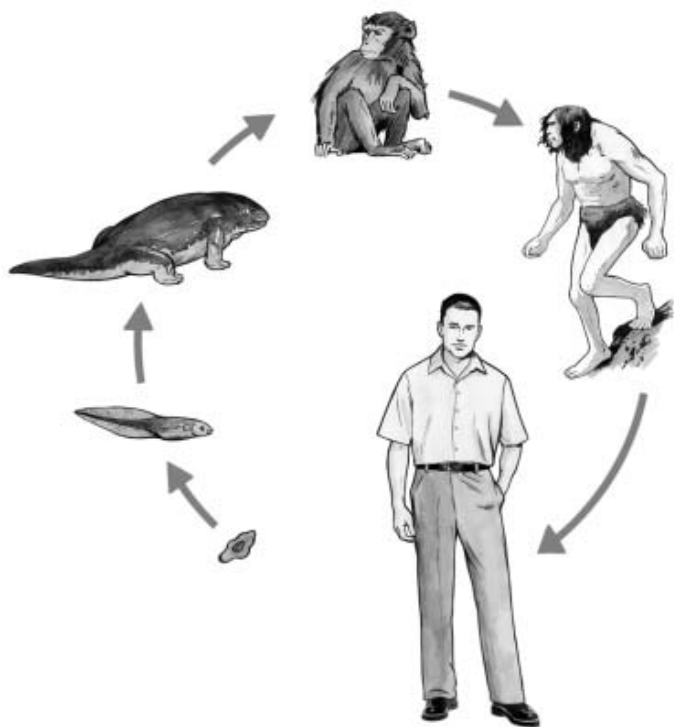


evolution: fact or fable?



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Richard Johnston

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By Richard Johnston

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introduction

When Charles Darwin and his adherents popularized the theory of evolution in the late 1800s, rationalist and humanist scientists and philosophers proclaimed that the death knell had sounded for religion, and for the God of Creation in particular. Now, over 100 years later, both God and faith in the biblical account of Creation are alive and well. In fact, although the theory of evolution has long been taught as fact in most schools and universities with the Bible's account and other opposing views being given little or no voice, a growing number of respected scientists are joining the "creationist" camp.

Many questions about how this or that happened remain unanswerable by means of scientific investigation, but more and more evidence is being uncovered that indicates the universe and all that is in it was the work of an intelligent designer, not chance. Evolutionists are fond of stating, "Evolution is a fact." But a fact is incontrovertible, meaning it is certain, undeniable, and not open to question. The truth is that the theory of evolution is *not* as factual and convincing as its proponents pretend.

“Creation science”—the scientific study of the creation of the universe by an intelligent designer—covers a wide range of scientific disciplines: physics, botany, biology and molecular biology, anthropology, biochemistry, astrophysics, and more. It would take far more than these few pages to thoroughly examine all the arguments of the evolution versus Creation debate. Instead, this booklet deals with only a few of the most oft-repeated claims for and against the two theories.

the two sides of the debate

Creation science contends that an intelligent designer was at work in the creation of the universe and life. A sizeable number on this side of the debate—perhaps even the majority—believe the Bible’s account of Creation—that is, that the universe was created over a span of six days about 6,000 years ago. (The age of the earth according to the Bible can be roughly calculated by adding the number of years Adam and his descendants lived, as listed in Genesis chapters 5 and 11 and other biblical passages, up to the laying of the foundation of the temple in Jerusalem by King Solomon in 967/966 B.C., a date most historians agree on, give or take a few years.¹) Further to this, biblical creationists also accept the Bible’s account that a worldwide flood around 1,400 years after Creation cataclysmically altered the original Creation and that all humans and animals now inhabiting the earth are direct descendants of the occupants of Noah’s Ark.

¹ Edwin R. Thiele, *The Mysterious Numbers of the Hebrew Kings* (Grand Rapids: William B. Eerdmans Publishing Co., 1951, rev. 1965) is regarded by many historians as the definitive work when determining biblical dates such as this.

The most popular atheistic theory as to the origin of the universe is the big bang theory. This theory goes through constant revision as new data is injected into the equation, but in essence it states that the universe began from a furiously spinning, infinitesimally small but immensely dense dot. The dot exploded in “the big bang” that threw out matter that expanded into all the astral bodies that inhabit the universe, which is still expanding.

Speculation is rampant as to when this occurred, but 20–40 billion years ago is the median time frame given. At some stage billions of years ago the earth, as it was then formed, was subjected to continuous rain for billions of years. This dissolved rock into the ocean, making what is commonly referred to as the primordial soup.

Due to some chance introduction of an energy force of some kind, life in the form of simple cells sprang forth from the various inanimate chemicals present in this “soup.” This life developed and became increasingly complex in nature, and through the intervening billions of years since that time has given rise to the vast diversity of life that abounds on this planet.

Creation scientists look at the cosmos and see the unmistakable hand of a designer at work. Evolutionists observe the same cosmos and view everything that is in it as the result of random chance.

It is important to understand that contrary to claims by evolutionists, belief in the biblical account of Creation is *not* diametrically opposed to true science. The proponents of evolution often try to cast believers in Creation as scientifically ignorant and unenlightened. Don’t let yourself be put in that position.

Creationists can believe as firmly in science as anyone else. In fact, many scientists are creationists.

True science is based on what is known as the “scientific method,” by which knowledge is advanced by formulating a question, collecting data about it through observation and experiment, and testing a hypothetical answer. Only after such experimentation has proven a scientific theory to be true by producing observable and repeatable results does the theory move into the realm of scientific fact.

Because neither the big bang/evolution theory nor the belief in the Creation being wrought by God can be observed or repeated under observable experimental conditions, both are belief systems that remain within the realm of faith. It comes down to what—and who—you choose to believe.

Others try to sit on the fence. Many believe in the God of the Bible, but contend that the Creation was the result of evolutionary processes. These are the proponents of theistic evolution. A later chapter takes a closer look at the theistic evolutionist’s attempts to synthesize the polar opposites of the Bible and evolutionary theory, but in short this middle ground requires twice as much faith as the two other belief systems because it requires faith in both.

Charles Darwin and Alfred Russel Wallace—Popularizers of the Theory of Evolution¹

Charles Darwin and his history-changing book *On the Origin of Species by Means of Natural Selection*, subtitled “The Preservation of Favored Races in the Struggle for Life,” published in 1859, are known around the world. As a young man, Charles Darwin was always interested in nature, but since his father saw no future in being a naturalist, he was sent to the University of Edinburgh to study medicine.

At 16, he left Edinburgh without a degree and enrolled in Christ College at Cambridge University to become a clergyman, since most naturalists of the day were clergyman. He received his B.A. degree in theology in 1831 and was recommended by the Reverend John Henslow, Professor of Botany, to Captain Robert Fitzroy of the HMS *Beagle* to participate in a surveying voyage around the world.

Darwin was 22 years old when they sailed from England in December 1831 with the primary mission of charting sections of the South American coastline. While the crew charted the coastline, Darwin observed the distinctive nature of South America and was puzzled by the geographic distribution of species. At the Galapagos Islands, Darwin came across several types of finches that, although very similar, had apparent adaptations to their particular environments. By the time they had sailed from the Galapagos, Darwin had read Charles Lyell’s *Principles of Geology*, and began to doubt the Church’s

{ ¹ From the Creation Science Web site: <http://emporium.turnpike.net/C/cs/>

position that the earth was only a few thousand years old. Later Darwin would theorize that these new forms were the result of the accumulation of adaptations to a different environment (Campbell 1990: 428–429). By the 1840s, Darwin had worked out the major features of the theory of natural selection as a mechanism for evolution but did not publish it immediately. Incidentally, Darwin spent most of his adult life in a semi-invalid condition whose cause, either organic or psychological, to this day remains unclear, but he did nevertheless write extensively and pursued his research.

The idea of natural selection as a source of new species was later to be co-discovered by Alfred Russel Wallace (1823–1913). Wallace, unlike Lyell and Darwin, was raised in poverty and had no formal higher education at all, learning his knowledge of biology by extensive field experience in the Amazon and East Indies. At 21, Wallace was introduced to spiritualism and would later become a leader in the spiritism movement and write on the subject. Wallace wrote a two-part article on the subject and later the definitive textbook, *Miracles and Modern Spiritualism* in 1876 (Morris 1989: 171).

In 1855 Wallace published a paper on the origin of species, which made Lyell and Darwin realize how close Wallace was to Darwin's research. While Darwin was procrastinating on the publication of *Origin*, Wallace made a very curious contribution to science while in the Malayan jungles:

"I was then (February 1858) living at Ternate in the Muluccas [part of modern-day Indonesia], and was suffering from a rather severe attack of intermittent fever, which prostrated me every day during the cold and succeeding hot fits. During one of these fits, while again considering the problem of the origin of species, something led me to

think of Malthus's "Essay on Population." (Morris 1989: 172, quoting Wallace, *The Wonderful Century*.) ...

"Then it suddenly flashed upon me that this self-acting process would necessarily improve the race, because in every generation the inferior would inevitably be killed off and the superior would remain—that is, the fittest would survive. Then at once I seemed to see the whole effect of this.

"The whole method of species modification became clear to me, and in the two hours of my fit, I had thought out the main points of the theory. That same evening I sketched out the draft of a paper; and in the two succeeding evenings I wrote it out, and sent it by the next post to Mr. Darwin" (op cit, p. 173).

At that point, Darwin was persuaded by his friends Lyell and Hooker to stop work on the "big book" and quickly publish an abstract, a shorter version, instead. Lyell and Hooker then presented Darwin's 1844 sketch and Wallace's 1858 paper to the Linnean Society on July 1, 1858. Darwin's "abstract" of 490 pages was published in 1859 as *On the Origin of Species by Means of Natural Selection* and the rest is history (Taylor 1991: 130–131). Had it not been for Wallace acting as a stimulus, Darwin may not have written *Origins* and the course of history could have remained unchanged. Morris summarizes this best:

"Herein was a marvelous thing! A theory that Darwin had been developing for twenty years, in the midst of a world center of science and with the help and encouragement of many scientific friends, was suddenly revealed in full to a self-educated spiritist, halfway around the world, alone on a tropical island in the throes of a two-hour malarial fit. This is not the usual route to scientific discovery" (Morris 1989: 173).

scientific laws that evolution defies

Before going further, it is important to understand a few basic laws of physics. When something is a law of science, it means that it is an unchanging principle of nature. It is a scientifically observable phenomenon that has been subjected to extensive measurements and experimentation and has repeatedly proved to be invariable throughout the known universe (e.g., the law of gravity and the laws of motion).

One of the laws of physics is termed the Second Law of Thermodynamics. Physicist Lord Kelvin, the man who first defined this law, stated it in technical terms as follows: "There is no natural process the only result of which is to cool a heat reservoir and do external work."

In more understandable terms, this law observes the fact that the usable energy in the universe is diminishing. Ultimately, there would be no available energy left. Stemming from this fact we find that the most probable state for any natural system is one of disorder. All natural systems degenerate when left to themselves.¹

¹ Lord Kelvin, as quoted in A.W. Smith and J.N. Cooper, *Elements of Physics*, 8th edition, New York, New York: McGraw-Hill Publishing (1972), p. 241.



The second law of thermodynamics means that everything deteriorates and does not get more complex as required for evolution to occur.

