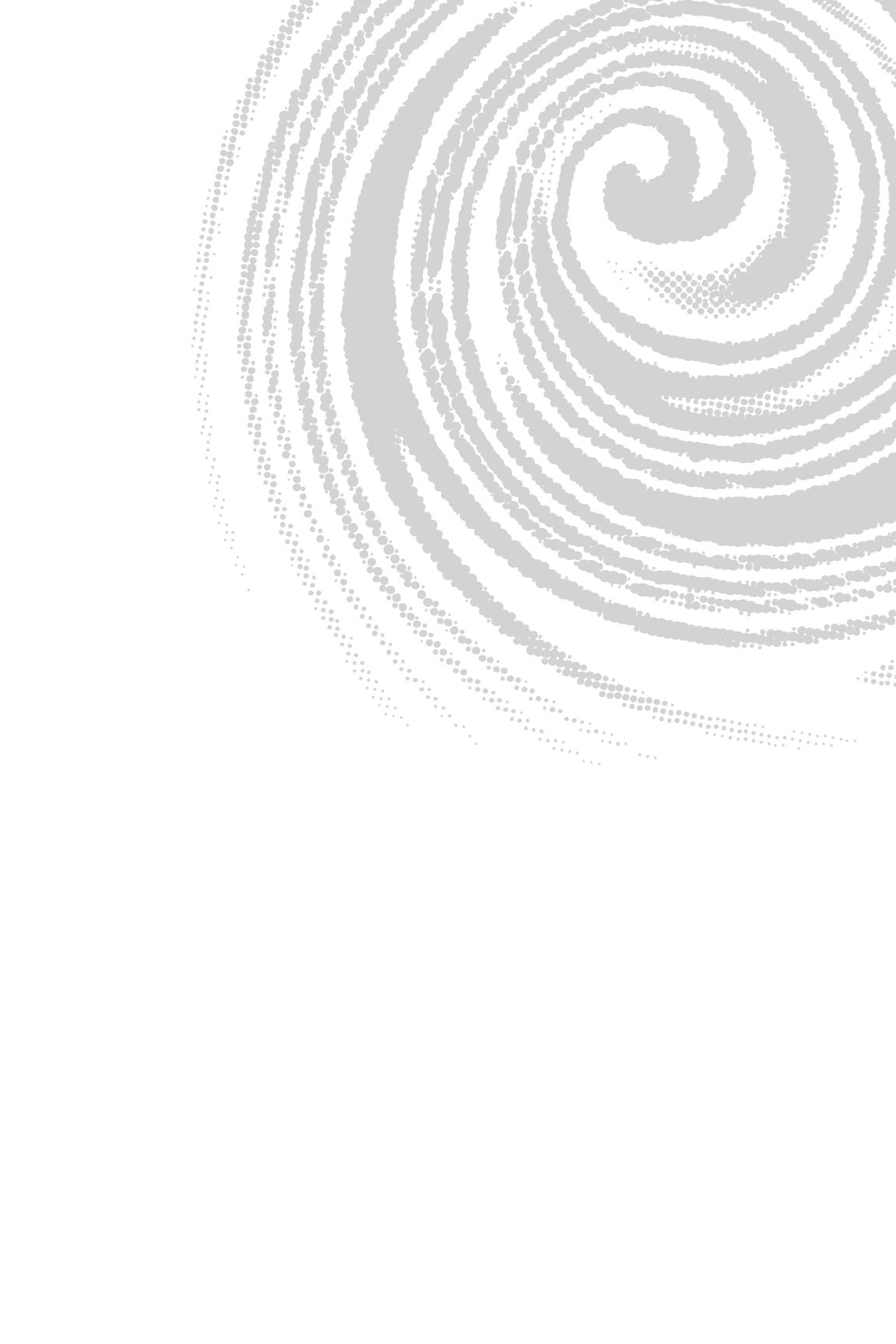
All the above results were statistically significant and provide very strong evidence that these diamonds, conventionally assumed to be a billion years old or more, contain measurable carbon-14 and therefore have to be less than 100,000 years old. This result does not allow anywhere near enough time for evolution to occur, as proposed by the standard evolutionary model.

When we look at the overall evidence we have available to us at the present time, there is a huge disparity between erosion and sedimentation rate age calculations and radiometric dating calculations for the age of the continents and the geologic column. Diamonds are supposed to be about the same age as the continents and yet, because we find measurable carbon-14 in them, they must be less than 100,000 years old and possibly as young as around 5,000 years old. When DNA mutation rates, the finding of soft tissues in dinosaur remains, and the historical accounts of a global Flood are considered, together with the different dating estimates, there is consistent evidence that there was a catastrophic global Flood event only thousands of years ago. It follows that much of the so-called geologic column is simply a record of the extinctions that took place during the Flood and volcanism catastrophe. Subsequently, it is very plausible to conclude that evolution has, in fact, not occurred.

26. Ibid., p. 614–616.

27. Ibid., p. 609–630.

28. R.E. Taylor and J. Southon, “Use of Natural Diamonds to Monitor ^{14}C AMS Instrument Backgrounds,” *Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms*, vol. 259, issue 1 (June 2007): p. 282–287.





Chapter 11

The Big-Bang Theory Is Not Supported by Observed Data

Our planet is a truly remarkable environment, different from any other planet in our solar system or from anything so far observed in nearby space. The size of the sun and our distance from it means that the earth's temperature is in the range that allows for life. The abundance of water, oxygen, and carbon, as well as many other factors, has made our planet seemingly perfect for life. In fact, some astronomers have referred to it as the "Goldilocks" planet.¹

Life as we know it is based on the element *carbon*, which has particular properties, including the ability to bond with up to four other atoms or chains of atoms. This enables carbon atoms to form the backbone of the multitude of polymer biomolecules that make the structures of our cells, their enzymes, and other essential molecules, including the genetic code itself.

There is a relatively large amount of carbon in our universe. Scientists have proposed that carbon and other elements formed as a result of nuclear synthesis from lighter atomic particles in stars. The famous Cambridge University astronomer Sir Fred Hoyle studied the reactions necessary to

1. See, for example, N. Lubrick, "Goldilocks and the Three Planets," *Astronomy*, vol. 31, no. 7 (2003): p. 36–41.

produce carbon, and calculated the energy levels in the carbon atom. He concluded that in order for carbon to have its unique chemical properties, its energy levels had to be so finely tuned that the probability that they could have been generated by blind forces of nature was utterly minuscule. He wrote that a common sense interpretation of the scientific data suggests that some super-calculating intellect must have designed the properties of the carbon atom.²

Hoyle also recognized that it was even more ridiculous to suppose that carbon atoms could come together to form life-sustaining biopolymers as a result of random chaotic processes. He and fellow mathematician Chandra Wickramasinghe calculated that the chances that carbon atoms could form the number of enzymes for the simplest life — all forming together at the right time — diminished progressively so that even if the whole universe was soup, it would still be improbable.³

It was Hoyle's view that rather than accept the unimaginably small probability of life having arisen through the blind forces of nature, one would be less likely to be wrong to suppose that the origin of life was a deliberate intellectual act.⁴

How the life-forming elements of carbon, oxygen, nitrogen, and hydrogen came into existence together with the other elements is usually explained in most college and university science classes in terms of “the big-bang theory.” This name was originally coined by Hoyle, who actually rejected the theory.⁵

The big-bang theory is an incredible construct of still unproven astronomical assumptions, contrived to provide a natural explanation as to how the universe came to be. So let us now consider an overview of the commonly taught “hot big-bang theory.”

It is initially important to note there is a common misconception as to what the big-bang theory portrays. Many people, including some scientists and astronomers, understand the theory to describe the scenario of “something” (scientifically referred to as a “singularity”) with extreme properties such as infinite heat and infinite density, suddenly appearing in the vacuum of empty space and rapidly expanding in three-dimensional space. As this

2. F. Hoyle, “The Universe: Past and Present Reflections,” *Engineering and Science*, vol. 45, no. 2 (November 1981): p 8–12. See: <http://callteches.library.edu/3312/1/Hoyle.pdf>.

3. F. Hoyle and C. Wickramasinghe, *Evolution from Space* (London: J.M. Dent & Sons, 1981), p. 23–33.

4. Hoyle, “The Universe: Past and Present Reflections p. 12. See: <http://callteches.library.edu/3312/1/Hoyle.pdf>.

5. See: <http://physicsworld.com/cws/article/news/2615>.

expanding energy/matter cooled, the galaxies and stars formed like islands in this space we know as the universe. However, the big-bang theory is actually even more contrived in that the theory proposes that space itself expanded in a fourth dimensional “hyperspace.”⁶ This picture is difficult for most of us to grasp — but an analogy would be the expansion of a balloon as it is being inflated. If we drew little circles on the surface of the balloon, as it expanded the little circles would expand and also move farther apart from each other. In this case, we have a two-dimensional surface of the balloon expanding in three-dimensional space. An important observation is that the surface of the balloon has no center. The big-bang theory, by having three-dimensional space expanding in hyperspace (which incidentally has never been observed or detected and is simply a made-up assumption), implies that the universe would have no edge and therefore no center. This assumption, known as the *cosmological principle* or *Copernican principle*, was needed to develop a theory in which the universe has no center and would look spherically symmetrical wherever an observer was in the universe.

When we observe the universe from earth, it appears to be spherically symmetrical (isotropic) around us, as if we are near the center — in a special vantage point to study the structure and nature of space. However, some cosmologists wanted a theory in which the earth was not near the center of the universe. So by adopting the construct of hyperspace, cosmologists devised a theory explaining that we appear to be near the center of the universe because that is the way the universe looks wherever you are.⁷ In other words, the big-bang theory has an assumption built into it to ensure that humans are not in a special place in the universe.

In an attempt to have a mechanical explanation of our origins rather than a supernatural one involving an Intelligent Creator, the big-bang theory contains a number of additional contrived assumptions. Some of these assumptions cannot be justified on the basis of what we know from established laws of physics.⁸ In other words, they are made-up assumptions and totally unproven, but cosmologists and other scientists have to use these assumptions, otherwise they don't have a big-bang theory.

6. W. Rindler, *Essential Relativity: Special, General and Cosmological*, second edition (New York: Springer-Verlag, 1977), p. 212–213.
7. S.W. Hawking and G.F.R. Ellis, *The Large Scale Structure of Space-Time* (Cambridge, UK and New York: Cambridge University Press, 1973), p. 134–135.
8. University of Tennessee astronomy lecture notes: “Problems with the Big Bang” see: <http://csep10.physics.utk.edu/astr162/lect/cosmology/bbproblems.html>.

For example, the big-bang theory requires a growing number of hypothetical entities that have never been proven and have never been observed. The most prominent of these are as follows:

- inflationary theory
- dark matter
- dark energy

Without these totally made up and assumed conditions, the big-bang theory doesn't work. In other words, what the theory predicts and what astronomers observe don't match up. So the theorists develop new fudge factors to try to get the theory to work.

For example, cosmologists have to assume that when the “big bang” started, the universe expanded much more rapidly than would occur under the laws of physics that we can actually observe. That is, they have to assume there was some unknown special “inflation” energy field that caused extra rapid expansion — otherwise the theory cannot explain the observed smoothness (scientifically called *isotropy*) of the cosmic microwave background radiation.

Similarly, the big-bang theory predicts a very different ratio of matter to anti-matter in the universe compared to what we observe. So rather than discard the theory since it does not fit with what we observe, cosmologists instead propose that there must be some kind of “dark matter” that we can't see, which is formed by some unknown law of physics.

“Dark energy” is a similar hypothetical entity. Without it, the theory predicts the ridiculous situation that the universe is billions of years younger than the age of some of the stars in our galaxy as calculated by other methods.

