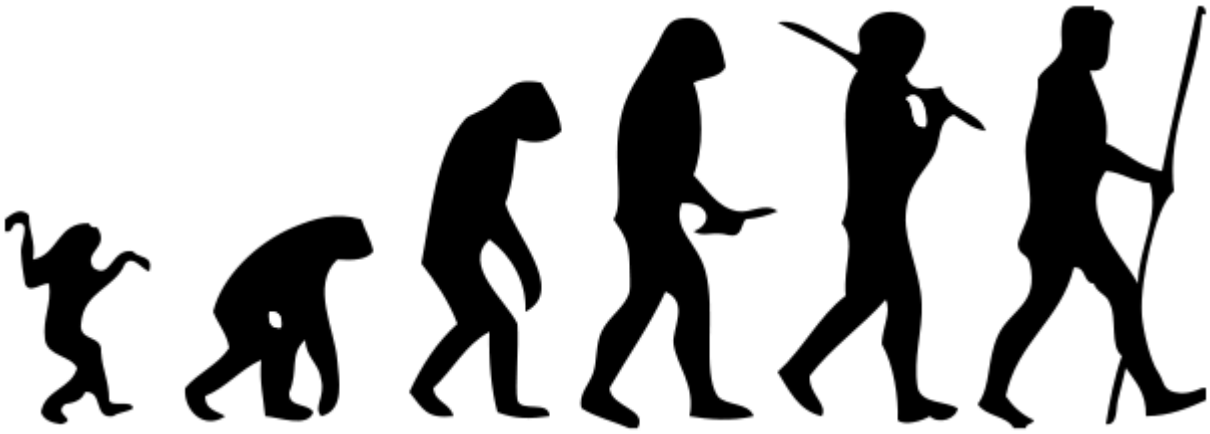
CREATION or EVOLUTION?

Did God create us or are we a product of gradual evolution?

David Shires



Living Stones
Bible Fellowship

Introduction

This booklet has been written to help people of all ages to gain a basic understanding of the issues involved in the creation/evolution debate: between those people who claim that evolution alone can account for the existence and diversity of life and those who believe that God created all that we see.

It is important to note that this is not a battle between science and religion because science, in its purest sense, cannot deal with matters of faith; faith in God and belief in the Bible do not provide a scientific description of our world. That having been said, there are areas of overlap, and all belief systems should be testable in some way. Therefore, it is appropriate to look at the true scientific evidence for and against evolutionary theory, and also to see whether the creationist model is consistent with scientific ideas.

Ultimately, science is only a technical description of the natural world and cannot answer the big question, "*Why* do we exist?" Faith in God can answer this question but not the question, "*How* do we exist?" It is important to note from the outset that evolution is not a true scientific theory, in the same way that genetics or relativity are. This is because no laboratory experiments can be done to prove the idea. All that can be done is to discover whether the proposed stages in the process are possible and what the historical evidence indicates.

In 1859, Charles Darwin, a relatively unknown amateur naturalist, published his now famous book "On The Origin of Species."
Ever since then controversy has raged over whether his theory is correct or not. The debate has been most intense between those Christians who accept the "Genesis" account of creation and atheists, who promote evolution and a view of life called "naturalism" - the belief that nothing exists apart from the material world.

I hope that, after reading through the material in this booklet, you will understand the implications of belief in God and creationism as opposed to belief in naturalism and evolution.

Contents

1 What do creationists believe?

2 What do evolutionists believe?

3 What does the creation model predict?

4 What does the evolution model predict?

5 How can you evaluate evidence?

6 What is scientific proof?

7 How can chemicals make life?

9 What is a mutation?

10 How does natural selection work?

11 What does the fossil record show us?

12 Can the fossil record prove human evolution?

13 How old is the Earth?

14 What was Darwin's evidence?

15 The wonder of the natural world.

16 Did life come from outer space?

17 Is evolution a fact?

18 Is creationism against science?

19 Is creationism a scientific theory?

20 Is evolution a scientific theory?

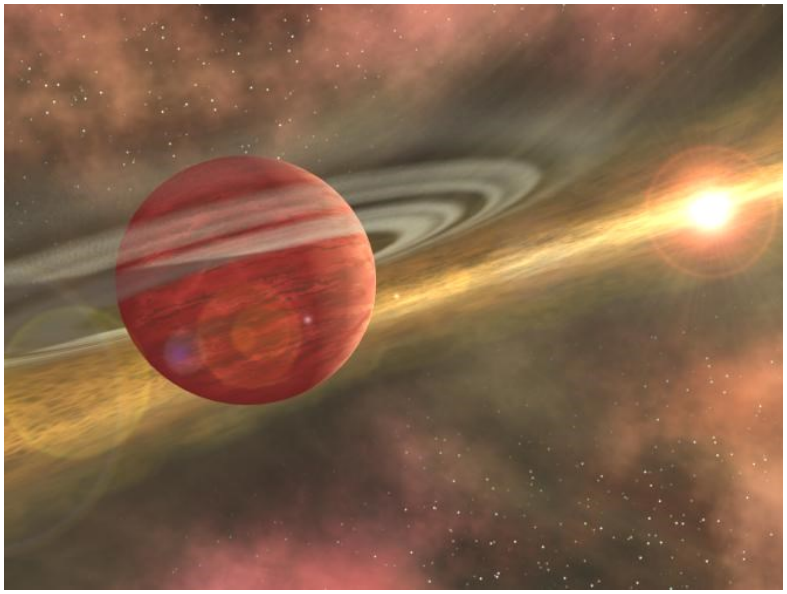
21 How does the creation/evolution debate affect us?