Famed scientist, science fiction writer, and evolutionary proponent Isaac Asimov put it this way:

Another way of stating the second law then is, “The universe is constantly getting more disorderly.” Viewed that way we can see the second law all about us. We have to work hard to straighten a room, but left to itself it becomes a mess again very quickly and very easily. Even if we never enter it, it becomes dusty and musty. How difficult to maintain houses, and machinery, and our own bodies in perfect working order; how easy to let them deteriorate. In fact, *all we have to do is nothing, and everything deteriorates, collapses, breaks down, wears out, all by itself*—and that is what the second law is all about.¹

But the crux of evolutionary theory is that things are gaining in complexity, simple life forms giving rise to more sophisticated ones; disorder giving rise

¹ Isaac Asimov, “In the Game of Energy and Thermodynamics You Can’t Even Break Even,” *Smithsonian Institution Journal* (June 1970), p. 6 (emphasis added).

to order. This flies in the face of the second law of thermodynamics. On this point alone the theory of evolution would have to be disallowed.

Evolutionists counter this argument by claiming that an energy source can reverse the second law. For example, an outside energy force such as a housekeeper can tidy a disorderly room. They point to the sun as the outside source of energy, and say over billions of years the sun's energy would be like the busy housekeeper. Simple observation, however, would show that energy from the sun alone is not capable of creating life from something with no life, or complexity from simplicity.

Consider the sun shining on two seedlings: the one alive, the other dead. When equal amounts of water and nutrients are added to both, the live plant flourishes but the dead one decays. Energy from the sun is not enough to give rise to life. And as for the dead plant, it rots and disintegrates in accordance with the second law of thermodynamics.

Another scientific law that is defied by the big bang theory is the law of the conservation of angular momentum. This law states that if an object is spinning and part of that object detaches and flies off, the part that flies off will spin in the same direction as the object it detached from.

As previously stated, the big bang theory holds that a very small, very dense point in space was spinning very fast when it exploded and shot out all the planets, stars, and other astral bodies that comprise the universe.



The law of the conservation of angular momentum disproves the big bang theory.

It is true that the planets are observed to be spinning. But, according to the law of the conservation of angular momentum, if all the planets spun off from the same original object, then they would all be spinning in the same direction. Even an examination of our own solar system shows that at least two planets, Venus and Uranus and possibly also Pluto, spin in the opposite direction than the rest of the planets do. This evidence alone disproves the big bang theory.

is the earth old or young?

An obvious difference in the arguments for evolution and creation has to do with the age of the earth. Evolutionists believe that it must be many billions of years old, while biblical creationists contend that it is only around 6,000 years old. What does the evidence reveal?

Chemical Processes

There are a few scientific ways to roughly calculate the age of the earth. Continuous, measurable chemical processes provide one way. If the rate of the process and current amount of the product can be determined, then it is possible to put a time on when the process started. The most obvious flaw in this method of reckoning is that the resultant product might not all be due to the single process being measured. What it does show us, though, is that the beginning date of the process can be no earlier than the date deduced. Here's an example:

Most of us are familiar with the element helium. It is the very light gas used to inflate party balloons and make them float. Blimps are also filled with helium.

Helium results from radioactive decay and it forms a very small percentage of our atmosphere—only about 0.0005% (compared to nitrogen’s 78% and oxygen’s 20%). However, that 0.0005% adds up to a considerable amount—about 3.7 billion metric tons. Helium is escaping into the atmosphere from the earth’s surface, due to the process of radioactive decay, at the rate of 67 grams per second. Even if there had been no helium in the atmosphere at the beginning, which is an unlikely situation, at the rate of 67 grams per second it would take only a few million years to reach the amount of 3.7 billion metric tons, not the 20–40 *billion* years that evolutionists claim to be the age of the earth.



The amount of helium in the atmosphere shows the earth could not be old enough for evolution to occur.

The question arises, though, could the helium being generated escape the earth’s atmosphere into space? The short answer is that a small fraction of the number of helium atoms, perhaps up to about 2% of the total, could be traveling fast enough to escape into space, but that is not enough to significantly alter the time calculations.

If God created the atmosphere with a significant amount of helium, then it is within the realm

of believability that the earth is only in the range of thousands of years old.

Just as helium is escaping into the atmosphere, so are salts being washed off the land and into the oceans by rain and other processes. Common salt is the chemical compound sodium chloride. The amount of sodium (in this form and others) being washed into the world's oceans is estimated at around 450 million metric tons annually. About 120 million metric tons leave the sea every year by various means. This leaves a net intake or buildup of sodium in the oceans of about 330 million metric tons yearly. The amount of sodium in the oceans is estimated at about 14,700,000,000,000,000 metric tons. At the current rate of intake, if there were no sodium in the oceans at the time of their origins, the earth could not be any older than about 45 million years old. It is understood that rates could fluctuate, but given the most generous rates of intake and outflow, it could not be older than 62 million years. These are absolute maximum dates, not the actual dates.¹

It is inconceivable therefore that the oceans of the earth, the "primordial soup" of evolution, could be 20 billion years old.

¹ For more information, see S.A. Austin and D.R. Humphreys, "The sea's missing salt: a dilemma for evolutionists," *Proceedings of the Second International Conference on Creationism*, Vol. II, pp. 17-33, 1990.



The amount of common salt in the ocean points to the earth being young.

Now 62 million years is a long time, but this is going by the supposition that not one gram of salt was in the ocean at the beginning. When God created the earth, it is most likely that He created the ocean water with salt included. There is also the matter of the Flood—a cataclysmic event that is documented in not only the Bible’s account of Noah and the Ark, but in the written and oral traditions of a number of civilizations—that would have resulted in massive erosion and therefore a massive increase in the sodium content of the ocean. Although the sodium content of the ocean cannot prove that the earth was created only 6,000 years ago, it *can* prove that is *not* billions of years old, as required in the theory of evolution.

Earth’s Magnetic Field

Another phenomenon that points to a young earth is its magnetic field. In the ’70s, Dr. Thomas Barnes, a physics professor, analyzed data from 1835 through to 1965 and concluded that the field is decaying, that it is getting weaker, at 5% per century.¹ Later investiga-

¹ K.L. McDonald and R.H. Gunst, “An analysis of the earth’s magnetic field from 1835 to 1965,” *ESSA Technical Report, IER 46-IES 1*, U.S. Government Printing Office, Washington, 1967.

tion showed that the field was 40% stronger in 1000 A.D. than it is today. Professor Barnes postulated the “free-decay theory,” which proposes that a decaying electric current in the earth’s metallic core is the cause. Assuming a constant decay of intensity, the current could not have been decaying for more than 10,000 years, or else its original strength would have been large enough to melt the earth. The conclusion from this is that the earth could not be older than 10,000 years.

Evolutionists postulate that some sort of a self-generating dynamo causes the liquid in the core to circulate, generating the magnetic field, rather than an electrical current circulating in a motionless liquid core as postulated by Barnes. Evolutionist scientists have been trying to construct a dynamo model or theory for the past 40 years that would take into account the data available, but so far have failed to come up with one that satisfies the criteria.



The weakening magnetic field of the earth is evidence of a young earth.

However, creationist physicist Dr. Russell Humphreys,^{† [following page]} looking at data derived from archeomagnetism and paleomagnetism, proposed that the free-decay theory needed to be revised because it

was shown that the decay of the magnetic field hadn't been constant over time. Wild fluctuations, and in fact complete reversals, in the earth's magnetic field occurred during the period approximating the time of Noah's Flood. He proposed the dynamic-decay theory to accommodate this new data. When all this is taken into account, it *shortens* the age of the earth to within the range of 6,000 years. The rate of decay in the earth's magnetic field is now constant, so it is believed that the dynamic, or fluctuating rate of decay, occurred earlier in the earth's history. Even if some of the decay happening today is still dynamic, which is unlikely, the age of the earth at a maximum would be around 100,000 years. That is still far too short a time for the processes attributed to evolutionary theory to have taken place. The dynamic-decay modification to the free-decay theory remains the best model for accommodating the data currently available.¹

† (previous page) Russell Humphreys, Ph.D. Physics (ICR) has a B.S. in Physics from Duke University and a Ph.D. in Physics from Louisiana State University. Dr. Humphreys then worked six years for the High Voltage Laboratory of General Electric. While there, he received a U.S. patent and one of *Industrial Research Magazine's* IR-100 awards. He has worked for Sandia National Laboratories since 1979 in nuclear physics, geophysics, pulsed power research, theoretical atomic and nuclear physics, and the Particle Beam Fusion Project. He was co-inventor of special laser-triggered "Rimfire" high-voltage switches. Dr. Humphreys has received another U.S. patent and two awards from Sandia, including an award for excellence for contributions to light ion-fusion target theory.

¹ "The Earth's Magnetic Field Is Young" by Russell Humphreys, Ph.D. in *Impact*, No. 242, issued by the Institute for Creation Research.

Rates of Erosion

Rivers dump tons of sediment into the world's oceans every day. Sedimentologists have researched many of the world's rivers and calculated how fast the land is disappearing. The average height reduction for all the continents of the world is about 60 millimeters (2.4 inches) per 1,000 years. This equals some 24 million metric tons of sediment per year going into the oceans. If the earth were even only one billion years old, a height of 60 kilometers of continent would have eroded. The earth's highest mountain, Mount Everest, is only 8.85 kilometers high. Obviously the continents of the world have never been on average over seven times as high as Mount Everest, because that sediment would have had to have gone somewhere. That somewhere is the oceans, which means that the oceans would have had to have initially been correspondingly deeper, and we would today see the ocean floor miles thick in sediment—which is not the case. Also, at this rate of erosion, North America should have been leveled in 10 million years. The Yellow River in China could flatten a plateau as high as Everest in 10 million years.¹ Therefore, the earth could not possibly be billions of years old as required by the theory of evolution, or not just the mountains, but every landmass, would have been eroded away and be now covered by the ocean.

¹ Walker, T., "Eroding ages," *Creation Ex Nilho* 22(2):18–21, 2000.



If the earth were as old as evolution demands, all land would have eroded into the ocean by now.

Other Processes

Fossil formation, the transformation of wood to coal, and petrification (the transformation of matter into stone), are processes that were believed to have taken millions and perhaps billions of years. However, they have since been shown to occur quite quickly. A petrified bowler hat sits in a mining museum in New Zealand.¹ The Petrified Forest National Park in Arizona is claimed by evolutionists to be older than 225 million years. It is obvious that bowler hats were not around then. In fact, we know the bowler hat was petrified only a little over a hundred years ago. So if this and other items in the same catastrophe can be petrified only recently, why does the Petrified Forest have to be dated as over 225 million years old?

¹ A bowler hat was buried in the volcanic eruption of Te Wairoa village (North Island, New Zealand) on June 10, 1886. It was discovered 20 years later, and was found to have turned to stone. A leg of ham had also been petrified after being buried in the same catastrophe. *Creation Ex Nihilo*, Vol. 8, No. 3, p. 10, 1986

radiometric dating

Radiometric dating is a method that scientists use to measure the age of things. The most widely known form of radiometric dating is that based on carbon-14. It works like this. Carbon-12 is the most common form of carbon, and carbon-14 is what is called an isotope of it. (An isotope is a variation of the normal atom of an element, in that it has more or less neutrons than the standard atom.) Carbon-12 has six protons and six neutrons at its nucleus, and is therefore said to have an atomic weight of 12. The component of an atom that determines its character is the number of electrons in orbit around its nucleus. In carbon's case there are six.