These major shortcomings of the big-bang theory have been known to scientists for decades.⁹ In 2004, dozens of leading astronomers and physicists signed a published letter in *New Scientist* magazine, pointing out that the theory was continually resorting to new hypothetical entities to bridge the gap between theory and observation. Furthermore, the theory had failed to give any quantitative predictions that have been scientifically validated.¹⁰

Prominent astronomers and cosmologists signing the letter included Halton Arp from the Max Planck Institute for Astrophysics in Germany,

9. See, for example, E. Lerner, *The Big Bang Never Happened: A Startling Refutation of the Dominant Theory of the Origin of the Universe* (London: Vintage, 1992).

10. E. Lerner, “Bucking the Big Bang,” *New Scientist* (May 22, 2004): p. 20.

Hermann Bondi from the University of Cambridge, and Thomas Gold from Cornell University.¹¹ Since the *New Scientist* article was published, two Crisis in Cosmology conferences have been held (in 2005 and 2008), and hundreds more astronomers, physicists, and other scientists have added their names to the list. Cosmic microwave background radiation is cited as one of the main evidences for the big-bang theory. However, at the 2008 conference, Oxford University-educated thermodynamics researcher Bernard Bligh presented rigorous thermodynamic calculations showing that the supposed initial “fireball” of the big bang could not have produced the actual perfect black-body type radiation that we clearly observe.¹²

Furthermore, Dr. Richard Lieu and coworkers at the University of Alabama in Huntsville analyzed data from the NASA Wilkinson Microwave Anisotropy Probe associated with 31 galaxy clusters. They were looking for evidence of shadows that should be cast by foreground galaxies in the cosmic microwave background radiation from the supposed big bang. However, not a single shadow associated with any of the 31 clusters was detected, which is powerful, directly observable evidence that the big bang never happened.¹³

In fact, the microwave background radiation we observe makes more sense and agrees with the calculated values if it is recognized as simply the temperature of space as heated by starlight.¹⁴

Another major problem with the big-bang theory is that it is way out in its prediction of satellite galaxies. University of Cambridge-educated professor of astronomy at the University of Bonn in Germany Dr. Pavel Kroupa points out that we only observe about 1 percent of the number of these galaxies compared to what the theory predicts. He believes this is the clearest evidence that there is something badly wrong with the big-bang model for the origin of the galaxies we observe in space.¹⁵

Another aspect of the big-bang model we noted earlier is that it describes an expanding universe. This expansion, if it were really occurring, would

11. For the full list of signatories see: <http://cosmologystatement.org/>.

12. H. Ratcliffe, “The Second Crisis in Cosmology Conference” (2008), <http://www.hilton-ratcliffe.com/article008.htm>, accessed 11/13/2009.

13. R. Lieu, J.P.D. Mittaz, and Z. Shuang-Nan, “The Sunyaev-Zel’dovich Effect in a Sample of 31 Clusters: A Comparison Between the X-ray Predicted and WMAP Observed Cosmic Microwave Background Temperature Decrement,” *Astrophysical Journal*, vol. 648, no. 1 (2006): p. 176–199.

14. T. Van Flandern, “The Top 30 Problems with the Big Bang,” *Meta Research Bulletin*, vol. 11, no.1 (2002): p. 6–13.

15. M. Chown, “Mystery of the Missing Mini-galaxies,” *New Scientist* (August 22, 2009): p. 37–39.

produce time-dilation phenomena resulting in two light curve-broadening effects for supernovae. However, it has now been discovered from the study of the widths of supernovae light curves that there is only a single broadening effect observed.¹⁶ These observations again provide evidence that the big bang never happened. On the other hand, data from observed surface brightness measurements of galaxies is consistent with the calculations for a nonexpanding universe.¹⁷

There are a number of other serious problems with the big-bang model that I have not discussed here as they are quite technical in nature.¹⁸ It is possible to propose any number of alternative cosmologies because in reality we cannot really “prove” how our universe came to be on the basis of what we can observe today. The fact remains, however, that some models fit the observed data better than others and to date no mechanical model like the big bang or anything similar has been proposed that fits all the observed data we have now collected. On the other hand, the instantaneous creation model of a universe with the earth near the center fits well with what we actually observe.¹⁹

The big-bang model is taught in schools, colleges, and universities simply because it is the most popular model among scientists who do not want to bring any notion of God into the classroom. They argue that creation is not a testable scientific theory and therefore cannot be taught in a science class. However, to try to save the big-bang theory, they see no problem in teaching inflation theory, which is a nontestable philosophical view. As internationally renowned astrophysicist George Ellis reminds us, a spherical symmetrical universe with earth at its center cannot be disproved on the basis of observations. He goes on to point out that cosmologists are using philosophical criteria to choose their model for the origin of the universe, and a lot of cosmology tries to hide that fact.²⁰

When we consider the accumulation of knowledge of the physics and chemistry of our universe, the number of “just right for life to exist” scenarios in relation to our planet, and its location in our solar system, I believe the evidence overwhelmingly supports the philosophy that we came

16. T.B. Andrews, “Falsification of the Expanding Universe Model,” *American Institute of Physics Conference Proceedings*, vol. 822 (March 21, 2006), p. 3–22.

17. Ibid., “Evidence for a Non-Expanding Universe: Surface Brightness Data From HUFD,” by E.J. Lerner, p. 60–74.

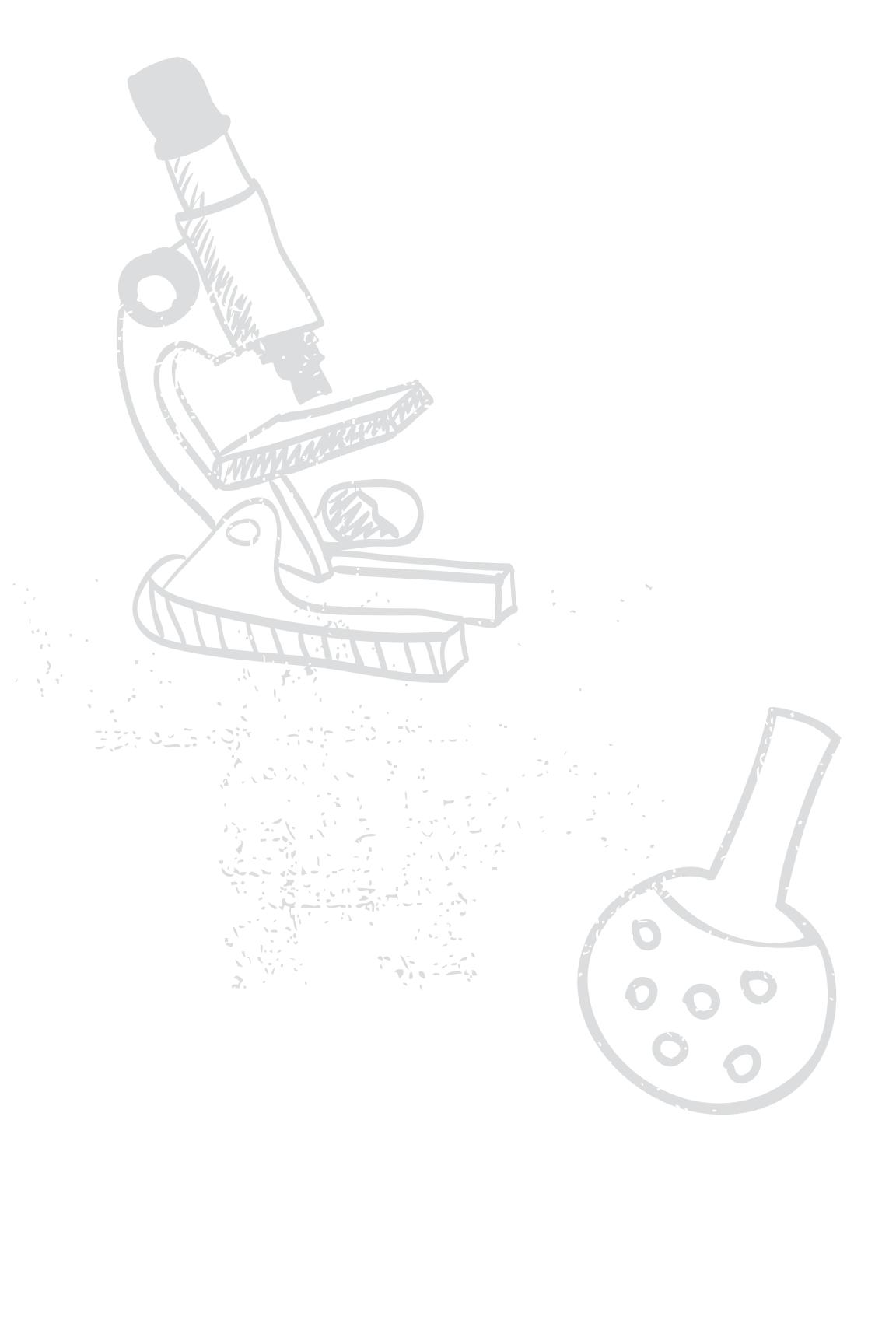
18. See, for example, Van Flandern, “The Top 30 Problems with the Big Bang,” p. 6–13.

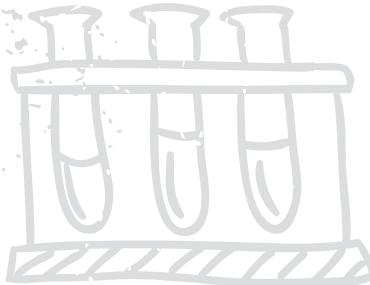
19. See, for example, the website of Dr. Robert Herrmann, PhD, Professor of Mathematics (retired), U.S. Naval Academy: <http://users.datarealm.com/herrmann/main.html>.

20. W.W. Gibbs, “Profile: George F.R. Ellis,” *Scientific American*, vol. 273, no. 4 (October 1995): p. 55.

12 Reasons Why Evolution Cannot Explain the Origin of Life on Earth

into existence as a result of the will of an all-powerful Creator God. There is presently no proven theory of how we came into existence. However, the fine tuning of the universe that we observe reinforces Professor Fred Hoyle's decades-old suggestion that the universe and life are the result of a deliberate, intelligent act by a vastly superior intelligence.





Chapter 12

Highly Qualified Scientists Reject Darwin's Theory

In the previous chapters I have presented very significant evidence demonstrating that natural evolutionary processes cannot explain the origin of life, and that the great ages for life on earth have not been scientifically proven. In fact, there is significant evidence for life on earth being relatively recent. Many readers may now be thinking, if there is all this evidence that evolution is impossible, why are other scientists not pointing this out? The answer is that in fact they are, and this chapter profiles some of the scientists who are now speaking out.

In 1999, I edited a book in which 50 doctorate-holding scientists explained why they rejected evolution in favor of recent creation of life on earth. The contributors included a number of prominent scientists, some of whom held senior research positions at universities. (Note that in the following quotes, footnotes and references cited by the authors have been omitted but are available as part of the full article on websites and in the print version of *In Six Days*).¹

1. J.F. Ashton, editor, *In Six Days: Why 50 Scientists Choose to Believe in Creation* (Green Forest, AR: Master Books, 2001). The full text is also available by clicking on the name of the scientist at <http://creation.com/in-six-days-preface> and <http://www.creation.com/isd>. Click on the name list on the left to open each chapter.

For example, Professor David B. Gower, who serves as emeritus professor of steroid biochemistry at the University of London and holds both PhD and DSc degrees in biochemistry from the same university, writes:

During the past three decades, a great deal of work has been done and published in the field of “creation research.” This has stimulated me to criticize evolutionary theory in three areas that are of particular interest to me:

(1) My chemical knowledge has allowed me to understand the criticisms of isotopic dating methods for rock samples and to realize that there are enormous problems with the interpretation of the data. Consequently, my own view is that rocks are nowhere near as old as they are alleged to be.