22 How should we regard human beings?

23 The problem of evil.

What do creationists believe?

In the beginning GOD created the Universe and the Earth.



He created the conditions on Earth to support life.

He created all plant life

He created all animal life

Lastly, he created man and woman as conscious thinking beings who resembled him and with whom he could communicate.

God himself decided to create life and to give human beings self awareness and a sense of right and wrong.

Therefore the Universe and everything in it, including us, has been designed for a purpose and made by the ultimate power and intelligence in existence.

The laws of science and the awesome complexity of life were designed by God. Life on Earth has been made according to the same perfect biochemical pattern.

The amazing way in which the natural world works is clear evidence of a super-intelligence who designed and made it to exist on this planet.

We may never know or understand exactly how God created the Universe and intelligent life: the methods may be too complicated for us to grasp.

Christian and Jewish creationists mainly base their beliefs on Genesis, the first book of the Bible, which describes the order of creation and the history of the first human beings.

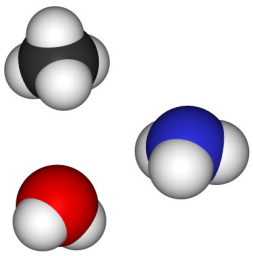
What do evolutionists believe?

The Universe and life has come into being due to random and undirected processes which have no ultimate plan or purpose.

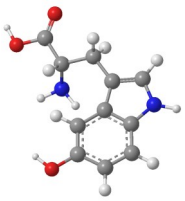
The Universe started at a point from which all matter and energy exploded outwards. At the same time the laws of science, which govern the behaviour of matter and energy, also started working. Time and space stretched out and the Universe cooled.

Matter and energy organised itself into stars and galaxies. Heavy elements formed in the first stars and then exploded out into space, providing the material for planets to form. This material mixed with gas clouds to form later stars and solar systems.

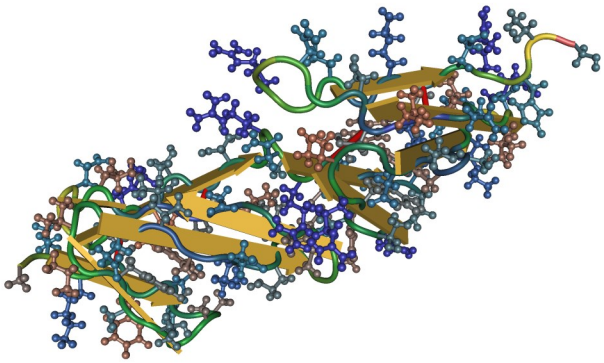
On one random planet, which we call Earth, the exact conditions needed for life to exist developed by chance.

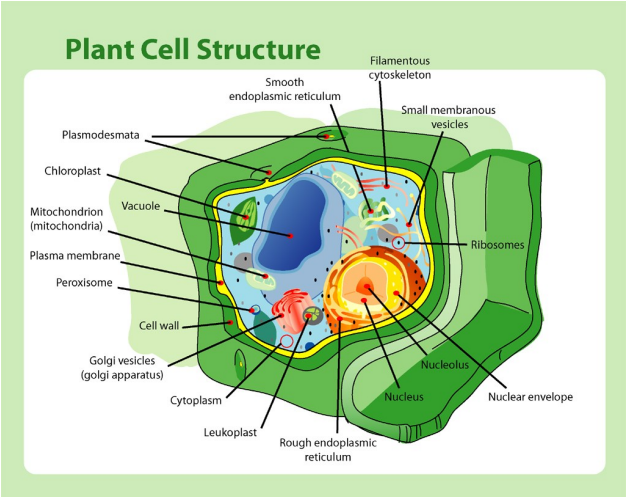


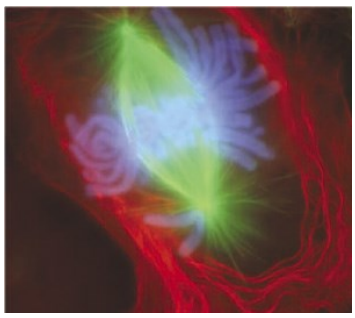
Very simple chemicals [molecules] joined together by chance to form more complicated molecules of the exact types needed to make the giant bio-molecules of life.



These more complicated molecules joined together *by chance* to form gigantic and specific bio-molecules which then *by chance* assembled together in their millions to make one highly complex, fully functioning living cell which could make exact copies of itself.







This first cell multiplied and produced many more similar cells. One or more of these cells copied itself wrongly so that it grew into an organism made of many cells.

A copying error is called a **mutation**.

Many more copying errors were made so that there existed different kinds of organisms. Some were unsuitable for their environment but others were more suited to it and tended to survive and reproduce in greater numbers.

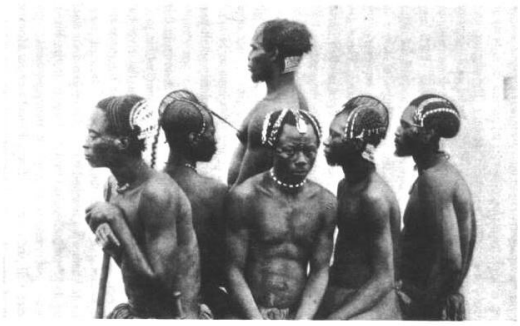
This process is called **natural selection.**

The combination of random mutation plus natural selection enabled the development of complex organ systems and sexual reproduction. All changes were gradual and undirected and only produced more complicated creatures.