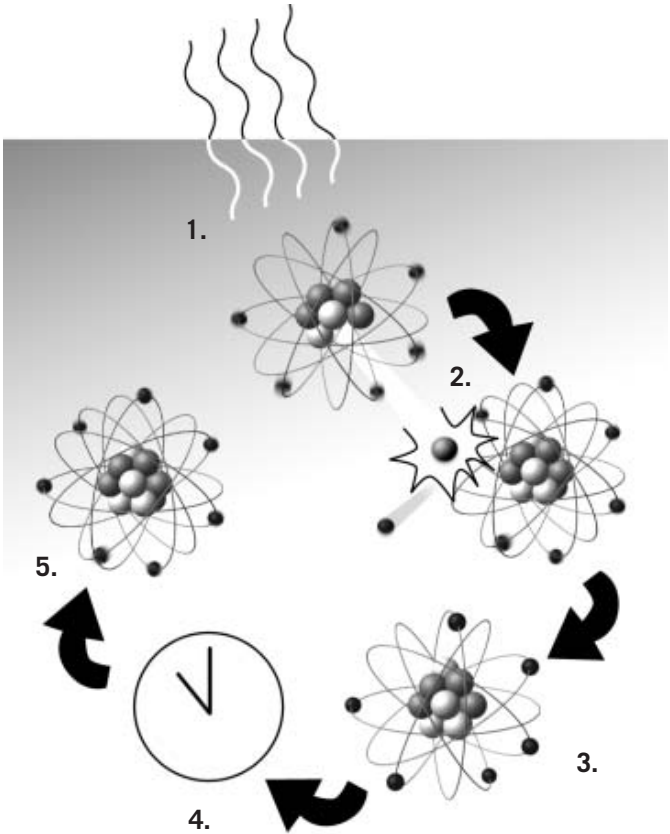
In the high atmosphere, the sun's rays knock out neutrons from the nuclei of atoms. These neutrons in turn bump into other atoms in the lower atmosphere. Nitrogen makes up about 78% of the atmosphere, so nitrogen atoms are prime targets for being bumped. A nitrogen atom has seven protons and seven neutrons in its nucleus, along with seven electrons spinning around the nucleus. The stray neutrons dislodged by the sun's rays knock one electron off a small frac-

tion of nitrogen atoms. Because the number of electrons determine the character of an atom, and these “bumped” atoms now have only six electrons, these nitrogen atoms become carbon-14. Because carbon-14 is an unstable isotope, it will in time radioactively decay back to normal nitrogen. This decay rate of carbon-14 back to nitrogen-14 is measurable.

The standard measurement in radioactive decay is called a half-life. This is how long it would take a certain amount of a substance to decay to half its weight (a gram to half a gram, for instance). The half-life of carbon-14 is 5,730 years (plus or minus 40 years). To measure the age of things, scientists make the supposition that the ratio of carbon-12 to carbon-14 in the atmosphere has remained constant over time.

Carbon-12 and carbon-14 are both absorbed by living things such as animals and plants, in the form of carbon dioxide. Once the living thing dies, no more carbon is absorbed. The carbon-14 content of the dead animal or plant then immediately starts to radioactively decay back to nitrogen, and escapes as a gas. The carbon-12, on the other hand, does not decay. Thus, if the amount of carbon-14 in relation to the amount of carbon-12 in a sample from a carcass can be measured, it should be able to give a fairly good estimate as to when the living thing died.

That all sounds good in theory, but the problem lies in the original supposition that the ratio of carbon-12 to carbon-14 in the atmosphere has remained constant. This has not been the case. Remember that carbon-14 does not come from carbon-12, but rather from nitrogen in the atmosphere. With the advent of the Industrial Revolution and the burning of fossil

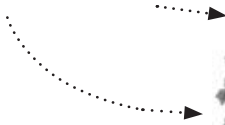


[1] High in the atmosphere, the sun's rays knock off neutrons from atoms.

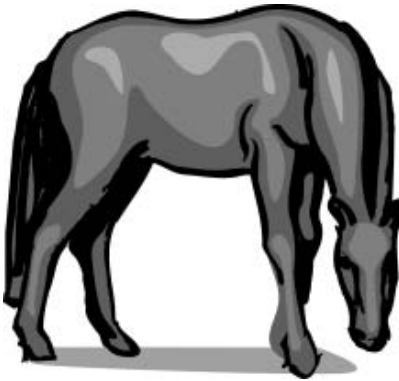
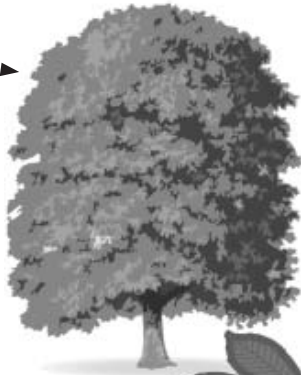
[2] The displaced neutron knocks off an electron of a nitrogen atom, causing it to become an unstable radioactive isotope [3].

[4–5] Through time, the unstable isotope C-14 radioactively decays to nitrogen again.

Upper atmosphere
conversion of ^{14}N to ^{14}C



^{14}C in
carbon
dioxide
taken up
by plants

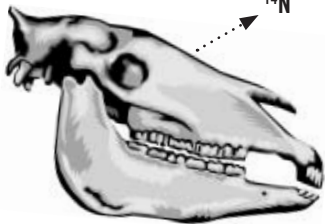


^{14}C absorbed by animals
as they eat plants or other
animals



After death:

Loss of ^{14}C by decay and no
replacement from eating.



^{14}N



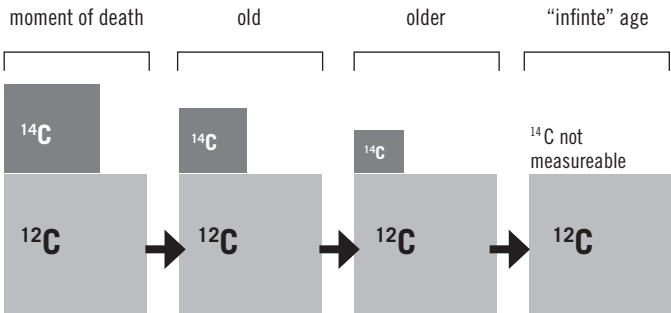
^{14}C is absorbed by living things but lost after death.

fuels, much more carbon-12 has been injected into the atmosphere with no corresponding increased levels of nitrogen turning into carbon-14. Although above-ground nuclear tests have discharged some more carbon-14 into the atmosphere, this has not compensated for the difference.

Also, it has been discovered that plants discriminate against carbon dioxide containing carbon-14 atoms, so that the absorption rate is lower than for normal carbon-12. Additionally, the rate of carbon-14 formation in the atmosphere has fluctuated due to Earth's weakening magnetic field. And finally, the Flood would have made a huge difference in that a vast quantity of carbon, in the form of plant and animal life, was pulled out of the biosphere and buried under the sediment deposited as the waters receded.

The net effect of all these conditions is that ancient specimens will test much older than they are.

Ratio of ^{14}C to ^{12}C decreasing with time



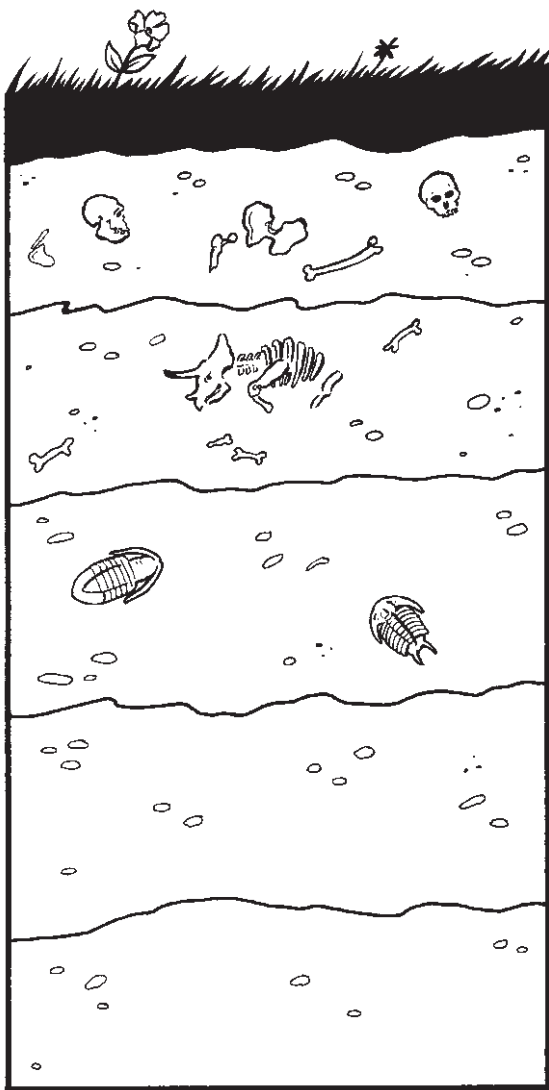
Furthermore, the limit of carbon-14 dating is set at around 50,000 years, as after that time there would be no detectable amount of carbon-14 left in a sample. So with regard to dating fossils that are supposedly millions of years old, carbon-14 dating is useless.

Other forms of radiometric dating are even more subject to error.

the geologic column and index fossils

Most of us are familiar with the geologic column from high school textbooks. In short, the geologic column divides the supposed history of Earth into five eras, each of which has its appointed age. (The Cenozoic Era runs from 25 thousand to 70 million years ago, the Mesozoic Era from 70 million to 200 million years ago, the Paleozoic Era from 200 to 600 million years ago, the Proterozoic Era from 600 million to 1 billion years ago, and the Archeozoic Era from 1 billion to 1.8 billion years ago.)

Certain fossils, called index fossils, are linked to layers of sedimentary rock that are assigned to each of the three most "recent" eras. (The other two eras are assigned no fossils.) These most recent three eras (Cenozoic, Mesozoic and Paleozoic) are each subdivided into 12 periods, and each period has its appointed age according to the index fossils it contains. According to this system, the fossils of simpler life forms are found in the lower (older) rock strata, and more complex ones in higher (more recent) strata. Ages are assigned to rock specimens according to the index fossils that are found in them.



A simplified geologic column according to evolutionary theory.

This all sounds good in theory, but in actuality the only place that the geologic column is ever found is in textbooks. It is not a reality in the field.¹ In other words, you can't take a drill, bore down into the earth, and from the core samples retrieved see the geologic column of fossils and rocks stacked up one upon another. Evolutionist scientists admit this, but the fact that students are taught the geologic column shows the bias that secular, humanist education takes. Students are given the impression that these rock layers can be found neatly placed one on top of the other, with these convenient index fossils present to indicate the age of the rock. This is patently false.

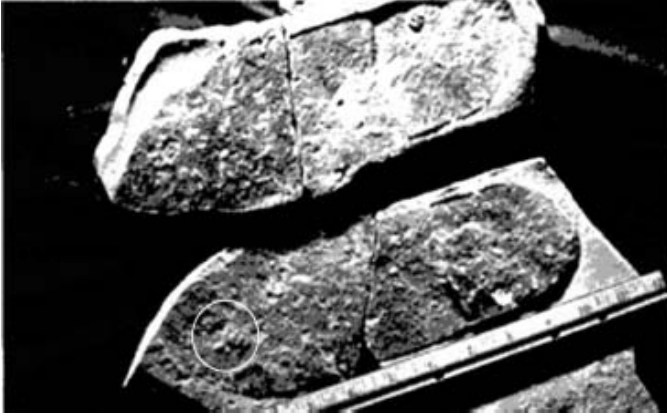
The science of fossils is called paleontology, and the science of rocks and minerals is called geology. Geologists date rocks according to the fossils found in them. Paleontologists date fossils according to the rocks they are found in. The one scientific discipline relies on the other to arrive at its dating of samples, and neither one of them relies on any other evidence. This is obviously circular and bogus reasoning.