(2) From the biochemical point of view, the idea that amino acids, sugars, etc., and some of the vital “building blocks” for proteins and deoxyribonucleic acid (DNA) could be formed simply by interaction of electrical discharges with a primitive reducing-type atmosphere can be criticized in so many ways and at so many levels.

(3) My own studies in numerous biochemical control mechanisms, especially in the control of steroid hormone formation (for which I was awarded the higher doctorate, DSc), convince me that all these processes are ordered precisely. This order and the extraordinary complexity are entirely consistent, in my own opinion, with the existence of a Creator, who Himself must be capable of creating with such design.

Such complexity is also being found in virtually every other branch of science in general, and is especially evident in the field of nature. Far from pointing toward formation by the chance processes of evolution, this clearly speaks to me of an Almighty Creator.²

Professor Gower acknowledges that the chance processes of evolution are not proven, and in his view the extraordinary complexity of biochemical control mechanisms such as the regulation of hormones requires amazingly brilliant intelligent design.

Dr. John K.G. Kramer is a prominent research scientist with Agriculture and Agri-Food Canada. He holds a PhD in biochemistry from the University

2. Ibid., p. 266–267.

of Minnesota and was one of the core scientists who evaluated the toxicological and biochemical properties of canola oil. He writes:

No one has ever demonstrated macroevolutionary changes on a molecular level, yet many people readily speculate evolutionary links between bacteria, plants, animals, and man. Are the gross structures not made up of individual cells with complex molecules? If macroevolution is unlikely on a molecular level, how can the whole be changed? Endless DNA sequence comparisons do not explain evolutionary development. Furthermore, the changes (mutations) observed on a molecular level, such as DNA, are predominantly disruptive, and always with loss of, not gain, in information and complexity.³

He goes on to give an example from his own area of specialty — lipid (fat) research:

In the last few decades, extensive work has been done on thermophilic and halophilic bacteria, which grow under extreme temperatures and salt conditions, respectively. These bacteria have been classified as archaeabacteria because some scientists believe that these are earlier and simpler forms of life. The lipids of these bacteria have chemical linkages called ethers rather than esters, and the alkyl moieties are on position 2 and 3 of the glycerol backbone, rather than on the 1 and 2 positions as in mammalian systems. Furthermore, they produce their energy in the form of adenosine triphosphate (ATP) from a combination of a sodium gradient plus a proton-motive force, instead of only a proton-motive force as mammalian cells. Fragile biochemical structures and processes in these bacteria, many of which are similar to mammalian cells, are protected. But how? Ether bonds are certainly more stable than ester bonds, but that may not be the whole explanation. From my research I believe an even greater stability is achieved by these ether lipids complexing with sodium ions. The integration of a sodium and proton gradient is still not understood, although the former initiates cell growth.

Therefore, to view these bacteria as earlier and simpler forms of life is totally misrepresenting their complexity. These bacteria are just as complex as mammalian cells and represent an amazing design

3. Ibid., p. 47.

suited for the extreme conditions of temperature and salt concentration. Each cell is produced according to the information in their respective DNA. Attempts to give these complex lipid structures common names containing the prefix “archae,” to denote their evolutionary hierarchy, does not provide scientific evidence. It states one’s belief but adds no scientific knowledge. In fact, it may even be misleading by implying that lipid structures and energy mechanisms may evolve differently under different environmental conditions. The evidence shows that *Methanobacteria thermoautotrophicum* remain *Methanobacteria thermoautotrophicum* through millions of generations, according to their genetic information, and grow under favorable conditions of high temperature and salt concentration.⁴

Notice the point that Dr. Kramer makes, that giving these bacteria a scientific name that implies that they are older than other bacteria does not prove that they are older. But to uninformed readers and students, this name conveys the subtle message that they are proven, older, ancestor-type bacteria.

Dr. James S. Allan is a former senior lecturer in genetics at the University of Stellenbosch and holds a PhD in genetics from the University of Edinburgh, Scotland. He writes:

Relatives tend to resemble one another in physical, functional, and behavioral characteristics. This is a phenomenon that is basic to the science of genetics. The resemblance is due to the fact that relatives, sharing in the common gene pool of a reproducing population, have genes in common. The closer the relationship, the greater is the proportion of genes in common and, therefore, the greater is the degree of resemblance. The theory of evolution assumes a common origin for all forms of life and, therefore, infers that species, genera, families, orders, etc., are genetically related. They all do carry some genes with similar structure and function, yes, but did this imply genetic relationship in the normal, within-species sense, and was one at liberty to assume a common origin for all forms of life? Was there any reason why God should have created different species, genera, etc., in completely different ways and with completely different genes? . . .

I present here two aspects arising out of such questions concerning the claimed evolution of man.

4. Ibid., p. 48–49.

1. Cytochrome-c is a protein and is a gene product. It functions as a key enzyme in oxidation reactions and seems to occur in practically every living organism. There are 20 different amino acids. Cytochrome-c consists of a chain of 112 amino acids, 19 of which occur in exactly the same sequential order positions in all organisms tested. Differences in the identity and positions of the remaining 93 amino acids are considered to be the result of mutational substitution during the course of evolution. The amino acid constitution of human cytochrome-c differs from that of many but not all other species. There are no differences in the cytochrome-c taken from humans and from chimpanzees, and only one difference between human cytochrome-c (the amino acid isoleucine in position 66) and that from the Rhesus monkey (threonine in that position). The numbers of differences in the cytochrome-c of various species compared with that of humans are as follows: cow, pig and sheep (10), horse (12), hen and turkey (13), rattlesnake (14), dogfish (23), fly (25), wheat (35), yeast (44), etc.

Information of this nature is used to construct phylogenetic trees of assumed genetic relationship. This is presented as evidence for evolution on a molecular level and, among other things, it is concluded that man and the chimpanzee have a relatively recent common ancestor. Assuming for the sake of argument that this is correct, does the constitution of cytochrome-c provide valid evidence for evolution?

The fact that cytochrome-c has a fixed number of 112 amino acids is an indication of the importance of the three-dimensional structure of the molecule, that is, there is a structural constraint on the total number of amino acids. On the other hand, only 19 of the 112 are identical in all organisms tested. Since the identity and positions of the remaining 93 amino acids differ among organisms except, for example, in the case of man and chimpanzee, it is reasonable to conclude that there are no functional constraints on the substitution of these remaining amino acids.

Apart from the single gene controlling the constitution of cytochrome-c, humans and chimpanzees differ in many thousands of other genes. As a conservative estimate, let us say 5,000. What the theory of evolution is saying is that while humans and chimpanzees have evolved independently from a common ancestor so as to now differ in these 5,000 genes, there has been no change in the 93 amino acids specified by the cytochrome-c gene, and this in spite of

there being no functional constraint on change in any of the latter. I find this to be an unacceptable claim. According to Weaver and Hedrick (1989), however, the lack of differentiation in the constitution of cytochrome-c between humans and chimpanzees is due to the very slow (0.3×10^{-9}), estimated rate of amino acid substitution in cytochrome-c. How is this rate determined? It is estimated on the basis of the assumed time since the species diverged, that is, the claim is assumed proven on the assumption that it is true. Must I accept this kind of reasoning? Is there any reason why God should not have created them in virtually the same form as we see them now?

2. The theory relating to the evolution of man from his assumed ancestor in common with the chimpanzee requires millions of years of mutation, genetic drift, and natural selection prior to the appearance of "modern man." However, when I consider mutation rates, the "cost" of the substitution of each new mutant gene in a population in terms of number of "genetic deaths," the assumed number of mutant gene differences between evolutionary stages, and the population size necessary to accommodate such a large number of successive mutations, I find that there is a remarkable lack of evidence for the "evolution of man." My reasons are as follows:

[J.B.S.] Haldane considered this kind of information and came to the conclusion that the number of genetic deaths needed to secure the substitution of one gene for another by natural selection is in the region of 30 times the number of individuals in a generation. Using this figure, the cost of substituting 5,000 successive, independent mutant genes in a population of constant size can be calculated. On the basis of an average mutation rate of 10^{-6} , the size of the population must be at least in the order of 1 million. This implies some 150-thousand-million forerunners of "modern man," forerunners who are often represented as belonging to small groups of cave-dwelling hunters called australopithecines who roamed the African savannah. Why is there such a shortage of evidence in the form of fossils, tools, or whatever for the existence of such vast numbers of australopithecine-like pre-humans?

It could, of course, be argued that such vast numbers of individuals were spread over millions of years, but I find difficulty with this when I look not only at the lack of evidence, but at the reality of total population numbers.⁵

5. Ibid., p. 128–132.

Professor Edward A. Boudreaux is professor emeritus of chemistry at the University of New Orleans and holds a PhD in theoretical chemistry from Tulane University. He writes:

The element oxygen (O) exists freely in nature as the gaseous diatomic molecule O₂. There are other representative elements that also occur as free diatomic molecules, e.g., hydrogen (H₂), nitrogen (N₂), fluorine (F₂), and chlorine (Cl₂). However, O₂ is *the only molecule of this type possessing two unpaired electrons*; the others all have paired electrons. In spite of this, O₂ is still chemically stable. This singular notable exception to the electron-pair rule of stability for representative elements has no known explanation. The only other molecule with an electron arrangement exactly that of O₂ is S₂. However, S₂ is a highly unstable molecule, which is the reason that sulfur does not exist in this form. Furthermore, if it were not for the two unpaired electrons in O₂, it would not be capable of binding to the iron (Fe) atoms in hemoglobin with precisely the amount of energy needed to carry the O₂ into the bloodstream and then release it. Some other molecules such as CO and NO can replace O₂ in binding to hemoglobin, but they completely destroy the hemoglobin function.

Similarly, there are several other transition metals comparable to iron that can replace it in hemoglobin and also bind O₂, but this binding is either too strong or too weak. Thus, there are no non-iron analogues of hemoglobin having the required properties of normal hemoglobin for transporting O₂ in blood metabolism.

The structured portion of hemoglobin that binds iron is called a *porphrin ring*. If this porphrin is translated into another biomolecular environment and the iron atom replaced by magnesium (Mg), chlorophyll, a key component essential to plant metabolism, is the most efficient photoelectric cell known. It is some 80 percent more efficient than any photocells fabricated by man. While calcium (Ca) and some other metals can replace Mg in chlorophyll, the products do not at all duplicate the photoelectric efficiency of true chlorophyll.

Proteins are composed of amino acid molecules chemically bound together by what are called *polypeptide bonds*. The amino acids themselves are carbon-hydrogen compounds containing an amine group, i.e., -NH², -NHR, or-NR² (where R represents one or more carbon-hydrogen groups) bonded to a C atom, plus an acid group (-COOH) bonded to the same C atom. Although there

are thousands of varieties of amino acids, only 20 are involved in *all* protein structures.

Furthermore, amino acids exist in two structural forms, D and L, which are non-superimposable mirror images of each other. In the absence of any imposed controls, both D and L forms will naturally occur in essentially equal amounts; however, all proteins are made of *only* the L form. By way of contrast, sugars (saccharides) that are carbon-hydrogen-oxygen compounds, have closed ring structures and also exist in both D and L isomeric forms. While there are numerous varieties of sugars, it is only the simplest, five-membered ring structure called *ribose*, in only its D form, that is present as one of the three fundamental molecular components in the structures of DNA and RNA.

Both DNA (deoxyribonucleic acid) and RNA (ribonucleic acid) are in some respects more complex than proteins, because they contain a greater variety of molecular units forming nucleosides (nucleotide bases, ribose, and phosphate). These nucleosides are all joined together in very specific patterns so as to perform unique and crucial functions. The ribose and phosphate (-P₀₄) units are bonded together in a regularly alternating sequence, thus producing long chains coiled in a right-handed helix. Each nucleotide is bound to one specific C atom on each ribose unit. In the case of RNA, the structure is a single stranded *right-handed helix* containing four different nucleotides (adenine, cytosine, guanine, uracil) arranged in very specific repeating sequences throughout the length of the chain. Each type of RNA has a different pattern in the sequencing of the four nucleotides. The DNA structure consists of a *right-handed double helix* also containing four nucleotides. Three of these are the same as in RNA, but one is different; thymine replaces uracil.