Many types of creatures came into existence due to mutations and natural selection. This process was very slow and so many weird half creatures existed such as dino-birds and walking whales

At the same time some cells, *by chance*, developed the complex biochemistry needed to use light as the source of energy to make food; thus plant life developed which provided, *by chance*, the necessary energy supply for animal life to survive.

Finally, through a long series of random mutations and natural selection of only those creatures who could best reproduce more of their type, monkeys and other higher animals developed. These creatures had large brains and superb integrated sensory organs. Through many more random changes mankind developed the ability to think and use language.



Evolutionists base their beliefs on the writings of Charles Darwin: the theory of evolution by natural selection.

What does the creation model predict?

The account of creation recorded in the first book of the Bible was not written as a scientific document. However, there are certain key ideas and inferences which can be identified:

1 Plant life appeared on Earth before animal life.

2 Aquatic and bird life appeared on Earth before animals.

3 Plant and animal life should exist in distinct species or types and be able to maintain the identity of species.

4 Plants and animals living today should be similar to the remains of much older examples with no new species "evolving."

5 There was a catastrophic worldwide flood, shortly after man was created, which should leave evidence such as:

   a. Millions of creatures buried rapidly in adjacent layers of sedimentary rock, and possibly preserved as fossils.

   b. Geographical features caused by rapid water scouring.

   c. Remains of some sea creatures at the top of mountains.

6 Genetically, all human life should be traceable back to a single pair of individuals [Adam and Eve].

7 All forms of life should show evidence of common design, i.e. at a cellular and biochemical level great similarities should exist.

8 All forms of life should be designed to suit their environment and be able to coexist in a self maintaining ecosystem.

9 Life should show evidence of complex structures that could not develop by chance because all the parts need to be present for it to work properly.

What does the evolution model predict?

Darwin's original theory of evolution set out to be a credible scientific theory and only dealt with the way in which simple species are presumed to be able to change into new, more advanced species. The chemical origin of the first living cell was never part of Darwin's original work; however, if evolution is true, then this must also be part of the theory. The resulting predictions are:

1 A scientifically testable method should exist for simple chemicals to form bio-molecules and then cells without any outside help. If these molecules and cells were formed by pure chance, then it should be possible for scientists to make them in a laboratory by choice starting only with simple chemicals.

2 All life forms on Earth should show the ability to generate offspring with new, beneficial characteristics due to mutations. [Not merely a change in any existing structure or organ].

3 Present day life on Earth should show the presence of evolution in progress i.e. we should see "half species" and evidence of organs and characteristics under development [not fully evolved].

4 The fossil record should show abundant evidence of plants and animals "half way" between others i.e. intermediate species.

5 The fossil record should show that complicated organisms appeared much later than simple organisms.

6 So-called early life forms, such as bacteria, should be much simpler than the present day life forms in terms of the chemistry inside the cell.

7 Life should **not** show evidence of complex structures that need all parts in place to function and to be useful, i.e. gradual sequential development must be possible.

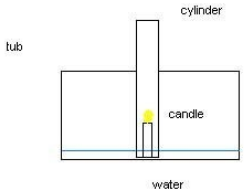
How can you evaluate evidence?

Any theory, idea or belief system should be open to evaluation on the basis of what it predicts.

If the predictions of a theory do not match our experience, or cannot be verified by an experiment, then the theory, idea or belief is probably incorrect. If, however, the predictions prove to be correct then the theory may be correct; in a strict sense, absolute proof is impossible. In other words, a good theory or even belief should be testable in some way. If a theory or belief cannot be tested then it is unlikely to be correct. Here are some simple examples:

“ I believe that there are invisible fairies at the bottom of my garden that make the flowers open up in springtime.”
This is not a valid theory as you could never perform a test to see whether flowers would open if the fairies were not there, since they are invisible. The prediction is that if the fairies were not there then the flowers would not open.

“ I believe that when materials burn they use up a gas in the air.” This is testable by a simple experiment; putting a lit candle under a glass jar in water. The water level rises despite the fact that the candle appears to be giving off a gas [smoke]. The prediction is that the water level must rise if a gas is used up. So this theory is correct.



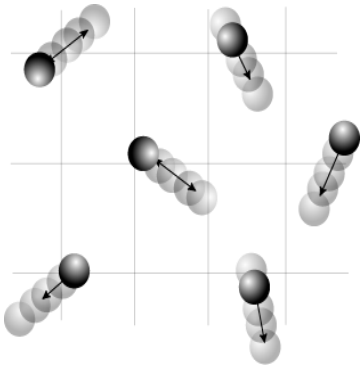
“ I believe that all human beings are peace loving and in reality don’t want to fight” This is testable by looking at recent history. The world wars of the last century indicate the false nature of this belief. The prediction is that if people are peace loving then there should be no wars.

Another important test that can be applied to a theory is this: If a process described by a theory has to take place in several stages, only if each stage is possible can the theory be true. It is only necessary to show that one of many stages is impossible to disprove the whole theory. A railway journey, for example, is only possible if the lines linking the stations are all open. If one section of line is broken, the whole journey is impossible.

Finally, there is a very simple but useful logical method that can be used when there is a definite number of possible causes for something. If all causes except one can be proved false then the remaining cause must be correct, even if there is no direct proof. This method was made famous by the fictional detective Sherlock Holmes. If there are only three suspects for a crime, if two are definitely innocent then the third must be guilty, even if there is no direct evidence to prove their guilt.

What is scientific proof?

Scientific theories attempt to describe the natural world and to find the underlying mechanisms that enable the world to work. Science, by definition, can never describe ultimate causes because any discovery simply raises more questions. An example of this is the explanation of how a gas exerts pressure on the walls of a container.