Things have become even more suspect since one of the creatures used as index fossils—graptolites, said to have lived 410 million years ago—have been found alive today in the South Pacific! And there is also the mysterious fossil of the trilobite, said to have lived 500–600 million years ago, found inside a fossilized sandal print.² How could a person wearing sandals,

¹ John Woodmorappe, "The Geologic Column: Does It Exist?" *Creation Ex Nihilo Technical Journal* 13(2):77–82, 1999.

² Found by William Meister of Kearns, Utah, June 1, 1968. Dr. H. H. Doelling of Utah's Geological Survey verified it was not a fake. Photo published in *Mysteries of the Unexplained*, The Reader's Digest Association, New York/Montreal, pp.37–38, 1985.

when evolutionists claim that human beings have been around for less than 10,000 years, have stepped on a 500 million-year-old creature?



You can see the trilobite circled near the front of the sandal print.

There is also the anomaly of polystrate fossils. These are objects such as fossilized trees that pass through two or more layers or strata of rock that supposedly vary in age by millions of years. Certainly the tree did not stand around for millions of years while the rock formed around it.

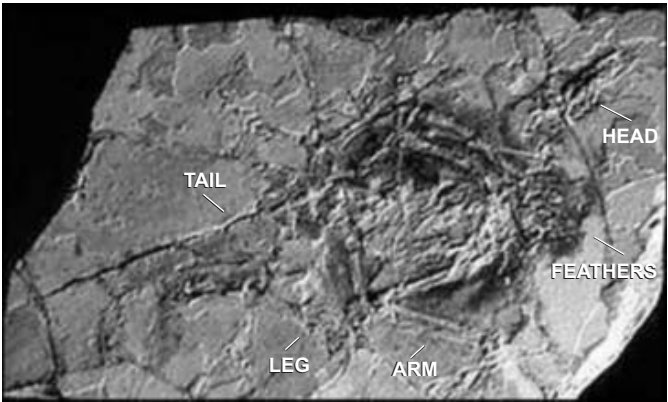
more on fossils

Most people are under the impression that all fossils are extremely old, and that the very fact that fossils exist is proof of evolution. Neither of these commonly held beliefs are true.

Fossils are the remains of once-living organisms that have been turned into stone. Normally, when living things like animals or plants die, they decay and eventually disintegrate. But in some cases organisms were caught in a catastrophe like a flood and quickly buried in sediment, and then extreme pressure compacted that sediment into rock. The carcass of the plant or creature is therefore in an airless environment where decay does not occur. Instead, it absorbs chemicals from the sediment it is encased in until the sediment and the carcass take on the same rocklike qualities. In general, for an organism to be preserved, two conditions must be met: 1) rapid burial to retard decomposition and prevent the ravaging of scavengers; and 2) possession of hard parts, such as bones, capable of being fossilized. Many fossils have been found, with more being found all the time.



Camel jaw fossil



High-tech scans of a fossil, *Archaeopteryx*, hailed as a “missing link” between birds and dinosaurs, have shown the specimen is a fake constructed from at least two separate specimens. Many paleontologists believed that with its mix of dinosaur and birdlike features, *Archaeopteryx* had captured the moment in “evolution” when dinosaurs were experimenting with flight. Later, it was discovered that the tail had come from *Microraptor*, the smallest adult dinosaur yet discovered, and had been glued on to increase the fossil’s commercial value.

The theory of evolution claims that simpler creatures are evolving into more complex ones. If this were true, one would naturally assume that there would be a fossil record of transitional creatures that would show one species gradually changing into another. For instance, many evolutionists believe that birds evolved from dinosaurs, therefore there has been much competition between various paleontologists to find fossils that show dinosaur-like creatures in various stages of developing feathers. Although fossils have been found that have supposedly shown this transition, they have all either been proved to be fakes or, on closer examination, do not show this transition at all. In fact, not one transitional fossil that is unmistakably genuine has been found. Every fossil ever discovered has been determined to be that of a distinct species of creature with no provable sign of having evolved from a simpler life form.

Evolutionists like to point out that fossils of simpler animals are usually found in strata lower than the more complex ones. They claim that this shows that the simpler animals were around for many millions of years before the more complex ones came on the scene. Although this is one way to look at it, there is another equally logical way to explain this—the Flood.

In Genesis chapters 6 through 8, the Bible tells of the world being inundated by a worldwide flood over 1,600 years after Creation, or about 2300 B.C.*

*This date is arrived at by the following process.

Genesis 11:10 says that Shem, Noah's son, was 100 years old two years after the Flood had finished. The following verses

in this chapter link Shem to Abraham through nine generations. It gives the fathers' ages when they had their first son. Once it gets to Terah, Abraham's father, it gives Terah's age when Abraham's elder brother was born, not how old he was when Abraham was born. But we can figure the missing numbers from Acts 7:3-4 and Genesis 11:32; 12:1-4, which state that Abraham was 75 years old when God gave him the promise that He would make him the father of a great nation. And in that same year, his father Terah was 205 years old. So Abraham was born when Terah was 130 years of age. By adding up all the ages listed in this chapter we come up with the figure of 352 years from the Flood to the birth of Abraham.

Galatians 3:17 says that Moses received the Law from God 430 years after He gave the promise to Abraham. This was the same year the Israelites left Egypt in the Exodus to return to the Promised Land.

1 Kings 6:1 says it was 480 years from the time of the Exodus till the laying of the foundation of Solomon's temple, which date has been established as 967 B.C.

So now we work backwards as we add up the years.

Year of the laying of the foundation of Solomon's Temple = 967 B.C.

Years from that to the Exodus = 480

Years from the Exodus to God's promise to Abraham = 430

Years from the promise to Abraham's birth = 75

Years from Abraham's birth to the Flood = 352

Total years and therefore date of the Flood = 2304 B.C.
+/- 11 years

We have to qualify it as plus or minus 11 years because the Bible for the most part gives us years, not the exact dates for these events. They could have been early in the year or late in the year, in which case we have to take into account that the date could vary by as much as 11 years on either side.

This was a cataclysm of unparalleled ferocity. Genesis 7:11 says that not only was there a torrential rain for 40 days and 40 nights, but also “all the fountains of the great deep were opened up,” indicating that this rain was accompanied by worldwide volcanic and seismic upheavals that make any recent earthquakes and volcanic eruptions pale in comparison. The result was the complete destruction of animal life except for the occupants of Noah’s Ark, and any sea creatures that managed to survive. The stratification (so apparent in places like the Grand Canyon in North America) resulted from the gradual settling of the previously churned-up earth, rocks, and sediment.

Along with the rocks, the animals and plants deposited are now found fossilized in the strata. Due to the flood, simpler creatures would have been drowned first as the waters began to rise, while more complex ones would have struggled for survival longer and sought out higher ground. This explains why the simpler life forms were buried in the deepest strata.

A worldwide flood of this magnitude would also account for the fossils being formed in the first place, the polystrate fossil phenomenon, why fossils of marine animals can frequently be found in the mountains, and the huge fossil graveyards that have been



Trilobite fossil

found around the world. Several in North America have been carefully examined. In Agate Springs, Nebraska, around 9,000 fossilized animals were found buried in "alluvial deposits," that is to say water-laid sedimentary rock. The remains of rhinoceros, camels, giant wild boars, birds, plants, trees, shellfish, and fish are intermingled in great confusion. This obviously could not have happened over thousands or millions of years.

The Cumberland Bone Cave in Maryland contained the intermingled bones of wolverines, bears, tapirs, groundhogs, rabbits, coyotes, beavers, muskrats, mastodons, elk, crocodiles, pumas, etc. The fossils were covered and preserved by a flood deposit of gravel and rocks.

Several miles north of Como Bluffs, Wyoming, a dinosaur quarry was found which yielded 483 specimens weighing a total of 146,000 pounds. The Cleveland Lloyd quarry in Utah has yielded over 12,000 bones of 70 different animals and 10 different kinds of dinosaurs. At Dinosaur National Monument near Vernal, Utah, 20 complete skeletons, as well as bones and parts of skeletons representing nearly 300 individual dinosaurs, were extracted. There are similar graveyards in the Gobi Desert of Mongolia, in Africa, in the foothills of the Himalayas, in South America, in Europe—in short, all over the world.

macroevolution vs. microevolution

Does biological evolution exist? The surprising answer is yes! However, the type of evolution that is evident is not the evolution that is so commonly taught as fact today.

There are two categories of evolution: One is called *microevolution* and the other *macroevolution*. Microevolution happens *within* species, when small adaptations either take place to accommodate environment or are brought about by breeding. Macroevolution is the idea that one species evolves into another, the commonly understood theory of evolution. This second type of evolution has *never* been observed to occur.

An example of microevolution is seen in the many different breeds of dogs. The range is expansive, from the miniature chihuahua to the huge Saint Bernard, with every imaginable size and shape in between. However, one thing is certain: They are all dogs. There is no instance where a dog has evolved into a cat or a horse or any other species. The reason for this lies in the internal DNA information of the dog.

We are learning more about DNA and the information stored in the genomes of species. Although there is no biological process whereby more information can be *added*, some of that information can be *lost*. For macroevolution to work and one species to become another, information has to be *added*, which as already stated is impossible by any known biological means. However, in microevolution information is actually being lost. When an animal adapts to its environment, the information on how to adapt was actually in the animal's DNA to start with. But in the process of this adaptation it is losing information about how to revert back to its original state.



Microevolution occurs but is the direct opposite process described by the theory of evolution.

This can be observed in dogs. All dogs at present on the earth come from the same ancestral couple that climbed down out of Noah's Ark some 4,300 years ago. Within those ancestors lay the information to give rise to the multitudes of breeds today. However, take any breed of dog—collie, basset hound, German shepherd, and so on—and you will not be able to revert back to the original by selective breeding to what those two ancestors looked like. That is because as dogs bred into the various breeds, they lost infor-

mation vital to reversing the process. The original and more complex information store has been simplified by the discarding of some of that information each time microevolution occurred.

Evolutionists claim that microevolution (adaptations within species) is proof of macroevolution, but this is untrue. In reality, the microevolutionary process is just the opposite of the process that evolutionists claim drives macroevolution.

Dazzling Design in Miniature¹

Prof. Werner Gitt²

The cells of the human body can produce at least 100,000 different types of proteins, all with a unique function. The information to make each of these complicated molecular machines is stored on the well-known molecule, DNA.

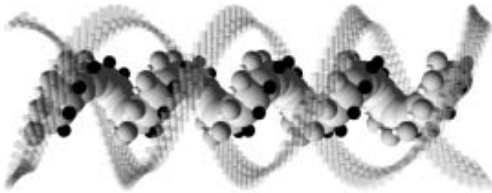
We think that we have done very well with human technology, packing information very densely on to computer hard drives, chips, and CD-ROM disks. However, these all store information on the surface, whereas DNA stores it in three dimensions. It is by far the densest information storage mechanism known in the universe.

{ ¹ Excerpts from an article first published in: *Creation Ex Nihilo* 20(1):6, December 1997–February 1998

{ ² Dr. Werner Gitt is an information scientist. He is a director and professor at the German Federal Institute of Physics and Technology (Physikalisch-Technische Bundesanstalt, Braunschweig) and is the Head of the Department of Information Technology. Dr. Gitt has written numerous scientific papers in the fields of information science, mathematics, and control engineering. He has also written several creationist books.