The nucleotides themselves belong to two classes of molecules called *purines* and *pyrimidines*. Adenine and guanine are purines, while cytosine, thymine, and uracil are pyrimidines. There are many hundreds of varieties of purines and pyrimidines, but *only these select five* determine the structures and functions of DNA and RNA.

Similarly, ribose is only one of a large number of molecules called *saccharides*. Why only *ribose* and its *D* isomer, but not one or more other saccharides in DNA and RNA? Likewise, why *only phosphate* and not sulfate or silicate, etc.? *Only phosphate works.*

These few examples contain clear evidence of complex design imparting tailor-made functions. Such characteristics defy the probability that any random evolutionary process could account for such unique specificity in design.⁶

Dr. John R. Baumgardner worked as a research scientist in the theoretical division of the Los Alamos National Laboratory for 20 years. He holds a PhD in geophysics from the University of California (Los Angeles) and was the chief developer of the TERRA code, a 3-D finite element program for modeling the earth's mantle and lithosphere. He also holds an MS degree in electrical engineering from Princeton University and has specialized in complex numerical simulations. He writes:

Many evolutionists are persuaded that the 15 billion years they assume for the age of the cosmos is an abundance of time for random interactions of atoms and molecules to generate life. A simple arithmetic lesson reveals this to be no more than an irrational fantasy.

This arithmetic lesson is similar to calculating the odds of winning the lottery. The number of possible lottery combinations corresponds to the total number of protein structures (of an appropriate size range) that are possible to assemble from standard building blocks. The winning tickets correspond to the tiny sets of such proteins with the correct special properties from which a living organism, say a simple bacterium, can be successfully built. The maximum number of lottery tickets a person can buy corresponds to the maximum number of protein molecules that could have ever existed in the history of the cosmos.

Let us first establish a reasonable upper limit on the number of molecules that could ever have been formed anywhere in the universe during its entire history. Taking 10^{80} as a generous estimate for the total number of atoms in the cosmos, 10^{12} for a generous upper bound for the average number of interatomic interactions per second per atom, and 10^{18} seconds (roughly 30 billion years) as an upper bound for the age of the universe, we get 10^{110} as a very generous upper limit on the total number of interatomic interactions which could have ever occurred during the long cosmic history the evolutionist imagines. Now if we make the extremely generous assumption that each interatomic interaction always produces

6. Ibid., p. 207–210.

a unique molecule, then we conclude that no more than 10^{110} unique molecules could have ever existed in the universe during its entire history. Now let us contemplate what is involved in demanding that a purely random process find a minimal set of about 1,000 protein molecules needed for the most primitive form of life. To simplify the problem dramatically, suppose somehow we already have found 999 of the 1,000 different proteins required and we need only to search for that final magic sequence of amino acids which gives us that last special protein. Let us restrict our consideration to the specific set of 20 amino acids found in living systems and ignore the hundred or so that are not. Let us also ignore the fact that only those with left-handed symmetry appear in life proteins. Let us also ignore the incredibly unfavorable chemical reaction kinetics involved in forming long peptide chains in any sort of plausible nonliving chemical environment.

Let us merely focus on the task of obtaining a suitable sequence of amino acids that yields a 3D protein structure with some minimal degree of essential functionality. Various theoretical and experimental evidence indicates that in some average sense about half of the amino acid sites must be specified exactly. For a relatively short protein consisting of a chain of 200 amino acids, the number of random trials needed for a reasonable likelihood of hitting a useful sequence is then on the order of 20^{100} (100 amino acid sites with 20 possible candidates at each site), or about 10^{130} trials. *This is a hundred billion billion times the upper bound we computed for the total number of molecules ever to exist in the history of the cosmos!!* No random process could ever hope to find even one such protein structure, much less the full set of roughly 1,000 needed in the simplest forms of life. It is therefore sheer irrationality for a person to believe random chemical interactions could ever identify a viable set of functional proteins out of the truly staggering number of candidate possibilities.

In the face of such stunningly unfavorable odds, how could any scientist with any sense of honesty appeal to chance interactions as the explanation for the complexity we observe in living systems? To do so, with conscious awareness of these numbers, in my opinion represents a serious breach of scientific integrity. This line of argument applies, of course, not only to the issue of biogenesis but also

to the issue of how a new gene/protein might arise in any sort of macroevolution process.

One retired Los Alamos National Laboratory fellow, a chemist, wanted to quibble that this argument was flawed because I did not account for details of chemical reaction kinetics. My intention was deliberately to choose a reaction rate so gigantic (one million million reactions per atom per second on average) that all such considerations would become utterly irrelevant. How could a reasonable person trained in chemistry or physics imagine there could be a way to assemble polypeptides on the order of hundreds of amino acid units in length, to allow them to fold into their three-dimensional structures, and then to express their unique properties, all within a small fraction of one picosecond!? Prior metaphysical commitments forced him to such irrationality.

Another scientist, a physicist at Sandia National Laboratories, asserted that I had misapplied the rules of probability in my analysis. If my example were correct, he suggested, it “would turn the scientific world upside-down.” I responded that the science community has been confronted with this basic argument in the past but has simply engaged in mass denial. Fred Hoyle, the eminent British cosmologist, published similar calculations two decades ago. Most scientists just put their hands over their ears and refused to listen.⁷

He goes on to write:

One of the most dramatic discoveries in biology in the 20th century is that living organisms are realizations of coded language structures. All the detailed chemical and structural complexity associated with the metabolism, repair, specialized function, and reproduction of each living cell is a realization of the coded algorithms stored in its DNA. A paramount issue, therefore, is how do such extremely large language structures arise?

The origin of such structures is, of course, the central issue of the origin of life question. The simplest bacteria have genomes consisting of roughly a million codons. (Each codon, or genetic word, consists of three letters from the four-letter genetic alphabet.) Do coded algorithms a million words in length arise spontaneously by any known naturalistic process? Is there anything in the

7. Ibid., p. 223–226.

laws of physics that suggests how such structures might arise in a spontaneous fashion? The honest answer is simple. What we presently understand from thermodynamics and information theory argues persuasively they do not and cannot!

Language involves a symbolic code, a vocabulary, and a set of grammatical rules to relay or record thought. Many of us spend most of our waking hours generating, processing, or disseminating linguistic data. Seldom do we reflect on the fact that language structures are clear manifestations of nonmaterial reality.

This conclusion may be reached by observing that the linguistic information itself is independent of its material carrier. The meaning or message does not depend on whether it is represented as sound waves in the air or as ink patterns on paper or as alignment of magnetic domains on a floppy disk or as voltage patterns in a transistor network. The message that a person has won the \$100 billion lottery is the same whether that person receives the information by someone speaking at his door or by telephone or by mail or on television or over the Internet.

Indeed, Einstein pointed to the nature and origin of symbolic information as one of the profound questions about the world as we know it. He could identify no means by which matter could bestow meaning to symbols. The clear implication is that symbolic information, or language, represents a category of reality *distinct* from matter and energy. Linguists therefore today speak of this gap between matter and meaning-bearing symbols sets as the “Einstein gulf.” Today, in this information age, there is no debate that linguistic information is objectively real. With only a moment’s reflection we can conclude its reality is qualitatively different from the matter/energy substrate on which the linguistic information rides.

From whence, then, does linguistic information originate? In our human experience we immediately connect the language we create and process with our minds. But what is the ultimate nature of the human mind? If something as real as linguistic information has existence independent of matter and energy, from causal considerations it is not unreasonable to suspect an entity capable of originating linguistic information also is ultimately nonmaterial in its essential nature.

An immediate conclusion of these observations concerning linguistic information is that materialism, which has long been the

dominant philosophical perspective in scientific circles, with its foundational presupposition that there is no nonmaterial reality, is simply and plainly false. It is amazing that its falsification is so trivial.

The implications are immediate for the issue of evolution. The evolutionary assumption that the exceedingly complex linguistic structures which comprise the construction blueprints and operating manuals for all the complicated chemical nano-machinery and sophisticated feedback control mechanisms in even the simplest living organism — that these structures must have a materialistic explanation — is *fundamentally wrong*. But how then does one account for symbolic language as the crucial ingredient from which all living organisms develop and function and manifest such amazing capabilities? The answer should be obvious — an intelligent Creator is unmistakably required.

But what about macroevolution? Could physical processes in the realm of matter and energy at least modify an existing genetic language structure to yield another with some truly novel capability, as the evolutionists so desperately want to believe?

On this question Prof. Murray Eden, a specialist in information theory and formal languages at the Massachusetts Institute of Technology, pointed out several years ago that random perturbations of formal language structures simply do not accomplish such magical feats. He said, “No currently existing formal language can tolerate random changes in the symbol sequence which expresses its sentences. Meaning is almost invariably destroyed. Any changes must be syntactically lawful ones. I would conjecture that what one might call ‘genetic grammaticality’ has a deterministic explanation and does not owe its stability to selection pressure acting on random variation.”

In a word, then, the answer is no. Random changes in the letters of the genetic alphabet have no more ability to produce useful new protein structures than could the generation of random strings of amino acids discussed in the earlier section. This is the glaring and fatal deficiency in any materialist mechanism for macroevolution. Life depends on complex nonmaterial language structures for its detailed specification. Material processes are utterly impotent to create such structures or to modify them to specify some novel function. If the task of creating the roughly 1,000 genes needed to specify the cellular machinery in a bacterium is unthinkable within

a materialist framework, consider how much more unthinkable for the materialist is the task of obtaining the roughly 100,000 genes required to specify a mammal!

Despite all the millions of pages of evolutionist publications — from journal articles to textbooks to popular magazine stories — which assume and imply material processes are entirely adequate to accomplish macroevolutionary miracles, there is in reality no rational basis for such belief. It is utter fantasy. Coded language structures are nonmaterial in nature and absolutely require a non-material explanation.⁸

Dr. Ker C. Thomson is a former director of the U.S. Air Force Terrestrial Sciences Laboratory and holds a DSc in geophysics from the Colorado School of Mines. He writes:

It should be apparent that evolution is capable of an immediate scientific test: Is there available a scientifically observable process in nature which on a long-term basis is tending to carry its products upward to higher and higher levels of complexity? Evolution absolutely requires this.⁹

The answer to the posited question is “yes,” there is a relevant observable process. Dr. Ker continues:

Evolution fails the test. The test procedure is contained within the second law of thermodynamics. This law has turned out to be one of the surest and most fundamental principles in all of science. It is in fact used routinely in science to test postulated or existing concepts and machines (for instance, perpetual motion machines, or a proposed chemical reaction) for viability. Any process, procedure, or machine that would violate this principle is discarded as impossible. The second law of thermodynamics states that there is a long-range decay process that ultimately and surely grips everything in the universe that we know about. That process produces a breakdown of complexity, not its increase. This is the exact opposite of what evolution requires.¹⁰

Dr. Thomson goes on in his chapter to give further explanation of the thermodynamics problem for evolution.

8. Ibid., p. 227–230.

9. Ibid., p. 216.

10. Ibid., p. 216–217.

These are just a small sample of the writings of a few of the 50 scientists who contributed a chapter to just one book discussing objections to the theory of evolution. Other scientists present their objections to evolution on their websites. For example, Dr. Robert Herrmann, a former professor of mathematics at the United States Naval Academy, posts some very detailed scientific arguments against evolution and in support of recent creation.¹¹

Some scientists have taken the time to write whole books on the scientific evidence refuting evolution. The following are examples.