Gases are made up of molecules which move around in rapid random motion. When they collide with the container they rebound and exert a force on the surface. The random rapid collisions of millions of molecules per second produces a steady pressure. But, why do molecules exist and what exactly are they? Where do the rules come from that govern their motion? How did the matter that makes up molecules come into existence? We could ask many more questions!

So what is the scientific method and what exactly is scientific proof?
Scientific proof requires experiments to be done under controlled conditions that will prove or disprove any idea or theory. If a theory cannot be disproved in principle then it is not a scientific theory. The scientific process works like this:

1 Some observations are made. [Gases exert a pressure]
2 A theory that accounts for this is proposed. [The molecular theory of gases]
3 The theory is developed so as to make further predictions.
[The mathematical theory of gases known as kinetic theory]
4 Experiments are performed to see whether gases obey the mathematical rules that the kinetic theory predicts. [The gas laws and diffusion etc]
5 Gases are found to obey these rules when they are not close to becoming a liquid. [The gas laws etc are confirmed]
6 The existence of gas molecules is "proved" even though they cannot be observed directly. [The molecular theory of gases is accepted]
7 Experiments are repeated to check that the results are not in error.

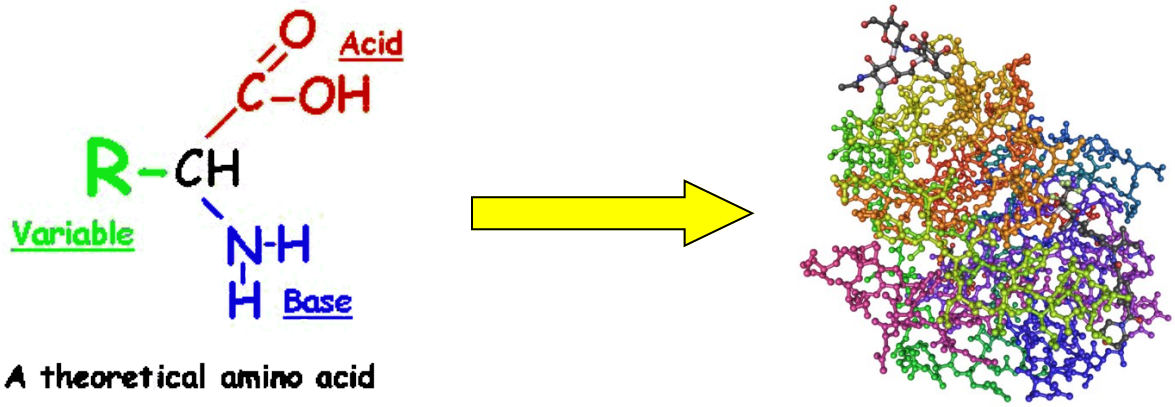
Many scientific ideas and theories are not open to direct proof in this way e.g.

"How did galaxies form?" No theory can ever be tested directly unless of course we can watch a galaxy forming real time!

"Humans evolved from apelike creatures." This theory is not open to direct proof in a scientific way as the process cannot be observed and any ape/man similarities can be interpreted in different ways.

How can chemicals make life?

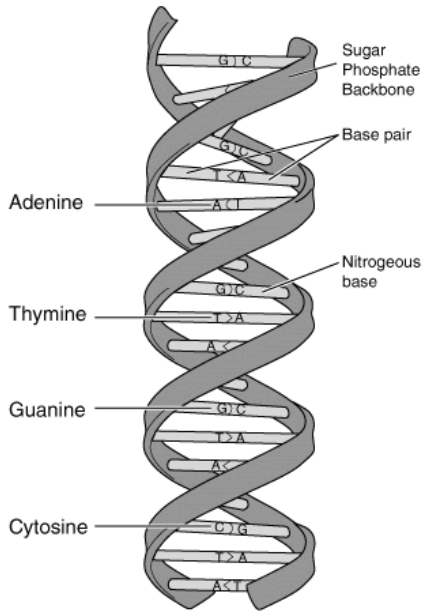
Chemicals cannot make life, but the bodies of animals and plants are made from chemicals. This is because the simple chemicals in the environment do not assemble themselves into large bio-molecules. In other words, the very complex molecules that are needed for life [e.g. DNA] are not found or formed in nature outside of living cells or recently dead cells. Living cells are mostly made from very large molecules called PROTEINS. For the scientifically curious here is a simple explanation what proteins are and what DNA does.



A theoretical amino acid

Simple chemicals e.g. water, hydrogen, ammonia and methane, can be made into a type of molecule called an AMINO ACID. In living cells only, amino acids can be joined together in a long chain and then folded up to make a protein molecule, which will contain 100 - 500 individual amino acids in a very definite order. There are 20 specific amino acids found in living cells that make up the very much larger protein molecules. Protein molecules have a very precise 3D shape which enables them to do their job in the cell.

Amino acids do not generally form in the non-living world and, based on experiments, only a few of the 20 types needed for life could have assembled by chance. The probability of a very basic but specific protein molecule assembling by chance is 1 in 1000000000000000000000000000000000.....[130 zeros].



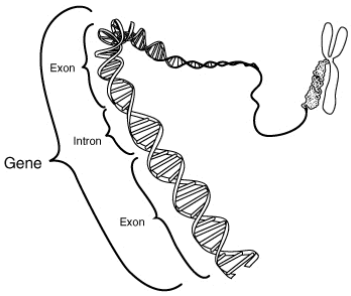
DNA, another well known and important bio-molecule, is just as complicated. It has a spiral shape [double helix]. The DNA in the simplest cell has about one million “rungs “ on the ladder of the DNA molecule. Human DNA has about three billion rungs. There is a strand of DNA at the centre of every living cell. Its function is to control the operation of the cell and it contains coded instructions that enable a cell to make new protein Molecules; each rung is one code letter. In organisms such as humans, DNA also carries the instructions for development and growth, and is an “instruction sheet” for the formation of a new individual from a fertilised egg cell. DNA has been called an information rich molecule, the computer programme of life. If DNA is damaged or changed, the cell may malfunction or die.