Let's look at the amount of information that could be contained in a pinhead volume of DNA. If all this information were written into paperback books, it would make a pile of such books 500 times higher than from here to the moon! The design of such an incredible system of information storage indicates a vastly intelligent Designer.

In addition, there is the information itself, which is stored on DNA, and transmitted from generation to generation of living things. There are no laws of science that support the idea that life, with all its information, could have come from non-living chemicals. On the contrary, we know from the laws of science, particularly in my own area of expertise [information science, mathematics, and control engineering], that messages (such as those that we find in all living things) always point back to an intelligent message sender. When we look at living things in the light of DNA, Genesis Creation makes real sense of the scientific evidence.



DNA

Cheating with Chance¹

Don Batten²

The argument from probability that life could not form by natural processes but must have been created is sometimes acknowledged by evolutionists as a strong argument. The probability of the chance formation of a hypothetical functional 'simple' cell, given all the ingredients, is acknowledged³ to be worse than 1 in 10^{57800} . This is a chance of 1 in a number with 57,800 zeros. It would take 11 full pages of magazine type to print this number. To try to put this in perspective, there are about 10^{80} (a number with 80 zeros) electrons in the universe. Even if every electron in our universe were another universe the same size as ours, that would 'only' amount to 10^{160} electrons.

These numbers defy our ability to comprehend their size. Fred Hoyle, British mathematician and astronomer, has used analogies to try to convey the immensity of the problem. For example, Hoyle said the probability of the formation of just one of the many proteins on which life depends is comparable to that of the solar system packed full of blind people randomly shuffling Rubik's

{ ¹ Excerpts from *Creation Ex Nihilo* 17(2):14–15, March–May 1995

{ ² Dr. Donald James Batten is a creationist agricultural scientist from Australia. He received a Ph.D degree from the University of Sydney, Department of Agronomy and Horticultural Science. His specialty is in plant physiology. He worked in the New South Wales state research facilities for 18 years before becoming a private horticultural consultant while working also with the Creation Science Foundation, Brisbane, Australia.

{ ³ D.A. Bradbury, 'Reply to Landau and Landau' *Creation/Evolution* 13(2): 48–49, 1993.

cubes all arriving at the solution at the same time¹—and this is the chance of getting only *one* of the 400 or more proteins of the hypothetical minimum cell proposed by the evolutionists (real world ‘simple’ bacteria have about 2,000 proteins and are incredibly complex). As Hoyle points out, the program of the cell, encoded on the DNA, is also needed. In other words, life could not form by natural (random) processes.

Creationists do not argue that life is merely complex, but that it is ordered in such a way as to *defy* a natural explanation. The order in the proteins and DNA of living things is independent of the properties of the chemicals of which they consist—unlike an ice crystal, where the structure results from the properties of the water molecule. The order in living things parallels that in printed books where the information is not contained in the ink, or even in the letters, but in the complex arrangement of letters which make up words, words which make up sentences, sentences which make up paragraphs, paragraphs which make up chapters and chapters which make up books. These components of written language respectively parallel the nucleic acid bases, codons, genes, operons, chromosomes and genomes which make up the genetic programs of living cells. The order in living things shows they are the product of intelligence.

{ ¹ F. Hoyle, ‘The big bang in astronomy’ *New Scientist*, 92(1280):527, 1981.

mutants

Evolutionists believe that the steppingstones of evolution are mutants. A mutant by definition is a specimen that has mutated, so that a gene or chromosome is different in the mutant than in its parent(s). The belief is that beneficial changes have occurred in mutants and then that has been passed on to the mutant's offspring.

The first barrier against mutations producing new traits is the law of probability. Mutations (which are actually errors in copying the genetic code) are rare—estimated at one in ten million. However, the real mathematical problem arises when you need a series of related genetic mutations. Each additional series is multiplied by the probability of one mutation. Four related mutations has a probability of 10 to the 28th power, which is virtually a probability of zero. A great many more than four related beneficial mutations would be needed to change one species into another. On a mathematical basis, the probability of evolution occurring by mutations within the gene pool is zero.



Mutations are overwhelmingly devastating and not beneficial as evolution requires.

Furthermore, of the approximately 4,500 genetic diseases in humans associated with genetic mutations, not one of these genetic mutations has been shown to have any *beneficial* effect. If even by chance one of them did, the chance of the one surviving and flourishing against the other 4,499 is negligible. It is currently estimated that the average apparently healthy individual carries five to eight mutations capable of causing serious disease if paired with other defective genes. We have two copies of most genes, which act as backups for each other. If one gene is defective, the backup takes over, so that most mutations or defects go unnoticed.

What this shows is that mutations are so overwhelmingly negative that any positive evolutionary advance through the process of mutation is for all intents and purposes impossible. In fact, the opposite is true. Given time, the human race would become so prone to genetic illness because of mutations that it would die out.¹

{ ¹ David A. Derrick, M.D., "The Blind Gunman" *Vital Articles on Science/Creation*, February 1999

How Old Is Humanity?

By David Plaisted, Ph.D.¹

New evidences suggest that the human race is very young. The journal *Science* reported that the age of the human race is roughly 1,000 to 10,000 generations. Other information about mitochondrial DNA mutation rates gives an even younger age than 1,000 generations.

Age estimates are obtained by observing differences between the DNA of different individuals and calculating the time of divergence using estimates of mutation rates. Mitochondrial DNA is often used, since it is separate from the bulk of DNA found in the cell nucleus. Mitochondrial DNA has about 16,000 base pairs and mutates, apparently, much faster than nuclear DNA. Human mitochondrial DNA has been completely mapped, so all the coding regions are known, as well as the proteins or RNA for which they code. Some areas of mitochondrial DNA known as “control regions” do not code for anything. A control region is a non-coding section that seems to have some kind of regulatory function. Because variation among humans is greatest here, scientists think this region mutates faster than any other region.

Mitochondrial DNA mutation rates in the control region were measured directly by comparing mitochondrial DNA from siblings and from parents and their offspring. Mitochondrial DNA was found to mutate about 20 times faster than previously thought, at an approximate rate of one mutation (substitution) every 33 generations.

¹ Dr. David Plaisted is Professor of Computer Science at the University of North Carolina, Chapel Hill. He has written numerous papers dealing with mathematics and computer science.

The control region studied has about 610 base pairs. Humans typically differ from one another there by about 18 mutations. By simple mathematics, it follows that the human race is about 300 generations old. If one assumes a typical generation of about 20 years, this gives an age of about 6,000 years.

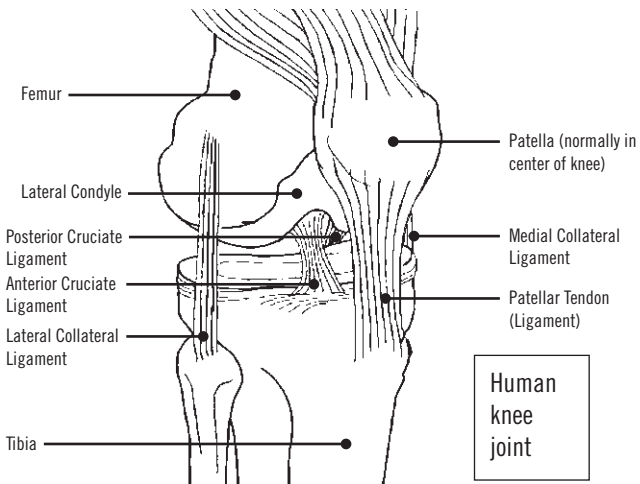
This calculation is done as follows: Assuming all human beings initially have identical mitochondrial DNA, consider two randomly chosen human beings. After 33 generations, two such random humans will probably differ by two mutations, since there will be two separate lines of inheritance and statistically one mutation along each line. After 66 generations, two randomly chosen humans will differ by about four mutations. After 100 generations, they will differ by about six mutations. After 300 generations, they will differ by about 18 mutations, the typically observed value in humans today.

irreducibility

The theory of evolution postulates that small, incremental, beneficial steps propel the evolutionary process forward. It is much like a device where one component of that device is modified at a time, so as to improve the efficiency of the device in some way, while at the same time allowing the device to remain functioning without any other modifications. Once the device has settled into the fact that it now has an improved component, it then “sees” the benefit of upgrading another one. The point is that it takes these steps one at a time, sees how good that step is, and then takes another step. The device must both continue to function and improve its functionality.

But what if the upgrade requires more than one improvement at a time? Evolutionary theory cannot accommodate this. The improvement must be one step at a time, and if a component doesn't offer an advantage to an organism (i.e., it doesn't function), it will be lost or discarded. Are there devices occurring in nature that therefore cannot be explained by evolution? Indeed there are many, but it only takes one to disprove the theory.

We will choose one which everyone will be familiar with—the amazing human knee joint. The knee joint is unique in our bodies. It is quite unlike the ball and socket joints of our hips or shoulders and the pivot joint of our elbows. Although those are all marvels of engineering, the knee is truly exceptional. It consists of several elements, but the critical design parts are (a) the two condyles of the femur bone that rotate in (b) the matching concave grooves of the tibia, and (c and d) the two cruciate ligaments (so called because they cross over each other) that fit in the space between the condyles.



If a structure is so complex that all of its parts must initially be present in a suitably functioning manner, it is said to be irreducibly complex. The knee joint is irreducible; all four of these parts must be present for the knee to work. (The knee has other parts, but these four are essential to each other for them to function

in the way they do.) Any one, two, or three of them on their own would not perform any useful function. They are all unique to the knee.

Therefore it is impossible for the knee to evolve from a simpler joint like the hip or the elbow, according to the theory of evolution. How such a device could have evolved in a gradual, step-by-step process as required by classic Darwinian evolution is an insurmountable obstacle to evolutionists.¹

{ ¹ Stuart Burgess, "Critical Characteristics and the Irreducible Knee Joint," *Creation Ex Nihilo Technical Journal*, Vol. 13, No. 2, 1999.

“human ancestors”

Most people are familiar with the supposed ape-men or hominids that evolutionists tout as humankind’s immediate ancestors. Let’s have a look at our supposedly long-departed forebears and see if indeed we should be calling them grandpa and grandma.

After a single tooth was discovered in Nebraska, U.S.A., in 1924, it wasn’t long before an artist’s rendition of a very brutish and ape-like Nebraska man, along with a Nebraska woman and their domestic animals and cave dwelling, were gracing the front page of the *London Illustrated News*, among other newspapers, magazines, and periodicals. It was then with some considerable egg on their faces that evolutionists had to downgrade Nebraska “man” to Nebraska “pig” when it was discovered that the tooth belonged to a type of pig still found in Paraguay. But still we are entertained today with pictures and larger-than-life mannequins of our supposed forebears in nearly every textbook and museum of natural history.

The scientific discipline that studies fossils for evidence of human evolution is call paleoanthro-



Nebraska man

pology. The base assumption for men and women in this branch of science is that man evolved from an ape-like ancestor. This, in their minds, is beyond doubt. Their mission in life is to find out from *which* ape-like creature man evolved. With that mindset, any evidence that would seem to contradict human evolution is either to be explained away, or if that proves to be too difficult a task, ignored.