Dr. John Sanford holds a PhD in plant genetics from the University of Wisconsin in Madison and served as an associate professor at Cornell University for more than 20 years. In addition to coinventing a gene gun for facilitating genetic engineering, he authored the book *Genetic Entropy and the Mystery of the Genome*. In this work, Dr. Sanford argues that mutations consistently destroy genetic information and do not create information, as the theory of evolution requires. He provides compelling theoretical evidence that whole genomes cannot evolve up the evolutionary tree, thereby refuting the evolutionary premise that the different life forms are merely a result of mutations and natural selection. He goes on to argue, on the basis of scientific studies and mathematical modeling, that DNA must be less than 100,000 years old.¹²

Dr. Walter J. Veith, who holds a PhD in zoology from the University of Cape Town and served as professor and chairman of the Department of Zoology at the University of Western Cape, South Africa, authored the book *The Genesis Conflict: Putting the Pieces Together*. He explains how the fossil record does not support the theory of evolution and how many modern discoveries in biology and zoology support creation, not evolution.¹³

Dr. Duane T. Gish, who holds a PhD in biochemistry from the University of California in Berkeley, worked for many years in medical biochemistry research at both the University of California, Berkeley, and Cornell University. His books *Evolution: The Fossils Say No!* and *Evolution: The Challenge of the Fossil Record*, argue that the lack of scientific evidence for evolutionary intermediate species provides strong evidence that evolution has not occurred.¹⁴

11. <http://users.datarealm.com/herrmann/main.html>.

12. J.C. Sanford, *Genetic Entropy & the Mystery of the Genome* (Waterloo, NY: FMS Publications, 2008).

13. W.J. Veith, *The Genesis Conflict: Putting the Pieces Together* (Delta, BC, Canada: Amazing Discoveries, 2002).

14. D.T. Gish, *Evolution: The Fossils Say No!* (San Diego, CA: Creation-Life Publishers, 1976); and D.T. Gish, *Evolution: The Challenge of the Fossil Record* (El Cajon, CA: Creation-Life Publishers, 1986).

Dr. George Javor, professor of biochemistry at the Loma Linda University School of Medicine (famous for carrying out the first successful child heart transplant) and who holds a PhD in biochemistry from Columbia University, authored the book *Evidences for Creation: Natural Mysteries Evolution Cannot Explain*. In this work, Dr. Javor explains how, from a biochemical perspective, evolution is impossible.¹⁵

Dr. Colin W. Mitchell, who holds a PhD in geography from Cambridge University and served as a specialist consultant on arid land development for the governments of 16 countries, authored the book *The Case for Creationism*. This very well-researched treatise against evolution reviews the scientific evidence from biology, paleontology, geology, and radiometric dating.¹⁶

Dr. Lee M. Spetner, who holds a PhD in physics from the Massachusetts Institute of Technology and taught information and communication theory at the Johns Hopkins University for ten years, authored *Not by Chance: Shattering the Modern Theory of Evolution*. Like Dr. Sanford, Dr. Spetner explains the evidence that powerfully refutes the evolutionary concept that random mutations can produce new genetic information.¹⁷

Dr. Andrew A. Snelling, a research geologist who holds a PhD in geology from the University of Sydney, has recently authored a comprehensively footnoted 1,100-page two-volume work titled *Earth's Catastrophic Past; Geology, Creation, and the Flood*. This scholarly work outlines the detailed geological evidence of recent global flood-type catastrophic events. It also gives a detailed explanation of the major problems with radiometric dating and the evidence from alternative scientific dating methods that date the earth as only thousands of years old.¹⁸

Dr. Ariel A. Roth, who holds a PhD in zoology from the University of Michigan and served as chairman and professor of biology at Loma Linda University in California for many years, authored a scholarly treatise titled *Origins: Linking Science and Scripture*. This work provided a comprehensive summary of the scientific evidence supporting the recent creation and global flood as opposed to evolution.¹⁹

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15. G. Javor, *Evidences for Creation: Natural Mysteries Evolution Cannot Explain* (Hagerstown, MD: Review and Herald Publishing Association, 2005).
 16. Colin W. Mitchell, *The Case for Creationism* (Alma Park, Grantham, England: Autumn House, 1994).
 17. Lee M. Spetner, *Not By Chance: Shattering the Modern Theory of Evolution* (New York: Judaica Press, 1997).
 18. A.A. Snelling, *Earth's Catastrophic Past: Geology, Creation & the Flood*, Volumes 1 & 2 (Dallas, TX: Institute for Creation Research, 2009).
 19. A.A. Roth, *Origins: Linking Science and Scripture* (Hagerstown, MD: Review and Herald Publishing Association, 1998).

Dr. Werner Gitt, who holds a DrEng in engineering from the technical University of Aachen and served as a director and professor at the German Federal Institute of Physics for many years, is an authority on information theory. In his book *In the Beginning Was Information* Dr. Gitt argues that information theory refutes evolution. He presents powerful arguments explaining why the biological information encoded in molecules such as DNA cannot arise by chance processes and requires an intelligent Creator.²⁰

Dr. Andy McIntosh holds a DSc in mathematics from the University of Wales and served as professor of thermodynamics and combustion theory at the University of Leeds. He is an expert on the unique defense mechanism of the bombardier beetle and also the intricacies of the mechanisms of flight in organisms, the latter stemming from his association with the design of jet engines for aircraft. In his book *Genesis for Today*, Dr. McIntosh presents fundamental evidence for order and design in our world and argues that there is very strong scientific evidence for creation and a global Flood.²¹ More recently in 2009, Dr. McIntosh published a ground-breaking research paper in the *International Journal of Design & Nature and Ecodynamics*, in which he showed that biological structures contain coded instructions that are not defined by the matter and energy of the molecules carrying this information. Therefore, the genetic information required to code for complex structures like proteins requires information to come from external sources of information and cannot arise from natural environmental forces. That is, information has a distinct, not material, nature and cannot arise as a result of some input of random energy.²² This research paper provides very powerful support for the concept of an external super intelligent designer being responsible for the complex information contained in each type of living organism.

Dr. John Hartnett holds a PhD in physics from the University of Western Australia where he currently serves as research professor of physics. Dr. Hartnett has authored a book offering a detailed scientific explanation of the paradox of starlight and time in a young universe.²³ He has also coauthored a book explaining major problems and shortcomings of the

20. Werner Gitt, *In the Beginning Was Information* (Green Forest, AR: Master Books, 2006).

21. A. McIntosh, *Genesis for Today: Showing the Relevance of the Creation/Evolution Debate to Today's Society* (Epsom, Surrey, England: Day One Publications, 1997).

22. A.C. McIntosh, "Information and Entropy — Top-Down or Bottom-Up Development in Living Systems?" *International Journal of Design & Nature and Ecodynamics*, vol. 4, no. 4 (2009): p. 351–385.

23. J. Hartnett, *Starlight, Time, and the New Physics* (Eight Mile Plains, Queensland: Creation Book Publishers, 2007).

big-bang theory.²⁴ University of Indiana-educated astronomer Dr. Danny R. Faulkner, who serves as professor of astronomy and physics at the University of South Carolina, Lancaster, authored the book *Universe by Design*, which explains arguments for a created universe.²⁵ Some scientists, such as Noble Prize-winning chemist Dr. Richard E. Smalley (PhD, Princeton University) state their rejection of evolution and support of the Genesis account in public lectures.²⁶

Many other scientists have explained their reasons for rejecting the theory of evolution in personal interviews, for example, Dr. Matti Leisola, dean of the Faculty of Chemical and Material Sciences, Aalto University, Finland; Dr. David King, former New South Wales government astronomer; Dr. Larry Thaete, cellular biology research scientist at Northwestern University in Chicago; Dr. Ross Pettigrew, senior lecturer in the School of Medicine at the University of Otago, New Zealand; and Dr. Stuart Burgess, professor of Engineering Design at the University of Bristol.²⁷

I could keep going with this list — but the point is that these highly educated scientists have spelled out in detail in public the reasons that they reject evolution. Their reasons are based on scientific findings reported in scientific literature. In particular, they are all experienced researchers who are accustomed to evaluating scientific data and have devoted much time to studying and checking the supposed evidence for evolution. They have all concluded that the scientific evidence does not support the concept of random mutations and natural selection producing new life forms.

In 1999, the United States National Academy of Sciences published a statement called *Science and Creationism: A View from the National Academy of Sciences Second Edition*.²⁸ On page 28, the statement claims that the scientific consensus around evolution is overwhelming and that no prominent scientists reject evolution. We can see of course that there are prominent scientists such as those listed above who reject evolution. However, most scientists would not be aware of the writings outlined above because they are not usually discussed in the science classroom, nor are they promoted in the popular media. In other words, most scientists who work in a very

24. A. Williams and J. Hartnett, *Dismantling the Big Bang* (Green Forest, AR: Master Books, 2005).

25. D.R. Faulkner, *Universe by Design* (Green Forest, AR: Master Books, 2004).

26. “Scholarship Convocation Speaker Challenges Scholars to Serve the Greater Good,” 2004, at www.tuskegee.edu.

27. See <http://creation.com> for more details and interviews with many other scientists.

28. Steering Committee on Science and Creationism, *Science and Creationism: A View from the National Academy of Sciences*, second edition (Washington, DC: National Academy Press, 1999). See: <http://www.nap.edu/catalog/6024.html>.

narrow specialist field, and teachers and lecturers who rely on the standard biology and evolution textbooks, would not be aware just how much scientific evidence refuting evolution is now available.

Often, scientists espousing evolution are not aware of (or have been blinded to) the growing evidence refuting the concept of random mutations and natural selection producing new forms of life. For example, in 2009, Oxford University professor Dr. Richard Dawkins authored the 470-page book *The Greatest Show on Earth: The Evidence for Evolution*, which has received wide promotion in bookshops and many reviews.²⁹ However, most scientists and teachers probably would not be aware that in 2010, PhD chemist and logician Dr. Jonathan Sarfati published a powerful and comprehensively referenced rebuttal to most of Dawkins' claims of evidence for evolution.³⁰

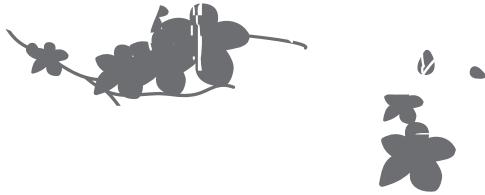
As King's College, London-educated molecular biologist Dr. Michael Denton pointed out 25 years ago, evolution is a theory in crisis.³¹

29. Richard Dawkins, *The Greatest Show on Earth: The Evidence for Evolution* (London: Bantam Press, 2009).

30. J. Sarfati, *The Greatest Hoax on Earth? Refuting Dawkins on Evolution* (Atlanta, GA: Creation Book Publishers, 2010).

31. M. Denton, *Evolution: A Theory in Crisis* (Bethesda, MD: Adler & Adler, 1986).





Chapter 13

Evidence for the Existence of an Intervening God

In an earlier chapter, I referred to British astronomer Sir Fred Hoyle's views that the evidence from physics, chemistry, and biology overwhelmingly suggests that a super-intellect has intervened in nature.¹ The eminent British historian Herbert Butterfield, who served as professor of modern history at the University of Cambridge in the 1950s, made a similar observation, suggesting that one could think of history as though an intelligence was moving over the story.²

In this chapter I decided to present a snapshot overview of the evidence of a supernatural intelligence intervening and interacting with humankind. Now some readers may be thinking, *Why is this material in a book about scientific evidence against evolution?* The reason is that many science academies and other science education boards wish to keep the notion of God out of the science classroom. I am not referring to "religion," which prescribes the ways we are supposed to relate to God. Rather I am referring to the fact that there is consistent evidence for the existence of a real supernatural

1. Fred Hoyle, "The Universe: Past and Present Reflections," *Engineering and Science*, vol. 45,

no. 2 (November 1981): p. 8–12.

2. Herbert Butterfield, *Christianity and History* (London: Fontana Books, 1958), p. 143.

super-intelligence. This provides further collaborative support for the view that life on earth is the result of a deliberate planned creation by this Intelligence, and not the result of random mechanical forces. That is, we live in a theistic universe, not an atheistic one.