What is a mutation?

Gregor Mendel was responsible for our understanding of genetics. He was an obscure Augustinian monk who experimented with pea plants to prove his theories. His work was not accepted for many years, but he proved that parents pass on information to their offspring and so characteristics are inherited rather than developed. He found that offspring inherit genetic information from both parents and they display a mixture of parental characteristics. He discovered the rules that determine which characteristics are likely to be inherited.

The discovery of DNA has enabled scientists to understand how Mendel's rules operate inside a cell. The DNA molecules inside a reproductive cell carry the information which determines the characteristics of offspring. Each parent contributes half their DNA to the offspring and so the parents' characteristics are combined when inherited. Nothing you do in life can change your DNA.

Various regions of the DNA molecule carry the information needed to produce certain characteristics, such as blue eyes. These regions are called GENES. Human cells contain over 20,000 genes in the DNA strands. This means that offspring can only show characteristics that come directly from parents e.g. two white skinned parents with suntans will never produce very dark skinned children.



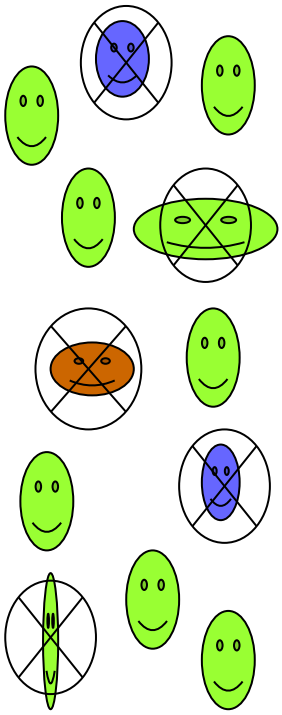
Occasionally, the DNA in cells is damaged by radiation, by chemicals or by viruses. Fortunately, each cell contains special proteins called ENZYMES which repair DNA. So for example, when human beings reproduce the DNA in the reproductive cells should be almost perfect. Sometimes though, DNA errors are not corrected by the enzymes and so DNA defects are inherited by offspring. These defects are called MUTATIONS and change [damage] the coded instructions carried by the DNA.

Sadly, these mutations can produce deformed or sub-standard offspring. At best a mutation has no immediate bad effect on any offspring. No mutations have ever been observed that can produce new useful characteristics in offspring. Some bad mutations can [very rarely] produce a side effect which is useful. An often quoted example is Sickle Cell Anaemia which can give the carrier resistance to malaria. Another example is bacteria that become resistant to antibiotics by random mutations stopping an existing cell function e.g. protein binding in the cell.

So mutations are DNA errors that are inherited by offspring, often causing problems. Mutations have <u>not</u> been observed which can produce new genetic information in organisms leading to completely new features.

How does natural selection work?

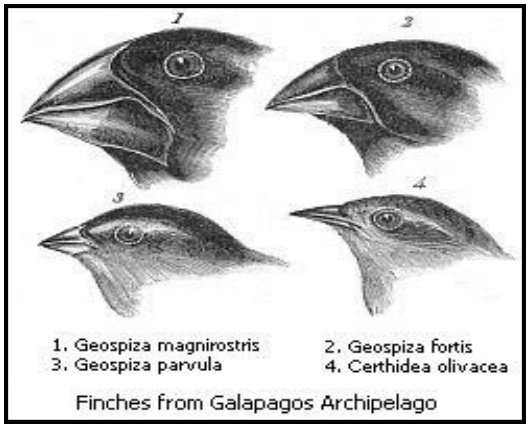
Natural selection is a process that happens in the living world all the time.



In any population of organisms there will always be some individuals who are not as good at competing for food and resources, or evading predators, or of simply reproducing. These individuals will therefore have a lower survival rate on average than normal members of the population. Over time these types of individual will tend to be eliminated from the population as more offspring will be produced by the healthy members. This in a nutshell is the way in which natural selection works. The whole idea is really about reproductive success and the factors which affect this. Those members of a population that can, by whatever means, produce more *surviving* offspring more quickly will come to dominate the population. The genes they carry will be the ones that are on average inherited in the population.

Weaker members of a population can be the result of unfavourable mutations, and so natural selection can ensure that these bad mutations are not kept in the population.

Natural selection has often been called SURVIVAL OF THE FITTEST but fitness only really means the ability to quickly reproduce more surviving offspring. This may not have anything to do with bigger and better organisms. In fact, there could be many instances where the organisms that survive are the simplest. His is because they can reproduce more quickly, or are less easily killed by poor environmental conditions, lack of food and natural predators.



Charles Darwin found a very interesting example of natural selection on the Galapagos islands when he made his famous voyage on the Beagle. He found that the finches which inhabit the islands have different beak shapes. He correctly realised that this was due to natural selection in action. The shape of the finch beak determines the ability of the bird to feed under different conditions.

In any finch population there are genes that code for different beak shapes i.e. there is natural variation within the species [this is not due to recent mutations]. When conditions change the most suitable finches will feed better and reproduce more. Recent evidence shows that these changes are reversible when conditions change back again, i.e. no “evolution” has taken place.
So natural selection can enable a species to adapt to changing conditions but only up to a point. Finches could never grow gills or fins if the islands became covered with water! Genes that code for fish organs don’t exist in finches.
The effects of natural selection are to help a species preserve its identity by eliminating sub-standard members and allowing slight adaptation of pre-existing characteristics when environmental conditions change.