In the naming of fossils, the term *pithecus* (Greek for ape) is applied to fossils with more ape-like characteristics, and the term *homo* to those with more human characteristics. So, for instance, *Australopithecus Afarensis* was the name given to the famous fossil nicknamed “Lucy” found in Ethiopia in 1974. The technical name translates to “southern ape from the Afar region of Africa.” *Homo erectus* is the name given to early human fossils found in many places around the world. Paleoanthropologists like to say that these were an early form of humans, but the size and shape of the fossils fit in the range of *Homo sapiens*, the anthropological term for modern man.

Where does the truth lie, and what actually has been discovered? Here is a list of fossil types that were or are thought to be ancestral to man.

***Homo sapiens neanderthalensis* (Neandertal man):**

Neandertal reconstructions were stooped and very much like an ape-man. It is now admitted that the supposedly stooped posture was due to disease and that Neandertal is in reality just a variation of humankind. Neandertals inhabited regions of the earth that were snow and ice covered during the Ice Age (yes, it seems there was one, though it did not last millions of years)

Evolutionary visions of Ancestral man

*Australopithecus**Homo erectus**Homo habilis**Ramapithecus**Homo sapiens
neanderthalensis*
(Neanderthal man)*Eoanthropus*
(Piltdown man)

and so suffered from dietary deficiency on top of living in extremely harsh conditions. It is believed that the disease rickets—which is caused by a deficiency in vitamin D that makes the bones soft and prone to bending and structural change—on top of severe arthritis, caused the malformation in the many Neandertal skeletons that have been found around the world

Ramapithecus: Once widely regarded as the ancestor of humans, it is now understood to be an extinct type of orangutan (an ape found in Southeast Asia).

***Eoanthropus* (Piltdown man)**: This was a hoax based on a human skullcap and an orangutan’s jaw. For 40 years it was widely publicized as the missing link. Because some evolutionists are so anxious to find proof of their theories, hoaxes such as this and others are often latched upon and accepted without proper critical investigation.

***Hesperopithecus* (Nebraska man)**: The model for Nebraska man was based on a single tooth of a type of pig now living only in Paraguay.

Australopithecus: Various species of these have at times been proclaimed as human ancestors. *Australopithecus africanus* was at one time promoted as the missing link, though it is no longer considered by evolutionists to be on the line from apes to humans. It is very ape-like, and many scientists now accept that it is simply an extinct type of ape. *Australopithecus afarensis* (Lucy) is still put forth as a viable ancestor. However, detailed studies of the inner ear, skulls, and bones have suggested that Lucy and her kind were not on the way to becoming human. They may have walked more upright than most apes, but not in the human manner. *Australopithecus afarensis* is very similar to the pygmy chimpanzee. In fact, research has shown that the australopithecines are

more different from modern African apes and humans than the latter two are from each other. They are not an intermediate form, but are unique.

***Homo habilis*:** There is a growing consensus amongst most paleoanthropologists that this category actually includes bits and pieces of various other types, such as *Australopithecus* and *Homo erectus*. It is therefore an “invalid taxon.” (A taxon is a category of organisms in the science of taxonomy.) In other words, *Homo habilis* never existed as such.

***Homo erectus*:** Many remains of this type have been found around the world. *Pithecanthropus* (Java man) and *Sinanthropus* (Peking man) both fall into this category. *Homo erectus* specimens are smaller than the average human today, with an appropriately smaller head and cranial cavity where the brain fits. However, the brain size is within the range of modern humans. Studies of the middle ear have shown that *Homo erectus* was just like us. Remains have been found in the same strata and in close proximity to ordinary *Homo sapiens* (modern man), suggesting that they lived together. Studies have shown that brain size fluctuations within *Homo sapiens* seem to have no correlation to intellectuality, so *Homo erectus* would not have been the dumb, brute caveman that has been implied in the past.

Statistical analysis conducted by evolutionist scientists Wood and Collard on six critical features of six various australopith and homonid specimens claimed to be transitional from “early ancestors” to *Homo sapiens* came up with only one specimen that could be exhibiting one single intermediate feature. The features studied were body size, body shape, locomotion, jaws and teeth, development, and brain size. The one

feature that could have been interpreted as an intermediate feature was the brain size of a *Homo erectus* specimen. But as already mentioned, other studies have shown that this variation fits within the brain-size range of *Homo sapiens*.¹

Typical science textbooks show a progression from an apelike knuckle-walking primate, through forms that are progressively larger, more bipedal, and more intelligent, culminating in modern humans. The scientific evidence shows no such thing. In the final analysis there is no irrefutable fossil evidence that shows man is the product of evolution. The missing links are still missing because they simply do not exist.

{ ¹ Wood, B. and Collard, M., The human genus, *Science* 284(5411):65–71, 1999.

is creation a credible alternative?

Although every area of evolution theory hasn't been examined in the preceding chapters, enough holes have been poked in the theory that a fair and unbiased reader would have to admit it is flawed in enough ways to render it debunked or at the least seriously questionable. It has very little actual scientific evidence to back it up and much to contradict it. If it hadn't become such a darling of many in the scientific community, it would have long ago faded from popularity.

But what about the alternatives? Can the Bible's account of Creation stand up to scientific scrutiny? There are some seemingly fantastic stories in the Bible's account of the beginning in the book of Genesis, such as a six-day Creation, a single human couple from which all are descended, and a worldwide flood that destroyed every living thing except the eight inhabitants of Noah's Ark (Noah and his wife, along with his three sons and their three wives), to name just a few. Not to mention the fact that the Bible implies that not just the earth but the whole universe is only about 6,000 years old. To be fair, these claims need to

undergo an examination just as rigid as the one given to the claims of evolutionists.

what saith genesis?

Let's start at the beginning, as related in the first two chapters of Genesis.

Day One

In the beginning God created the heaven and the earth. And the earth was without form, and void; and darkness was upon the face of the deep. And the Spirit of God moved upon the face of the waters. And God said, Let there be light: and there was light. And God saw the light, that it was good: and God divided the light from the darkness. And God called the light Day, and the darkness He called Night. And the evening and the morning were the first day (Genesis 1:1–5 KJV).

God's Checklist for Day One

- the planet Earth
- light
- separate light from darkness

Earth was created as a watery, formless planet, suspended in the darkness and void of space—no sun, no moon, no stars, no other planets, nothing. This, of

course, runs entirely contrary to the Big Bang theory in which Earth and the rest of the universe spun out of an infinitesimally small dot of immensely dense matter, but there is no solid scientific evidence to disprove the Bible's claim that Earth was made first.

The next thing God created was physical light. Evolutionists are quick to ask how there could have been light before there was the sun, which according to the Bible was not created until the fourth day. This detail is not covered in the Bible's very brief account of Creation, but clearly this light emanated from a source other than the sun. It is also clear that the light came from a single direction and that Earth was already rotating, because there was a "morning and evening"; at any given time, half of the planet was facing away from the light.

Day Two

And God said, Let there be a firmament in the midst of the waters, and let it divide the waters from the waters. And God made the firmament, and divided the waters which were under the firmament from the waters which were above the firmament: and it was so. And God called the firmament heaven. And the evening and the morning were the second day (Genesis 1:6–8 KJV).

God's Checklist for Day Two

- atmosphere
- water
- divide the waters

When the waters were “divided” by the firmament (the sky), some remained on the surface of the planet and some went into the atmospheric heavens. It is conjectured that this atmospheric water encased Earth at this stage in a water canopy.

Day Three

And God said, Let the waters under the heaven be gathered together unto one place, and let the dry land appear: and it was so. And God called the dry land earth; and the gathering together of the waters called He seas: and God saw that it was good. And God said, Let the earth bring forth grass, the herb yielding seed, and the fruit tree yielding fruit after his kind, whose seed is in itself, upon the earth: and it was so. And the earth brought forth grass, and herb yielding seed after his kind, and the tree yielding fruit, whose seed was in itself, after his kind: and God saw that it was good. And the evening and the morning were the third day (Genesis 1:9–13 KJV).

God’s Checklist for Day Three

- dry land and seas
- a system to water the entire land surface
involving springs or mist, or both
- vegetation, seed-bearing plants, trees that
bear fruit

The water on the surface of the earth was gathered into one place. This would seem to imply that there was only one ocean on the earth and by inference only one continent. Then all the various types of vegetation

were created. They were created as mature plants and trees, each one already bearing seed and fruit.

Day Four

And God said, Let there be lights in the firmament of the heaven to divide the day from the night; and let them be for signs, and for seasons, and for days, and years: And let them be for lights in the firmament of the heaven to give light upon the earth: and it was so. And God made two great lights; the greater light to rule the day, and the lesser light to rule the night: He made the stars also. And God set them in the firmament of the heaven to give light upon the earth, and to rule over the day and over the night, and to divide the light from the darkness: and God saw that it was good. And the evening and the morning were the fourth day (Genesis 1:14–19 KJV).

God's Checklist for Day Four

- Earth's sun
- Earth's moon
- the rest of the universe

Time for the rest of the universe! The sun, the moon, and the rest of the stars and planets were created. But the question now must be asked: If the universe was created thousands and not millions of years ago, how can some stars be millions of light years away and we see their light now? In fact, it even seems from the Genesis account that the light from those stars was seen on Earth the very day they were created.

There are some simple possible answers. One is if God can create those distant stars, then it is not really

any more difficult for Him to create them with their light en route to Earth, so that it arrived on the same day they were created. A second is that He could have created the light so that it seemed to be coming from millions of light years away but in reality was not. That would mean, though, that we are watching things in the night sky that never happened. For example, we can observe distant supernovas exploding and the resultant light that reaches earth contains all sorts of detailed information in it, such as the speed of the expansion, what isotopes are involved, even sometimes a reflected light echo from nearby gas. In this scenario such events would have never actually taken place, which doesn't really seem to fit with God's nature. Furthermore, these ideas seem to be found wanting when put to rigorous scientific examination.

Another proposal that is more philosophical in nature is that like any inventor, God had been envisioning all of His Creation in His mind before He got down to making it. All of these things such as the stars and starlight could have been maturing concepts in the mind of God before being turned from ideas to reality, therefore they developed at the speed at which God thinks. No one knows how fast God thinks, and since He is not bound to the realm of time, the term "speed" cannot be applied to His thoughts. A fully matured universe could have been created just as He apparently created the animal and plant life on Earth in a mature state.

However, there are science-based answers as well. The scientific term for the study of the origin and structure of the universe is cosmology, and Christian scientists have developed some interesting models

that seem to explain how the universe can be hundreds of millions or even billions of light years in size, yet still have been created only about 6,000 years ago. Although models such as these may not be how God did it, what they do show is that there are scientific grounds that God could have done it in these ways. Therefore they show that a six-day Creation is scientifically viable.

One model is described by Dr. Robert Humphreys in his book *Starlight and Time*.¹ It is based on Einstein's theories of general relativity.

Humphreys makes two general assumptions: 1) that the universe has a boundary and therefore a center, and 2) that our solar system and therefore our planet is somewhere near the center. The assumption that the universe has an end or boundary is valid because everything else that we observe in the physical realm has boundaries. That Earth is near the center of the universe seems to be borne out by astronomical observation.

Dr. Humphreys's model is then built on these two observations: 1) that the speed at which something travels is the distance traveled divided by the time it took to travel it, and 2) that *gravity distorts time* (as put forward by Einstein in his general theory of relativity). The stronger the gravitational pull, the slower time is perceived to be. Likewise, the weaker the gravitational pull, the faster time is perceived to be.

{ ¹ Humphreys, D. R., *Starlight and Time* (Green Forest, Arkansas: Master Books, 1994)
137 pp.