Perhaps the most striking example of this is the dream of Nebuchadnezzar, a king who founded the ancient Babylonian empire. He is credited with building the Hanging Gardens of Babylon, one of the “seven wonders of the ancient world,” for the enjoyment of his wife, Amytis.³

In 605 B.C., Nebuchadnezzar defeated Egyptian forces at the battle of Carchemish, and Jerusalem passed from Egyptian control to Babylonian control. At this time, a number of Hebrews were taken captive to Babylon. One of these captives was a particularly gifted young man named Daniel, who later became an advisor to Nebuchadnezzar and a senior official in the king’s court. Some years later, Daniel recorded the king’s dream and certain other events, including the fall of Babylon, in a book named after him (Daniel, chapters 2 and 5), which became part of the Hebrew Bible and later the Old Testament of the Christian Bible.

Daniel describes how Nebuchadnezzar had a dream that troubled him but he could not recall it. Daniel and the king’s other advisers were put under a death sentence unless they could reveal the dream. Daniel writes how he prayed to the God who created the heavens and the earth for the dream to be revealed to him, and he received a vision during the night. He reported the dream to the king, who confirmed that it was the same dream he had experienced, and the lives of the king’s counselors were spared. The dream is truly amazing. Daniel recorded that he saw an image with a head of gold, chest of silver, belly and thighs of bronze, legs of iron, and feet of iron and clay mixed together. Then a stone came and struck the statue on its feet and crushed them. The rest of the statue was demolished and the stone became a mountain filling the whole earth.

Daniel went on to tell the king that the God who had revealed the dream had also shown Daniel that the dream was a picture of the future of the king’s kingdom. The head of gold represented Nebuchadnezzar and his kingdom, which would be followed by an inferior kingdom represented by the chest of silver. This would be followed by another kingdom represented by the bronze, and then a very strong kingdom represented by the iron, which would eventually be divided up into a number of strong and weak kingdoms. These kingdoms would try to unite through marriage but

3. M.E.L. Mallowan, “Babylon,” *Encyclopedia Britannica* (Chicago, IL: Encyclopedia Britannica Inc., 1967), Vol. 2, p. 949–951.

never succeed. Then God would return and destroy all the earthly kingdoms, replacing them with His kingdom.

The dream is recorded as taking place in the second year of Nebuchadnezzar's rule, which was about 603 B.C., yet it accurately predicted the series of events that followed down to the present time, more than two and a half thousand years later. We know from history that Babylon fell to the Medo-Persians when the general Gobryas took the city on October 12, 539 B.C., after diverting the river Euphrates that had run through the city.⁴ Thus the Medo-Persian empire would correspond to the silver kingdom. This empire was followed by the Greek empire when Alexander the Great defeated the Persian king Darius III at a battle near Arbela on October 1 in 331 B.C. The Greek empire, which would be represented by the bronze kingdom, was followed by the Roman Empire, as the Roman armies conquered various sections between 168 and 30 B.C., when Egypt finally came under its power. Thus the Roman Empire corresponds to the kingdom represented by the legs of iron.

History tells us that the Roman Empire gradually succumbed to successive waves of barbarian invaders. In A.D. 476, the Heruli deposed the last Roman emperor, Romulus Augustus, and over the next century and a half the barbarian attacks continued until the process of inundation was complete. Today, after nearly a millennium and a half, the grand empire that was Rome remains divided exactly as foretold in the dream.

Daniel also was shown that the rulers of these lesser kingdoms would “mix with one another in marriage” in an endeavor to achieve unity, but still would be unable to hold together. Down through the centuries, repeated attempts have been made to unify the nations of Europe both through intermarriage and by military might, but never with more than temporary success. Charlemagne set out to try about A.D. 800, Charles V of Spain about 1520, and Napoleon Bonaparte about 1800. Kaiser Wilhelm II's pursuit of a similar ambition led to World War I and that of Adolf Hitler to World War II. In each case, their successes were relatively short lived. Thus, the Babylonian king's dream accurately revealed the future of the West to the present time.

In my view, this is an impressive example of an accurate vision of the future up to the present time. To write around 600 B.C. that there would only ever be another three then-known “world” empires, and from then on only individual kingdoms that would never completely unite — and be

4. D.J. Wiseman, “Belshazzar,” *Encyclopedia Britannica*, Vol. 3, p. 458.

correct over two and a half thousand years — is, in my view, a pretty good record.

Daniel also recorded some details of events on the night of the fall of Babylon. He stated that the king in Babylon at that time was Belshazzar and that he was putting on a feast for a thousand of his nobles. Daniel also records that during the debauched revelry, supernatural handwriting had appeared on the wall of the banquet hall. Daniel was called by the king to interpret the writing. Daniel explained that this was a warning from the God of heaven that Belshazzar's kingdom would end that night. It is from this account that we get the saying "the writing is on the wall," meaning there is no escape from the outcome. Daniel goes on to record that Belshazzar was slain that night.

Up until the 19th century, the name of this king had not been found in any writings outside the book of Daniel, and some scholars doubted the historical accuracy of the account. Then from the 1860s onward, a large number of cuneiform texts were discovered that confirmed that Belshazzar, who as a co-regent with his father, Nabonidus, was the king of Babylon at the time when the Persian general Gobryas took the city without resistance.⁵ It is revealing that the ancient Greek historian Xenophon declares "the impious king" of Babylon, whose name is not mentioned in the account, was slain by his throne in the banquet hall when Gobryas entered the palace. Xenophon also relates that the night the Persians took the city a certain festival had come round in Babylon, during which all Babylon was accustomed to drink and revel all night long.⁶ These independent records support the accuracy of the account of events recorded in the Book of Daniel.

There is also evidence that the book was definitely in existence before 332 B.C. when Alexander the Great invaded Judah. The first-century Roman historian Josephus writes that when Alexander's armies were approaching Jerusalem, Jaddua, the high priest at the time, prayed to the God of heaven for protection for the city. He subsequently had a dream that the priests should put on their priestly garments and open the gates and march out, followed by the people, to meet Alexander. They did this and Alexander dismounted and bowed before them. When Alexander was later asked why he did this, he replied that in his youth he had a dream in which a man dressed in the identical priestly garments had invited Alexander to come to Asia and that he would be assured of conquest. Josephus writes that when Alexander

5. Ibid.

6. Cyropaedia, Book vii, 5, 10, 13, 15, 16, 26–30.

entered the city, the priests showed him the Book of Daniel containing the description of a Greek who would come and destroy the Persians.⁷ As a result, the Jews were treated very favorably by Alexander.⁸

Another well-documented historical account of supernatural intervention would be the events surrounding Joan of Arc, a 17-year-old girl who led the French army to victory against the English forces in 1429 B.C.

Joan of Arc was born in the French village of Dromremy in 1412. According to history, she was a hard-working, simple, and exceptionally pious child. From the age of 13 years she began to hear a “voice,” which was accompanied by a great light. As time went on, she believed that the voice was that of an angel. On later occasions she was able to see this angel and other “angels” who also spoke to her. These “voices” were to guide Joan throughout her life.

At that time, the crown of France was in dispute between the dauphin Charles, the son of the late king of France Charles VI, and the English king Henry VI, whose armies were occupying nearly all the northern part of the kingdom.

The apparent hopelessness of the dauphin’s cause by 1427 was exacerbated by the fact that, five years after his father’s death, he had still not been consecrated at Rheims, the traditional place for the crowning of French kings, as Rheims was well within the territory held by the English. In 1428, the English had laid siege to the loyalist city of Orleans, surrounding it with forts. The “voices” told Joan that she would raise the siege of Orleans and lead Charles VII to his coronation at Rheims.

Following the directions of her “voices,” Joan had unparalleled success in leading the French army to a momentous victory at Orleans. Still only 17 years old, she marched the victorious soldiers to Rheims, where Charles was crowned in great splendor. These achievements were a decisive factor in the revival of France during the crisis of the Hundred Years’ War.

Joan continued to lead the French armies but was captured on May 23, 1430, by the Burgundians, who had allied themselves with the English. At the request of the University of Paris, Joan was handed over for judgment by Pierre Cauchon, the bishop of Beauvais, in whose diocese she had been captured. Joan was tried not for her offenses against the English king but because of her faith and morals. It was charged that Joan had claimed divine revelation, had prophesied the future, and had immodestly worn men’s clothing.

7. See details of another vision of the future that Daniel recorded in Daniel 8:7, 20–21.

8. Flavius Josephus, *The Antiquities of the Jews*, Book 11, ch. 8, in W. Whiston, editor, *The Complete Works of the Learned and Authentic Jewish Historian Flavius Josephus* (London: J.F. Tallis, undated), p. 237–238.

The records of Joan's evidence under oath at her trial in 1431 are still preserved. It is clear from these documents that her "voices" were accompanied first by light and sometimes by figures that spoke clearly and could be seen clearly, just like ordinary people. The "voices" came mainly when she was awake and sometimes when she was aroused from sleep. One of the predictions that she received from her voices was that there was a rusty sword with five crosses on it behind the altar in the Church of St. Catherine of Fierbois. She sent for it and it was found and given to her. None of the clerics or the townspeople knew of its existence, and the coffer in which the sword was found had not been opened for 20 years, that is, before Joan of Arc was born. The voices also warned her that she would be captured before midsummer's day. She was unhorsed during a battle and taken prisoner on May 23, 1430. It is revealing that during her trial there was no serious attempt by her judges to invalidate her clairvoyance.⁹

The events of her trial are complex, but Joan maintained her testimony concerning her voices to the end even though it would mean death. The final outcome was that she was burnt alive at the stake. Yvonne M. Lanthers, Keeper, National Records Office, Paris, asserts that Joan exhibited the basic characteristic and stamp of a genuine prophet, following the tasks laid upon her by divine command.¹⁰

The records of the trial of Joan of Arc, who fought for the freedom of her people, provide strong evidence that she really did experience communication from a supernatural intelligence.

A medical doctor in my locality, Dr. Merlene Spear, told me this interesting story some years ago. One morning in 1984 she was traveling to work at Wingham Medical Centre in north New South Wales when she had an experience she has never forgotten. As Dr. Spear approached a winding section of the road, she heard a voice behind her ear say in clear musical tones, "Slow down." Totally surprised and amazed, she exclaimed out loud, "Pardon?" The beautiful voice repeated the audible command, "Slow down." Totally overwhelmed by the experience, she braked toward a stop just before a bend. Within seconds, a yellow Ford Mustang appeared, traveling at a very high speed around the corner on her side of the road. Dr. Spear believes that if she had not obeyed the voice, she would have been very seriously injured, if not killed.

9. Yvonne M. Lanthers, "Saint Joan," *Encyclopedia Britannica*, Vol. 13, p. 3–7. See also F.W.H. Myers, *Proceedings of the Society for Psychical Research*, Vol. V (1888–1889): p. 543–545; and J. Glass, *The Story of Fulfilled Prophecy* (London: Cassell, 1969), p. 72–75.