What does the fossil record show us?

What is a fossil?

A fossil is a dead plant or animal that has been preserved in a rock layer. Sometimes only part of the organism is preserved. Very often only the skeleton remains as the soft tissues decay by the action of bacteria etc.

Where can you find fossils?

Most fossils are found in sedimentary rock layers all over the world.
Fossils are found underground and also at the top of mountains where the remains of marine organisms are buried.

What can fossils tell us?

Normally, fossils can only tell us about the skeletal structure of any organism and things such as brain size, but not details of internal organs.
DNA cannot be recovered from the majority of fossils as it decomposes after the organism dies.
Birds can leave the remains of feathers imprinted into rock.
Fossils <u>can</u> tell us which organisms lived in the past and whether they have changed over time.

How do fossils form?

Fossils form best by the rapid burial of an organism just before or after death. This is likely to be in mud or underwater as this is where the layers of sedimentary rock are deposited. Land animals that die normally will not fossilise; the tissues will be eaten and decay and the bones will then crumble due to erosion or weathering, as well as being scattered.

If whole creatures are found well preserved [e.g. dinosaurs], it is likely that they were killed by a catastrophic event such as a flood or tidal wave which engulfed, killed and buried them. So a single layer of rock can provide a snapshot in time of life on Earth in the past. Plants and trees can also be fossilised providing that they too are buried rapidly and have no time to decompose. Fossilised trees have been found that go up through many rock strata. This is a puzzle for geologists as the trees should not have fossilised, but decomposed *if* the rock layers formed over millions of years.

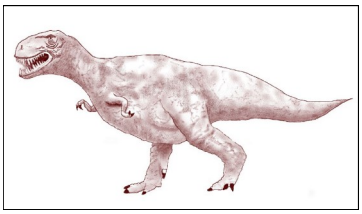
Pliocene
Miocene
Oligocene
Eocene
Paleocine
Cretacious
Jurassic
Triassic
Permian
Carboniferous
Devonian
Silurian
Ordovician
Cambrian
Precambrian

Rocks on the surface of the Earth are found in layers called STRATA. It is *assumed* by evolutionary geologists that these strata were laid down in order over millions of years. According to this theory, the fossils found in the strata represent the timeline of evolutionary development.

Creationists think that most of the strata were deposited by a massive global flood. Therefore, the fossils in the strata are all from the same time period, and the original organisms existed together only thousands of years ago. Dinosaurs would have existed with men and the geologic column does not represent billions of years.

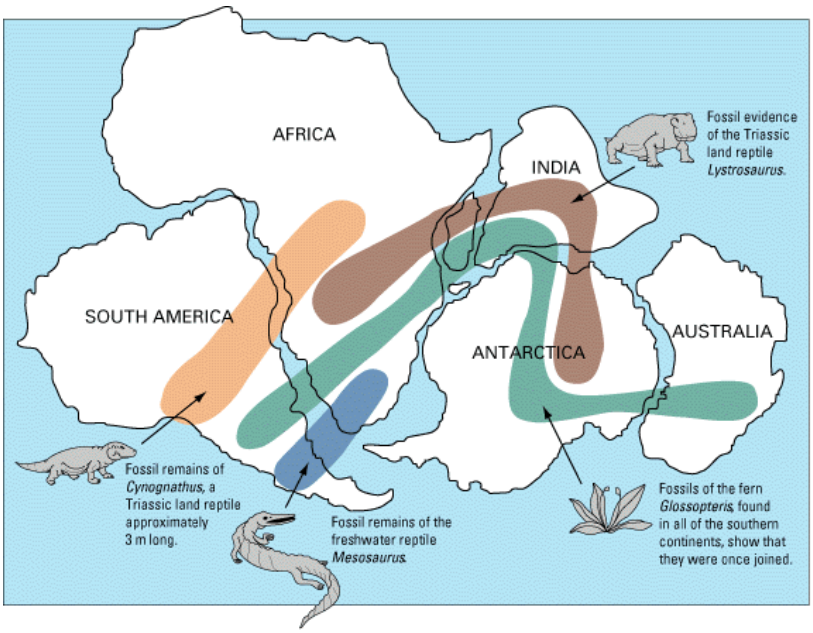
Almost all major animal groups [phyla] found here