Einstein's Theory of General Relativity can support a one-day creation of the rest of the universe.

When the matter is very large or the concentration dense enough, the gravitational distortion can be so immense that even light cannot escape. This is known as a “black hole.” The equations of general relativity show that at the invisible boundary surrounding such a concentration of matter (called the “event horizon,” the point at which light rays trying to escape the enormous pull of gravity bend back on themselves), time literally stands still.

If Earth is near the center of the universe, then the effect of gravity is many times stronger here than at the edges of the universe. There is also evidence that the universe is expanding—something that the Bible seems to support by verses such as Isaiah 42:5, Jeremiah 10:12, and Zechariah 12:1, where it says that God “spread” or “stretched out” the heavens.

If the universe is not much bigger than we can observe, and if it was only 50 times smaller in the past than it is now, then scientific deduction based on general relativity means it had to expand out of a previous state in which it was surrounded by an event horizon (a condition known as a “white hole”—a black hole

running in reverse, which is a possible situation according to the equations of general relativity).

As matter passed out of this event horizon, the horizon itself had to eventually shrink to nothing. At one point, therefore, time on Earth, relative to a point far away from it, would have stopped. A human observer on Earth would not have felt any differently. However, “billions of years” (in earth terms) would have been available (in the frame of reference within which it is traveling in deep space) for light to reach Earth, for stars to age, etc., while less than one ordinary day is passing on Earth. According to the Bible, the creation of the sun, moon, and stars (with their light visible on Earth) happened in the space of one Earth day. This massive gravitational time dilation (expansion or stretching) would seem to be a scientific inevitability if a universe with boundaries expanded significantly.

This cosmology is based upon mathematics and physics (the theory of general relativity) that are universally accepted by cosmologists. It accepts—along with virtually all physicists—that there has been expansion of the universe in the past.

This may sound quite far out, but let’s remember that God is the One who created all the laws upon which true science is built, and that true science does not contradict the existence of God or His role as Creator of the universe. God was working on a physical plane when He created it all, so it would stand to reason that there are scientific answers—some of which are yet to be discovered or confirmed—to explain how He did it.

How long has the moon been receding?¹

by Jonathan Sarfati²

Friction by the tides is slowing Earth's rotation, so the length of a day is increasing by 0.002 seconds per century. This means that Earth is losing angular momentum. The Law of Conservation of Angular Momentum says that the angular momentum Earth loses must be gained by the moon. Thus the moon is slowly receding from Earth at about 4 cm (1½ inches) per year, and the rate would have been greater in the past. The moon could never have been closer than 18,400 km (11,500 miles), known as the Roche Limit,³ because Earth's tidal forces (the result of different gravitational forces on different parts of the moon) would have shattered it. But even if the moon had started

¹ Excerpt from "The Moon: The light that rules the night." First published in *Creation* 20(4): 36–39, September–November 1998.

² Dr. Jonathan D. Sarfati was born in Ararat, Victoria, Australia in 1964. He is a creationist physical chemist associated with AiG (Australia). He moved to New Zealand as a child and later studied science at Victoria University of Wellington. He obtained a B.Sc. (Hons.) in Chemistry with two physics papers substituted (nuclear and condensed matter physics). His Ph.D. in Chemistry was awarded for a thesis entitled "A Spectroscopic Study of Some Chalcogenide Ring and Cage Molecules." He has co-authored papers in mainstream scientific journals on high temperature superconductors and selenium-containing ring and cage-shaped molecules.

³ The Roche Limit was first described by Edouard Roche in 1848. It is the closest distance a body held together by self-gravity can come to a planet without being pulled apart by the planet's tidal (gravity) force. As a result, large moons cannot survive inside the Roche Limit. On July 7, 1992, Comet Shoemaker–Levy 9 broke apart into 21 pieces due to tidal forces when it passed within Jupiter's Roche Limit; on the subsequent pass, each of the comet's pieces collided with Jupiter.

receding from being in contact with the earth (in other words, was once touching the earth), it would have taken only 1.37 billion years to reach its present distance.¹ Note well that this is the maximum possible age—far too young for evolution (and much younger than the radiometric “dates” assigned to moon rocks)—not the actual age.

{ ¹ Tidal forces are inversely proportional to the cube of the distance, so the recession rate is inversely proportional to the sixth power of the distance.

Day Five

And God said, Let the waters bring forth abundantly the moving creature that hath life, and fowl that may fly above the earth in the open firmament of heaven. And God created great whales, and every living creature that moveth, which the waters brought forth abundantly, after their kind, and every winged fowl after his kind: and God saw that it was good. And God blessed them, saying, Be fruitful, and multiply, and fill the waters in the seas, and let fowl multiply in the earth. And the evening and the morning were the fifth day (Genesis 1:20–23 KJV).

God's Checklist for Day Five

- water creatures
- birds

The Hebrew word translated as “great whales” is *tanniyn*, which can also be translated “land or sea monsters.” The word translated “creature” is *nephesh*, which is more properly translated “a breathing creature.” So the marine mammals were created on this day and probably the marine dinosaurs.

Day Six

And God said, Let the earth bring forth the living creature after his kind, cattle, and creeping thing, and beast of the earth after his kind: and it was so. And God made the beast of the earth after his kind, and cattle after their kind, and every thing that creepeth upon the earth after his kind: and God saw that it was good. And God said, Let Us make man in Our image, after Our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth. So God created man in His own image, in the image of God created He him; male and female created He them. And God blessed them, and God said unto them, Be fruitful, and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth. And God said, Behold, I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat. And to every beast of the earth, and to every fowl of the air, and to every thing that creepeth upon the earth, wherein there is life, I have given every green herb for meat: and it was so. And God saw every thing that He had made, and, behold, it was very good. And the evening and the morning were the sixth day (Genesis 1:24–31 KJV)....

And the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul. And the Lord God planted a garden eastward in Eden; and there He put the man whom He had formed. ... And the Lord God took the man, and put

him into the Garden of Eden to dress it and to keep it. ... And the Lord God said, It is not good that the man should be alone; I will make him an help meet for him. And out of the ground the Lord God formed every beast of the field, and every fowl of the air; and brought them unto Adam to see what he would call them: and whatsoever Adam called every living creature, that was the name thereof. And Adam gave names to all cattle, and to the fowl of the air, and to every beast of the field; but for Adam there was not found an help meet for him. And the Lord God caused a deep sleep to fall upon Adam, and he slept: and He took one of his ribs, and closed up the flesh instead thereof; And the rib, which the Lord God had taken from man, made He a woman, and brought her unto the man (Genesis 2: 7–8,15,18–22 KJV).

God's Checklist for Day Six

- land animals
- man
- Garden of Eden
- Adam name the animals
- woman

This was a busy day, and although God can do a lot in a day, what about Adam? How could he have been created on this day, and then go about naming all the animals, take a nap, and then wake up with a wife?

A close reading shows that Adam did not name *all* the animals. It says he named all the cattle (livestock), the birds of the air, and a select group of animals referred to here as “the beasts of the field.” Earlier, in Genesis 1:24–25, it says that on the sixth day the Lord

had created all the “beasts of the earth.” The “beasts of the field” seem to be a subset of these. Adam was in the Garden of Eden, but the animal creation was not necessarily limited to that location. So perhaps the beasts of the field were those “kind” who were located in the Garden.

To name all those animals would nevertheless still be a daunting task for anyone. The section of this book on the Flood gets into the issue of how many “kinds” of living creatures there were, but creation scientists have estimated that Adam would not have had to name more than 3,000 kinds of animals.

Take a minute and see how many animals you can name. An experiment conducted on this point by the author of this book showed that about forty could be named in a minute. Now even if Adam stumbled along at that poor rate, he would be able to name 3,000 animals in about an hour and a quarter. Granted, the names of animals were already known in the aforementioned experiment, so it might not be considered a fair comparison. But Adam’s brain was the most perfect one (aside from perhaps Eve’s) that any human has ever possessed, and he would have probably been able to name the animals much faster. Adam was as perfect a human as there ever was. He had been freshly created, he was without sin, and able to communicate with God directly. So if ever a man was up to the job, it was Adam. Even at a moderate rate of ten per minute, it would have taken Adam just five hours to name them all.



There was time for Adam to name the animals in one day.

There is also another point to consider: The purpose of this exercise of naming the animals was to show Adam that no helper had yet been created for him, so when Eve came on the scene Adam would know that she was to be his companion, and would appreciate her as such.

So Adam fell asleep and God took a rib out of his side and created Eve. Some skeptics ask why, then, don't men have one less rib than women. This can be answered with another question: Does a man who has lost an arm have one-armed children?—Of course not!

This brief look at Creation Week shows that the Genesis account of Creation can stand up to scientific scrutiny. Admittedly, some things are not clear and it cannot be proven scientifically, but the huge difference between Creation theory and evolution is that science cannot *disprove* the Genesis account, whereas science can and has disproved evolution. Those who deny Creation do so as a matter of choice, not because it is unscientific.

theistic evolution

Not everyone who believes in evolution is an atheist. Some Christians reason that the book of Genesis—said to have been authored by Moses or compiled under his direction—was originally written for a primitive people. So instead of confusing them with a lot of scientific explanations that they wouldn't understand, God kept it simple with this charming little Creation fable. Let's examine that supposition in context.

Moses led the Hebrews in their exodus from the bondage of Egypt. At the time of Moses, Egypt had already been a flourishing civilization for centuries. It built, among other things, the famous pyramids—marvels of engineering that many structural engineers claim could not be built with the same precision today. The Egyptians were not ignorant, nor were the Hebrews who had lived in Egypt for 400 years, much of that time as a favored guest nation.

There was no reason for God to have handed Moses and the Hebrews a line with regards to the beginning of all things. If all of this had evolved over billions of years, He could have said so. But He didn't.

And the reason He didn't is because it didn't happen that way. God had His reasons for making the world, and the main one was for it to be a proving ground for humankind to prepare us to be His companions in the infinitely better world He has made as our ultimate home.

Nevertheless, ever since the theory of evolution became popular, there have been attempts to harmonize the biblical account of Creation with evolution—what is known as “theistic evolution.” In short, theistic evolution holds that God used the evolutionary process to bring about creation. The two most common theories of theistic evolution are the Gap Theory and the Day-Age Theory.

The Gap Theory

(also called the Ruin and Reconstruction Theory)

This theory supposes that evolution occurred during an enormous time gap between the first two verses of the book of Genesis. This theory has eight basic assumptions:

- God created Earth and life.
- Between Genesis 1:1 and Genesis 1:2, all that evolution proposes took place.
- Fossils are the remains of animals and plants that evolved millions of years ago and were preserved in deposits left by local floods, sometimes millions of years apart.

- All of the fossilized animals evolved from non-living matter by chance, just as evolution teaches—first single cell plants, then invertebrate animals, vertebrate fish, amphibians, reptiles, and finally mammals.
- Mammals evolved into a race of man-like beings (a pre-Adamite race).
- All of this ended when Lucifer (a.k.a. Satan, the Devil) rebelled against God and was cast down to the earth.
- The result of Satan's fall was global cataclysm (flood and explosion).
- This cataclysm left Earth as we find it in Genesis 1:2, without form and void with darkness on the face of the deep.

From a Scriptural point of view, this theory is totally without foundation. The proponents of the Gap Theory have been so bowled over by the supposed correctness of evolutionary theory that they have tried to save God's and the Bible's reputations, but they are doing God no favors.