10. Lanthers, "Saint Joan," *Encyclopedia Britannica*, Vol. 13, p. 6.

In the 1970s Dr. John Taylor, professor of mathematics at King's College in London, made a study of the evidence for supernatural events, including dreams warning of impending disasters. For example, after the Aberfan mine disaster in Wales in 1966, in which coal slag from a mine slid down a hill and covered a school, killing 144 children and teachers, 76 reports were collected from people who claimed to have had premonitions of the accident. Twenty-four of these premonitions had been witnessed by a second person before the tragedy.¹¹

University of Virginia research psychiatrist Ian Stevenson has made several studies of reported premonitions of a number of natural disasters.¹²

It seems that at times when a disaster is impending that involves a large number of victims, several people have received premonitions. One outstanding example involved the sinking of the *Titanic* on April 15, 1912. On her maiden voyage across the icy waters of the North Atlantic in the dead of night, the ship struck an iceberg and went down, with the loss of some 1,523 lives. Stevenson collected reports of 19 individuals who had premonitions of the tragedy.¹³

Dr. Robert Van de Castle, the former director of the Sleep and Dream Laboratory at the University of Virginia Medical School, has researched dreams for more than 30 years. He points out that historians have generally ignored achievements originating from these revelations, yet dreams have had a dramatic influence on almost every important aspect of our culture and history.¹⁴ He gives examples where dreams revealed major advances in advanced mathematics number theory,¹⁵ the structure of benzene,¹⁶ archaeological discoveries,¹⁷ and the location of oil in Kuwait after years of unsuccessful exploration.¹⁸ Dr. Van de Castle also found that warnings of death or danger were the most prominent theme in dreams revealing the future.¹⁹

11. J. Taylor, *Science and the Supernatural* (London: Granada, 1980), p. 83. See also N. Bludell, *The Supernatural* (London: Promotional Reprint Co. Ltd., 1996), p. 91–96.

12. Ian Stevenson, “Prediction of Disasters,” *Journal of the American Society of Psychical Research*, vol. 64 (1970): p. 187–210.

13. Ian Stevenson, “Seven More Paranormal Experiences Associated with the Sinking of the *Titanic*,” *Journal of the American Society of Psychical Research*, vol. 59 (1965): p. 211–224.

14. Robert L. Van de Castle, *Our Dreaming Mind* (New York: Ballantine Books, 1994), p. 10–11.

15. Ibid., p. 35; see also P. Davies, *The Mind of God* (London: Simon and Schuster, 1992), p. 153–154.

16. Ibid., p. 35.

17. Ibid., p. 37–38.

18. Ibid., p. 27–28.

19. Ibid., p. 40, 42, 409.

The very compelling results of his research convicted him that dreams give us a basis for believing in a nonmaterial component to our existence.²⁰

In the 1990s, I devoted some time to research the available evidence of individuals' experiences of revelations of the future. Work colleagues related three quite outstanding personal experiences to me.

A research technician named Paul told the first account to me. When he was a high school student he had a particularly vivid dream. He saw himself walking alongside his twin brother, Stephen, who was on a stretcher being wheeled down a corridor past the school auditorium. Paul looked up and saw a physical education class in progress. One of the girls in the class recognized Paul, then smiled and waved her hand. Some months later Stephen received serious head injuries during a metalwork class. Paul, who was in the same class, remained with his twin brother until ambulance officers arrived. Then he walked beside the stretcher as his brother was wheeled to the ambulance. As they passed the auditorium, Paul looked up and realized he was seeing the same scene as in his dream. At that moment, the same student Paul had seen in his dream smiled and waved.

Paul commented to me that he has never forgotten the experience because the dream was so specific. The girl, the way she looked up, smiled and waved, and the activity of the other students was exactly as he had seen in his dream months beforehand.

In another account, a young lady described to me how in 1981 her father, while working in New Guinea, had a dream where he saw an angel showing him the book of his life. He noticed that each page represented a year and that there were only a few pages remaining. When he woke up he could not remember exactly how many pages were left in the book. He decided to write to each of his children, telling them how much he loved them, and also took out a life insurance policy. In 1990, while back in Australia, he had the same dream again, but this time he confided to his wife that the book was on the last page. Soon afterward he went to the Solomon Islands to help with an aid program and was killed in a building construction accident.

The third account was a dream experienced by Joe, one of the former staff in the engineering department of the research organization where I work. He told me that when he was 18 years old and living near Mullumbimby in New South Wales he had an unusually vivid dream. It was different from the other dreams he had, and he still remembers it clearly even though the incident had occurred ten years earlier.

20. Ibid., p. 11.

He dreamed that he was out in the surf on his surfboard when suddenly someone yelled, "Shark!" Everyone in the surf quickly got out of the water. That part of the dream ended abruptly and he dreamed that he was now standing on the bank of a river. On either side of him stood people that he recognized from the church he attended. Suddenly, part of the bank gave way and a girl to the left of him slipped and fell into the water, disappearing out of sight. Then, almost immediately, he saw the girl being pulled out of the river on the opposite bank by a man with a beard wearing a white robe. The man's face was not distinguishable, but he could see the girl's face clearly. She was no longer wearing her original clothes but was wearing a white robe the same as the bearded man. The girl gave a cheery smile and a wave and then walked away with the bearded man. Meanwhile, on this side of the river everyone was crying because the girl had slipped under the water and they could not see her anymore. It was as if they could not see the other side where she was pulled out. There the dream ended.

Joe told me that a couple of days later he went to surf before going to church. Sharks were often seen on the North New South Wales Coast where he was, but this time while he was surfing he saw two shark fins surface a mere 20 to 25 feet away. Without hesitating, he and another older surfer nearby hastily paddled for the shore.

Later that day when he went to church he learned from tearful friends of a terrible tragedy. The very girl he had seen in the dream had been killed in a freak car accident during a storm the night before.

I continued my research and found a large number of similar examples reported in historical and scientific literature. My findings were published in the book *The Seventh Millennium: The Evidence That We Can Know the Future*.²¹

During my lifetime, I also have heard many personal testimonies of miraculous interventions in people's lives. In my local church, just a few weeks before writing this chapter, an older man told how when he was about six years old he was playing with his cousins at his grandparents' place. His grandmother was washing clothes on a scrubbing board when suddenly she jumped up and ran over to where he and the other children were playing with an inflated tractor tube. Grabbing the tube, she ran off down the road.

He later learned that while his grandmother was washing the clothes, she suddenly saw a vision on the surface of water in a basin beside her of her husband drowning. Knowing that the grandfather had gone fishing at

21. John F. Ashton, *The Seventh Millennium: The Evidence That We Can Know the Future* (Sydney, Australia: New Holland, 1998).

a reef about two kilometers (over a mile) away, she ran with the tube to the spot, to find him struggling to swim in heavy seas that had swept him off the reef. She threw the inflated tube into the water, and her husband was able to keep afloat until rescued by some nearby fishermen.

A longtime friend, Joy Butler, who was serving as a hospital chaplain in Sydney, related another amazing account to me. Joy and her husband had been working in Harare, Zimbabwe, for a number of years. On the day before they left to return to Australia in April 1993, Jo, a friend of Joy's, called to tell her of a remarkable incident that had just happened to a friend of hers.

Jo's friend had arrived home in her car with her five-year-old daughter. The lady stepped out of her car to open the front gate while leaving the engine of the car running. An African man who had been hiding behind the front hedge jumped into the driver's seat and drove off with the lady's daughter still in the back seat. The mother screamed and shouted in her driveway and caught the attention of another African man who saw what had happened, and who then set off in his car to give chase.

The distraught mother continued to scream, and an Indian man driving by stopped his car. He invited the mother to come with him to the police station. The poor mother was hesitant about this, but when the man explained that he was a minister of religion and she saw a Bible on the front seat of his car, she agreed to accept his help. The man then prayed and asked God to let the car break down so that the pursuers could catch up. These sorts of "carjackings" were quite common in the city of Harare at that time, and often the stolen cars were driven across the border to a neighboring country where they were sold.

The mother and the Indian man then set off in his car to give chase after the thief. They had not traveled far when they came to the woman's car stopped on the road. The little girl was safe and the African man was holding the thief.

The little girl told her mother and the Indian man that she was pleading with the thief to take her back to Mummy when she saw an angel appear on the front of the car as it was being driven along. The girl said the angel pushed what appeared to be a long, shining sword down into the hood and the car stopped.

When the car was examined later it was found that the clutch had failed, yet the car was not known to have a clutch problem. While some readers may be skeptical about this story, I believe that a child's testimony in these circumstances is likely to be highly accurate. Why would a five-year-old have

to make up a story about an angel? Why wouldn't she simply say the car just stopped as cars do when they break down?

The Old and New Testaments of the Bible record many accounts of angels intervening in the lives of people. In particular, the Book of the Acts of the Apostles, which is written as a factual historical account of the early Christian church, refers to several interventions by angels. The book is very accurate in both its geographical detail and historical detail of that period in the first century, suggesting that the accounts of angels were just as real. Similar accounts have been reported in modern times, such as the reported intervention of angels at Mons in Belgium during the First World War.

In August 1914, during the First World War, the British people were called to a national day of prayer because the future of the Allied forces looked bleak. Following this, a number of remarkable incidents occurred that held back the German forces long enough to allow the British army to withdraw to comparative safety. One such incident occurred at Mons in Belgium during a battle between the German and Allied armies on August 23 and 24, 1914. The British army, greatly outnumbered by German forces, found itself under heavy attack and suffering severe losses. Since there were practically no reserve forces, serious defeat looked inevitable, and the *Times* correspondent prematurely telegraphed unnecessarily alarming news that the British army had been "annihilated at Mons." However, the next day news came that the disaster had been averted by a miraculous turn of events, involving angels. Both senior British officers and German prisoners reported collaborated accounts of the intervention of angels in the retreat from Mons.²²

The world we live in is chaotic. In our daily lives, driving to work, at our jobs, and with our families, we are continually making little choices that all affect the outcomes for the day. When the lady in Joy's story arrived home, she made the decision to leave the keys in the car instead of locking it. The thief had made the decision to hide in that particular yard at that time, and the unpredictable combination of these actions led to the potentially tragic situation. An extra minute in the shower can affect the time we arrive at an intersection relevant to an intoxicated out-of-control driver coming the other way. A few seconds' delay can mean the difference between life and death, as was illustrated by Dr. Spear's experience. The film *Sliding Doors* portrayed this very point. Split-second decisions or timings can change our

22. H. Price, *Angels, True Stories of How They Touch Our Lives* (London: Macmillan, 1993), p. 92–97.

future forever. So how can it be possible to know the future by some scientific calculation? It is impossible!

However, people do experience revelations of the future that are accurate, and these experiences are as real as magnetism or the force of gravity. Yet such phenomena have no explanation in terms of the mechanical model that underpins science. In other words, science cannot explain everything we observe. It cannot explain the supernatural experiences, particularly revelations of the future, such as those discussed in this chapter. Furthermore, science cannot really explain how we came to be here. It has no satisfactory explanation for the origin of the universe; it has no explanation in terms of proven models for how life came to exist; it has no explanation for how the laws of physics and chemistry could come to be; it has no explanation for how the massive amount of purposeful information encoded in DNA could arise; and it has no explanation for the experience of consciousness. As Sir John Eccles, the 1963 Nobel Laureate in physiology, remarked in his speech at the dinner for the Parapsychology Convention held in Utrecht in 1976:

The most paranormal thing in all is how I can move my finger when I so will it. The mind is the problem to explain in any parapsychological investigation.²³

However, the existence of a supernatural intelligence, a Creator God unconstrained by space and time, does provide a meaningful explanation for our existence. Of course, there are many scientists who believe that “God” cannot be used as an explanation of our universe. They are entitled to their view, but it is based on a faith that ignores the abundant evidence that an intervening God is a very real participant in our existence.

23. J. Taylor, *Science and the Supernatural* (London: Granada, 1980), p. 181.





Chapter 14

Summary: Twelve Evidence-Based Reasons for Rejecting Evolution

In February 2010, the Israeli Education Ministry chief scientist Dr. Gavriel Avital sparked a furor among local university academics when the newspaper *Haaretz* reported him encouraging students to critically examine the evolutionary teaching imposed upon them. He was quoted as saying:

If textbooks state explicitly that human beings' origins are to be found with monkeys, I would want students to pursue and grapple with other opinions. There are many people who don't believe the evolutionary account is correct.