Not much found here



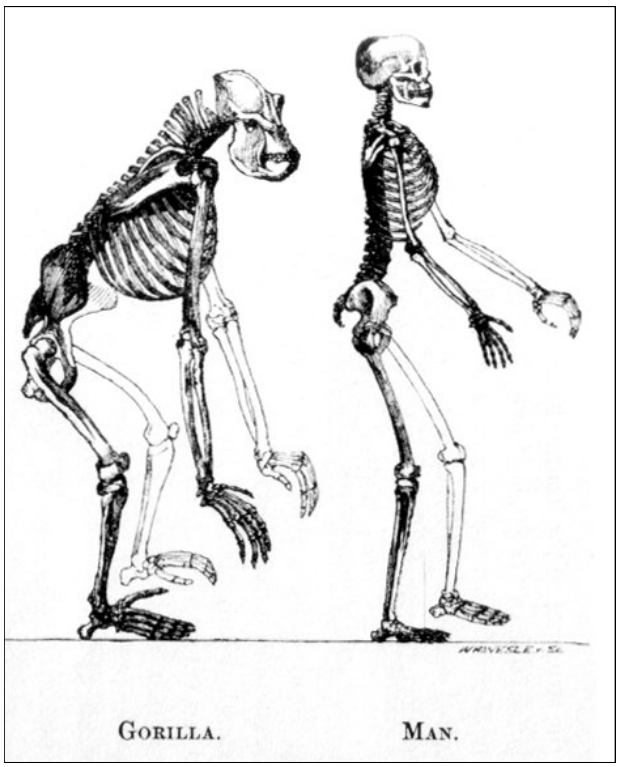
These are the names of the rock strata

WHICH FOSSILS ARE FOUND IN WHICH STRATA?
According to evolutionists, the fossil record should show a slow, steady, continuous development of species.
This is not found. Instead there is the "Cambrian Explosion" of species, where nearly all major animal groups appear in one stratum [called the Cambrian]. This has led some leading palaeontologists to suggest that evolution was not gradual.



The creation/flood theory *can* explain the observed fossil record. During the flood, animals were drowned and buried without warning. Then they were quickly covered with more sediment as the flood waters subsided from the continents. So what we see is a snapshot in time. According to this model, the "Cambrian Explosion" makes sense, as all animal life would have been buried together.

Can the fossil record prove human evolution?



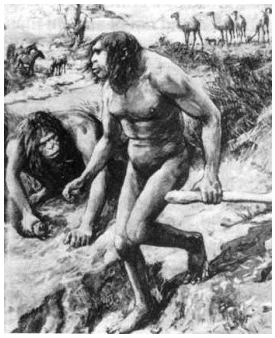
The scientific answer is **NO.**

All supposed ape-man remains have been frauds, or simply apes, or based upon fragments of bones or teeth. No nearly complete skeletons of half-man half-ape have ever been found.

All apes and monkeys are *quadrupedal* .
They can walk on all fours.
All men and women are *Bipedal.*
We only walk upright on two legs.

It is very unlikely that quadrupedal apes could have slowly evolved into bipedal man. Any creature halfway between an ape and a man would not be able to walk on all fours properly, and would not be able to walk upright properly. In other words this sad creature would have been a limping disaster and natural selection would certainly have ensured its extinction. For comparison, exactly the same could be said about birds with half developed wings: no good for flying, and no good for moving on land or in trees.

Famous Frauds



Nebraska Man 1922
Based entirely on the TOOTH of an EXTINCT WILD PIG!
Fraud admitted in 1927.

Lucy [1974] a 1m tall male ape

Neanderthal Man [1856] a badly deformed elderly man: proved in 1953.

Ramapithecus [1932] proved in 1982 to be an extinct orang-utan. Evidence was originally from a jawbone.

It is unfortunate that so many so-called scientists have been so desperate to "prove" evolution or to become famous that they been willing to deceive the scientific community and the public.

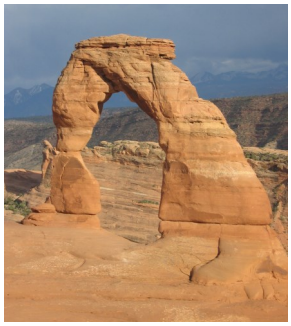
Piltdown Man 1912
Human skull.
Ape jaw & teeth.
Teeth filed down and bones made to look "old" with chemicals. Fraud discovered in 1953.

How old is the Earth?

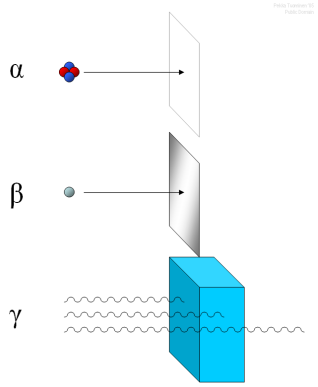
This may seem like a simple question
- but there is no simple answer.

The question is important because if one assumes that evolution is possible, then billions of years are needed for the process to change pond life into people. If, therefore, it could be shown that the Earth is quite young, then evolution could not have taken place.
So what scientific evidence is there?

The age of the earth is linked to the age of our solar system and the Universe itself. The age of the human race is another linked question, and again there is no completely clear scientific answer.



Most of the Earth's surface is covered with sedimentary rock layers. Evolutionary geologists assume that the layers were gradually laid down over millions of years and use specific fossil types to date the layers. When new fossils are discovered, they are dated according to the rock layers in which they are found [a circular argument]. Radioactive dating cannot determine the age of *sedimentary* rocks (1).



Radioactive dating of *igneous* rocks (2) has been used to estimate the age of the Earth as billions of years, but this relies upon unproven assumptions. These are:

1. The decay rate of uranium etc has remained constant over time.
2. No decay products [e.g lead] were in the rocks to start with.
3. All decay products and the original radioactive material cannot escape from or be added to the rocks in which they are found.

The universe itself appears to be billions of years old. Modern telescopes can see galaxies at the edge of the visible universe that must be billions of light years away from us. [A light year is the distance that light travels in one year]. Light from them will have taken billions of years to reach us *if* the speed of light has not changed and *if* time itself is the same everywhere. We must make assumptions about the past to interpret modern data.

Many creationists will interpret the Biblical account of creation literally and therefore believe that the Earth is no more than six thousand years old.
[If the human race was much older than this, there should be historical and archaeological records, which in fact do not exist!]. According to the Bible, God created everything in six days but some scientists who have a Christian faith think that these days refer to long periods of time.
Whatever the verdict, the Biblical account clearly states that we live in a created Universe and that nothing that exists is here by chance, including us.