Again, Genesis 1:1–5 states: "In the beginning God created the heaven and the earth. And the earth was without form, and void; and darkness was upon the face of the deep. And the Spirit of God moved upon the face of the waters. And God said, Let there be light: and there was light. And God saw the light, that

it was good: and God divided the light from the darkness. And God called the light Day, and the darkness he called Night. And the evening and the morning were the first day.”



The theistic evolution theories are both scientifically and Scripturally bogus.

This all happened on the first day. The Hebrew word *yowm* in the original text can mean: 1) from sunrise to sunset; 2) a 24-hour period; 3) an indefinite period of time defined by an associated term (e.g., “in the day of battle” [Psalm 140:7]). But the context in Genesis 1:5 makes it clear that either definition 1 or definition 2 applies because it hems in the time period by one evening and one morning. (The Jewish day starts in the evening and ends the following evening, so the term evening and morning is consistent with Jewish usage.) And finally, whenever the word *yowm* appears in the Bible qualified by a number, such as “first” in this instance, it means a 24-hour period.

Also, when God had finished the Creation at the end of the sixth day, Genesis 1:31 (KJV) states, “And God saw every thing that He had made, and, behold, it was very good. And the evening and the morning were the sixth day.” Because everything He made at this point was very good, this seems to place the fall

of Satan and his angels after the Creation Week—not before it, as claimed by the Gap Theory.

Evolutionists reject the Gap Theory outright because any cataclysm (such as a worldwide nuclear or volcanic explosion) that would leave Earth “without form and void” and with “darkness on the face of the deep” would effectively disintegrate Earth’s crust and thus obliterate all evidence of any previous “geological ages,” which they claim is found in sedimentary deposits with their fossils. Thus the Gap Theory—which is supposed to accommodate the geological ages—requires a cataclysm that would destroy all evidence for the geological ages.¹

The Gap Theory satisfies neither the creationists nor the evolutionists.

The Day-Age Theory

Proponents of this theory contend that the six days of Genesis 1 were actually long periods of time—ages—that correspond to the major periods of geological history, as defined by evolutionists. Day-Age Theory proponents apply the third definition of *yowm* (“an indefinite period of time”) to the days of Genesis 1, and support this with 2 Peter 3:8: “One day is with the Lord as a thousand years and a thousand years as one day.” They also insist that too much activity took place on the sixth day (Genesis chapter 2) to fit into a single 24-hour day.

¹ For more details on this subject, see “Why The Gap Theory Won’t Work,” by Henry M. Morris, published by the Institute for Creation Research. <http://www.icr.org/pubs/btg-a/btg-107a.htm>

The passage 2 Peter 3:3–10 speaks of scoffers in the last days who belittle biblical predictions of the second coming of Christ. Verse 8 is not meant as a mathematical formula of $1 = 1000$ or $1000 = 1$, but rather to make the point that the Lord is not limited by time, that He can accomplish something in a day or in however long He wants to. 2 Peter 3:8 has nothing whatsoever to do with the length of the Creation Week. Genesis 1 needs to be interpreted in context, not by a verse written over 1,500 years later and taken out of context. Even if it were possible to apply this verse literally to the Creation Week, 6,000 years does not begin to accommodate the millions of years required by evolution.¹

Again, the Day-Age Theory satisfies neither the creationists nor the evolutionists.

God's Checklist for Day Seven

- Take a break

¹ For more details on this subject, see "Theistic Evolution and the Day-Age Theory," by Richard Niessen, published by the Institute for Creation Research.
<http://www.icr.org/pubs/imp/imp-081.htm>

the flood

The next big issue with which evolutionists take exception to is the Genesis account in chapters 6–9 of the worldwide flood, commonly called Noah’s Flood. Did it cover the whole world? Is there any evidence today that such a flood ever occurred? How could all those animals fit in the Ark?

According to Genesis the Ark measured 300 x 50 x 30 cubits (Genesis 6:15), which is approximately 140 x 23 x 13.5 meters or 459 x 75 x 44 feet. The ratio of length to width to height is 30:5:3. Tests on models of the Ark made to exact specifications have shown that it could survive capsizing by waves of up to 200 feet high, and that even if it pitched to a near 90 degree angle it could then right itself. Because it wasn’t designed to go anywhere in particular, it needed no propulsion or steering system; it just needed to be seaworthy and provide accommodation for one year, and the design was perfect for that.

The total volume of the Ark was 43,500 cubic meters or about 1.5 million cubic feet—equal to that of 522 standard American railroad livestock cars, each of which can hold up to 240 sheep. That means the

Ark could hold over 125,000 animals, if the average size were that of a sheep.

The Bible says that Noah took two of every “kind” of animal, bird and reptile, except when they were “clean” animals he took seven. (There is some debate as to whether it was seven pairs or just seven in total.)

So what is a “kind”? The best modern term for this is “genus” (plural is “genera”). This is a broader term than species. Animals within a species can mate and produce fertile offspring, whereas those within a genus can mate and produce offspring but they may or may not be fertile. For example, zebras, donkeys, and horses are all in the same genus, but if they interbreed, their offspring, such as mules, are infertile.

It is believed that each genus had an original parent from which the variety of species in the genus descended, through the process of microevolution. For example, all domestic cattle descended from aurochs, and the aurochs in turn may have descended from a common bovine ancestor that they share with bison and the many varieties of buffalo.

About 8,000 genera have been identified, including extinct ones. That would mean that there would have been about 16,000 animals, birds, and reptiles in the Ark. (The larger number—seven or seven pair—of clean animals would have had little bearing on this total because the number of clean animals fitting the criteria to be found in Deuteronomy chapter 14 would be quite small.)



*There was plenty of room for all
the animals on Noah's Ark.*

Noah did not need to take sea creatures or fish because enough of these would survive even in the tumultuous conditions of the Flood. He also wasn't instructed to take insects, but his huge floating menagerie no doubt attracted copious quantities of insects, even as unwanted guests. More probably survived on floating vegetation. The Bible is clear that except for the ones in the Ark, all creatures that "breathed through their nostrils" perished in the Flood. Neither insects nor fish breathe through nostrils, so the implication is that some of these two types of creatures survived.

There is also the question of the very large animals, such as the dinosaurs or even elephants. How did they get in the Ark? There is no mention that Noah took fully developed adult animals onto the Ark. Most animal experts say that younger animals are much easier to handle, so it would seem sensible for Noah to take adolescent or even younger animals. If this was the case, then only about 10% of the animals would have been bigger than sheep. So since the Ark could theoretically hold over 125,000

animals the size of sheep and since as few as 16,000 creatures may have been on board, there was plenty of room for them and for enough food to feed them on the duration of their voyage—about 375 days.¹

Genesis 7 describes the Flood as follows:

[On that] day were all the fountains of the great deep broken up, and the windows of heaven were opened. And the rain was upon the earth forty days and forty nights. ... And the flood was forty days upon the earth; and the waters increased, and bare up the Ark, and it was lift up above the earth. And the waters prevailed, and were increased greatly upon the earth; and the Ark went upon the face of the waters. And the waters prevailed exceedingly upon the earth; and all the high hills, that were under the whole heaven, were covered. Fifteen cubits upward did the waters prevail; and the mountains were covered. ... And the waters prevailed upon the earth an hundred and fifty days. (Genesis 7:11–12,17–20,24 KJV.)

First, the fountains of the great deep were broken up. Whether there were immense amounts of water trapped below the earth's surface that were released, or if a huge upward motion of the ocean floor caused much of the water in the ocean to spill onto the land, we don't know. A recently developed scientific model called Catastrophic Plate Tectonics postulates that intense and violent movement in the tectonic plates² resulted in the worldwide disaster of the Flood.

¹ For a thorough study on Noah's Ark, see John Woodmorappe's *Noah's Ark: A Feasibility Study*, Institute for Creation Research (1996).

² tectonic plate: a segment of Earth's crust that moves relative to other plates and is characterized by volcanic and seismic activity around its edges

This model further postulates that global volcanic activity also occurred, especially under the ocean. That would have sent so much water into the atmosphere that it could have realistically resulted in the 40-day rain described in Genesis. Eventually all this movement would have caused the high mountains to be thrust up, the ocean floor to sink, and the waters that had first covered the highest mountains of the pre-Flood earth to recede and fill the new oceans created by the shift.



That Noah's Flood was worldwide and occurred as Genesis states is scientifically feasible.

If the surface features of our present Earth were totally flattened, water would cover the globe to a depth of 2.7 km (1.7 miles). Obviously this would not have covered the high mountains that exist today, such as Mount Everest. The Himalayas, along with many other mountain ranges, show clear evidence of having been pushed up after layers of fossil-bearing sediments had been deposited, consistent with the catastrophic plate tectonics theory in regards to the Flood. It is conjectured that the seven continents we have now formed at this time. Future research may either prove or disprove this theory, but the cata-

strophic plate tectonics model comes the closest yet in accounting for all the evidence.¹

So was the Flood possible? Science says it could have been.

¹ Critical examinations of this theory can be found at <http://www.icr.org/research/as/platetectonics.html> and <http://www.creationinthecrossfire.com/documents/CatastrophicPlates1/CatastrophicPlates1.htm>

what's the conclusion of the whole matter?

Neither Creation nor evolution can be conclusively proven by scientific methods. So whether you choose to believe in Creation or evolution, it takes faith. And for faith to be sustained and grow, it must eventually be rewarded with some evidence, however small. Here is where creationists, and Christians in particular, are at a distinct advantage. Evolutionists have their faith bolstered every time a new discovery is made that seems to support the theory of evolution, only to have their faith shaken when that new “evidence” is proven scientifically unsound. Creationists, on the other hand, have their faith rewarded every day. “The heavens declare the glory of God; and the firmament shows His handiwork” (Psalm 19:1). From the synchronization of the cosmos to the wonders of nature and the intricacies of the DNA molecule, everything points to the hand of an intelligent designer behind this universe of ours.

And that's not all. Those who have made a personal direct connection with the Designer through His Son, Jesus Christ, can come to know the Author of the biblical account of Creation. Through His loving

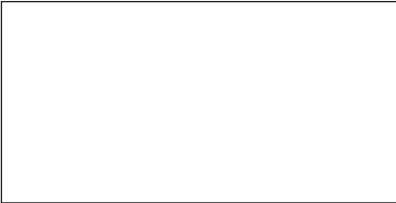
presence in our lives, through the answers we receive to our prayers, and through the truth and freedom He reveals to us through His Word, our faith is continually rewarded and strengthened. Just as truly loving human relationships engender faith and trust between the parties, all that we receive from God helps us to trust Him and take Him at His word. Because the other things He tells us in the Bible ring true, we are able to view the Genesis account of Creation from a position of faith—not the faith of a gullible simpleton, but that of a thinking, sensible person who bases his or her decision on the character of a close and trusted Friend who is the author of the account.

Would you like to know the Creator and Author by accepting Jesus' love into your heart as your Savior and Friend? You can do so by saying a prayer like this:

Jesus, I want to know You personally, so I invite You to come into my heart. Thank You for dying for me that my sins may be forgiven and so I can have the free gift of salvation. Thank You for creating this world and giving me eternal life in the world to come. Help me to learn more of You so that I can help others as You have helped me. Amen!

The End

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The theory of evolution is the widely accepted explanation of the origin of life on earth and taught as unquestionable fact in most schools today. Yet is this scientific explanation as to our beginnings really that scientific? Is it supported by the facts? This short book examines critical evidence for and against evolution. How does this most cherished of scientific theories fare under close scrutiny? Read it and decide for yourself.

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