In an earlier interview, Dr. Avital had added fuel to the furor by expressing his view that

Another scientific field that is problematic is biology, or life and environmental sciences. When your doctrine is based on Darwin's theory of evolution and its implications, you are standing on unreliable foundations.¹

1. O. Kashti and Z. Rinat, "Education Ministry Chief Scientist's Dismissive Remarks on Fundamental Tenets of Science Spark Calls for His Ouster," *Haaretz* (February 21, 2010). See <http://www.haaretz.com/print-edition/news/scientists-irate-after-top-education-official-questions-evolution-1.263673>.

These statements had led to calls for Dr. Avital to be sacked, while other academics expressed outrage or dismay. One emeritus professor of earth sciences at Hebrew University stated, “Denying evolution is like denying science itself,” while another professor at Tel Aviv University said Dr. Avital’s statements are tantamount “to saying that space should be given in textbooks to the view that the earth is flat and the sun revolves around it. It is astonishing that the chief scientist of a government ministry can say such bizarre things.”²

Indeed, with virtually all university and college biology textbooks stating that life on earth has evolved over the past 3.5 billion years from simple molecules to humans, and most school biology curricula devoting time to the teaching of the theory of evolution, why shouldn’t this Ministry of Education official be dismissed for encouraging students to question evolution? Why should a person with such views be tolerated in such an influential position and be able to comprehensively affect the education of future scientists in an advanced nation?

On the other hand, why would this highly educated chief scientist, appointed to such a responsible position in higher education by the government of one of the world’s nuclear powers, be encouraging students to look for alternatives to evolution? Why would he potentially put his career on the line by making such statements?

It has been the purpose of this book to present the evidence that forms the basis of the reasons why scientists like Dr. Avital reject evolution as an explanation of the origin of life. The data I have discussed is not exhaustive. There is much more evidence against evolution and long ages that could be mustered that is detailed on a number of Internet sites for easy access.³

However, 12 substantial reasons for rejecting evolution gleaned from the evidence in the previous chapters could be summarized as follows:

1. Mutations do not produce new purposeful genetic information.
2. Evolution of a new species as a result of new genetic code arising has never been observed.
3. There is no known proven mechanism that can explain how new purposeful genetic information could arise, and statistically it is impossible.

2. Ibid.

3. <http://www.icr.org/> ; <http://creation.com> ; <http://www.answersingenesis.org/>; <http://www.creationresearch.org/>; <http://www.discovery.org/csc/>; <http://users.datarealm.com/herrmann/main.html>.

4. There is no known proven mechanism that can explain all the steps for a living cell to form from nonliving molecules (abiogenesis), and statistically it is impossible.
5. Abiogenesis has never been observed and all experiments to initiate it have failed.
6. The fossil record is a record of extinction of fully formed animals and plants — not a record of the evolution of life forms.
7. There are no fossils of proven mutant evolutionary intermediate organisms, yet there should be millions and millions of fossils of such mutations. That is, we have no evidence of actual evolution in the fossil record.
8. Some of the oldest fossil-bearing rocks contain fully developed advanced animals such as trilobites, with no evidence of evolutionary ancestors.
9. Erosion rates for the continents are too fast for the continents and their fossil content to be old enough for supposed evolution to occur.
10. There are not enough ocean sediments or volcanic deposits for the continents to be old enough to allow for supposed evolution.
11. Radiometric dating results give old ages for recent rock, so we cannot accurately “know” the age of rocks. Also, the finding of carbon-14 in coal and diamonds means that these deposits must be less than 100,000 years old, indicating insufficient time for supposed evolution.
12. The rate of mutation of DNA currently observed suggests that DNA must be less than 100,000 years old, which is not enough time for supposed evolution.

As I mentioned earlier, this list is far from exhaustive, but it is sufficient in my view to substantiate the assertion that evolution is impossible and never happened!

Of course, to raise these objections against evolution in a scientific journal would most probably create an outcry along the lines that Dr. Avital experienced. In fact, when I had a peer-reviewed article drawing attention to some of the unproven assumptions underpinning evolution, published in *Chemistry in Australia* in 2007, it drew a very hostile response from some scientists.⁴ It is revealing, however, that these scientists offered no substantial

4. John Ashton, “A Creationist’s View of the Intelligent Design Debate,” *Chemistry in Australia*, vol. 74, no. 3 (2007): p. 19–20.

evidence to refute my arguments — they simply expressed their shock that such an article could be published in a reputable scientific journal.⁵ These professors also claimed that the arguments against evolution were based on a religious belief and not based on science. I believe the previous chapters of this book powerfully refute this claim, which is commonly raised against those who reject evolution.

The bottom line is this. For evolution to occur — for the frog to become the prince — a massive amount of new genetic information has to come from somewhere. In the popular fairy tale, it happened in a moment in response to the kiss of the maiden. According to the theory of evolution it takes longer — hundreds of millions of years. But an extension of time does not change the science. The random processes of nature cannot provide the changing “kiss” — the new genetic code — even given eons of time. As the eminent scientist and author Dr. Paul Davies points out, biological information is not encoded in the laws of chemistry and physics, and this information cannot come into existence spontaneously. He writes, “There is no known law of physics able to create information from nothing.”⁶

Where does this now leave evolution? It is a “wish” theory, not unlike a fairy tale, for those scientists who wish to maintain a purely mechanical model for our existence.

When we look carefully at the geological and fossil evidence, it is very consistent with a catastrophic worldwide flood not so long ago. As to explaining how we came to be — science really has no explanation. But we do see overwhelming evidence of amazing design in every part of nature that more realistically can only have come from a super-intelligence. The creation scenario fits this evidence very well.

Some readers may be thinking, *What about all the pain and suffering we see around us. How can that be part of a creation by a super-intelligence?* Most of us have probably grappled with this question at some time or another and some spiritual explanation is probably the best answer.⁷

If a super-intelligence — God — can reveal the future, as we have seen in chapter 13, He can also reveal the past.⁸ This means that God can reveal

5. See C. Barner-Kowollik, R. Brooks, and A. Whittaker, “Your say . . .” *Chemistry in Australia*, vol. 74, no. 4 (2007): p. 2, 29.

6. Paul Davies, “Life Force,” *New Scientist* (September 18, 1999): p. 27–30.

7. See, for example, John Ashton and Michael Westcott, editors, *The Big Argument: Does God Exist?* “The Problem of Evil,” by J. Paulien (Green Forest, AR: Master Books, 2006), p. 179–196.

8. Dr John Taylor, professor of mathematics at Kings College, London, cites one extensive study, reporting 1,600 cases of people who saw details of the past long before they were born. See John Taylor, *Science and the Supernatural* (London: Paladin Books, 1980), p. 177.

how we came into existence. That revelation was that the earth and the universe were created in six literal days about 6,000 years ago (Genesis 1:1–2:1). Because extreme wickedness and violence had become widespread, most of the life on earth was destroyed in a supernatural worldwide flood about 4,300 years ago (Genesis 6:5–7:24).⁹

I believe we humans were made in the “image” of this super-intelligent Creator God. This is why our minds have the ability to discover and understand the amazing details of the workings of nature. We did not evolve from monkeys — we are far more “special.” Far from our presumed primate ancestry, we have been endowed with the capacity to enhance our lives and our environments with reflections of the unlimited qualities of our Creator, into a timeless future. Let us not restrict our access to these in favor of a singular reliance on the now-impossible theory of evolution to explain our existence, our significance and purpose, and our prospects.

9. For the calculation of the approximate date of the Flood see appendix 1.

Appendix 1

Calculation of the Approximate Dates for Creation and the Flood Using Data in the Biblical Record

Genesis chapter 5 records the age when the patriarchs became fathers, that is, Adam, 130 years old; Seth, 105; Enos, 90; Kenan, 70; Mahalel, 65; Jared, 162; Enoch, 65; Methuselah, 187; Lamech, 182; Noah (Flood), 600. Adding these years up, we get a total of *1,656 years from creation to Flood*. (Note: these ages could be up to +1 year off for each of the ten patriarchs depending on whether they became a father just after a birthday or just before a birthday. That is, 1,656 is the minimum number of years, with 1,666 years the maximum, with the correct value somewhere in between.)

Genesis 11:10–25 records the age when post-Flood patriarchs became fathers. That is, Shem, 2 (years after Flood); Arphaxad, 35; Salah, 30; Eber, 34; Peleg, 30; Reu, 32; Serug, 30; Nahor, 29; Terah, 130 (died at 205 when Abraham was 75, Genesis 11:32, 12:4). Abraham was 75 when he left Haran and made a covenant with God (Genesis 12:4). Adding up these years, we get a total of *427 years from Flood to the covenant with Abraham*. Again, the years could be off by up to ten years as before. That is, the maximum number of years would be 437.

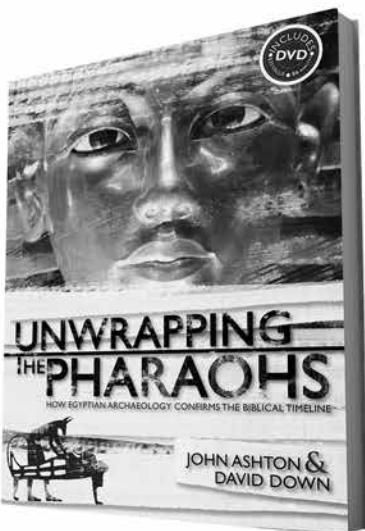
The dates for the Flood and creation can be calculated as follows from the date of Solomon's fourth year, which is now believed to be 967 B.C. The Exodus occurred 479 years earlier, that is, 1446 B.C. (1 Kings 6:1). The covenant with Abraham took place 430 years before the Exodus (Exodus 12:40–41; Galatians 3:16–17). Since the covenant with Abraham was 427 years after Flood, the time from the Flood to the Exodus was 857 years.

Therefore, the Flood was 1446 + 857 = 2303 B.C. and creation was 2303 + 1656 = 3959 B.C. (approximately).

Note 1: Ussher has Solomon's fourth year as 1012 B.C., that is, 45 years earlier than the current date assigned to this event. Ussher's date for creation of 4004 B.C. – 45 = 3959 B.C. The calculations shown in this appendix are consistent with Ussher's calculations but are dependent on the accuracy of the historical date for Solomon's fourth year.

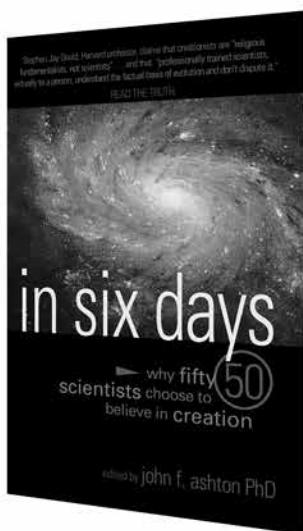
Note 2: The uncertainty in the Flood date would be +10 years, that is, up to ten years older. The uncertainty in the creation date would be +20 years, that is, up to 20 years older.

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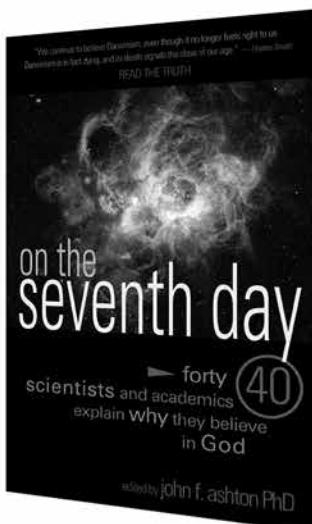
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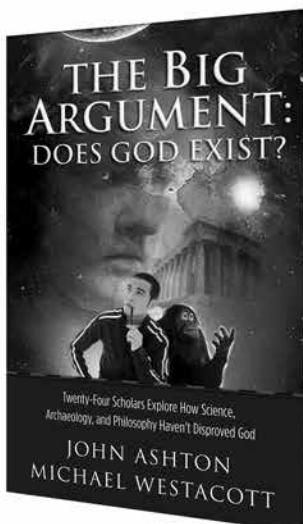
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