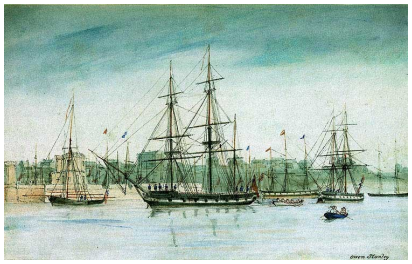
(1) Sedimentary rocks are formed from layers of water -deposited, eroded rock fragments which have later dried and hardened.
(2) Igneous rocks are solid masses which have cooled and solidified from molten lava.

What was Charles Darwin's evidence for his theory of evolution?

Charles Darwin

Charles Darwin developed his theory of evolution as a result of many influences. He did not originate the idea of evolution himself. He used previous ideas, together with his own observations, to put together a theory which he thought might be able to account for the slow development of species from a simple original ancestor. Darwin never considered the origin of life itself but was only interested in how plants and animals might gradually change into different types by means of natural selection.

In 1831 he began a famous five year voyage on the HMS Beagle to the Galapagos Islands.
He discovered many varieties of finches and tortoises which he thought had developed from single species. These varieties were isolated breeding communities on separate islands that had adapted to changing conditions by natural selection.



HMS Beagle

Darwin was interested in pigeon breeding [artificial selection]. He used his knowledge as a basis for assuming that existing species could change into new species given enough time. We now know through modern genetics that selective [artificial] breeding can only produce different varieties of the same species. Extreme change is impossible without introducing new genetic material. Artificial selection requires intelligent input but natural selection cannot have a goal. Darwin thought that unlimited natural selection could transform one species into another completely different creature.

The Galapagos Islands

Peppered moths shown on dark colour tree bark. Camouflage helps the moths to evade predators such as birds.

Darwin discovered several varieties of finch on the Galapagos Islands. Their main difference was in beak size and shape.

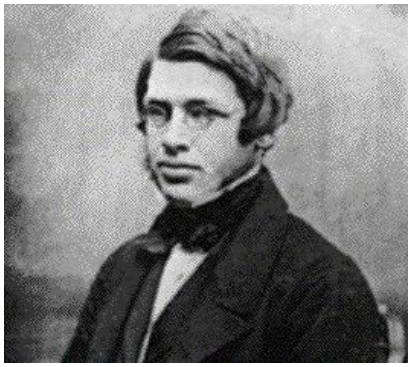
Many textbooks show pictures of peppered moths as evidence of evolution in action. This is in fact only a good example of natural selection in action since the two wing colours exist anyway and no new genetic information is created when, for example, mainly dark moths survive on dark polluted bark.

Darwin hoped that further fossil finds of very many intermediate species would prove his theory. So far this evidence has not been found, despite the efforts of many palaeontologists [fossil experts].

Men who shaped Charles Darwin's ideas

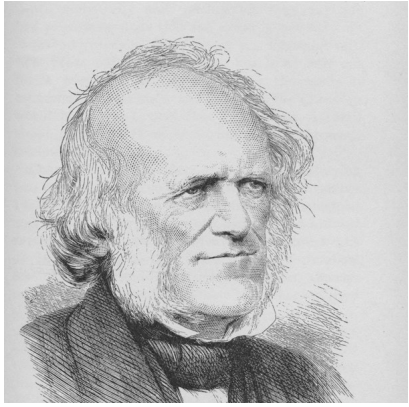
Erasmus Darwin

He was Charles Darwin's grandfather who qualified as a doctor and wrote a book called "Zoonomia" which outlined the basic idea of evolution, anticipating the ideas of……



Jean-Baptiste Lamarck

Lamarck believed that acquired characteristics could be inherited: so a weightlifter might produce very strong children. This idea was disproved by Gregor Mendel, the founder of modern genetics, who showed that offspring inherit a recombination of parental genes.



Alfred Russel Wallace

Wallace went to the Amazon in 1848 to try and find evidence for his own ideas of organic evolution. In 1858, whilst suffering from malarial fever in Borneo, he formulated the idea of "the survival of the fittest". He immediately wrote to Charles Darwin explaining his ideas. The next year, Darwin published "On The Origin of Species".

Charles Lyell

Lyell promoted the theory of uniformitarianism. This proposed that the Earth is millions of years old and that rock layers were deposited gradually rather than rapidly due to a flood. This idea assumes that conditions on Earth have been the same for most of its history. Lyell was a great friend of Darwin. The long geological timescales implied by his theory enabled Darwin to propose that natural selection could change species very gradually.

Darwin believed in *embryonic recapitulation,* which means that stages of evolution happen in the womb. This idea has now been scientifically disproved.

What did Charles Darwin succeed in proving?

He observed many examples of artificial selection and natural selection in action. These produced fairly minor changes to existing characteristics in organisms. He thought that this process could, over long timespans, produce entirely new creatures and organ systems. He never observed "true evolution" in action. The modern study of genetics has shown that it is totally impossible for natural selection alone to change one species to another. For this to happen, new specific genetic information must be given to an organism. Modern [Neo] Darwinism proposes that mutations can add new genetic information. This has yet to be proved and there is much evidence that goes against this idea.

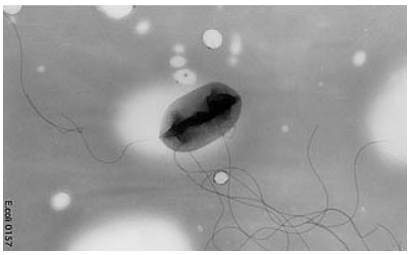
The wonder of the natural world

The world we live in is an amazing place full of interesting life forms.

A spider spins a web from material that is stronger than steel in order to catch insects. Spider silk has a strength to weight ratio as good as Kevlar and can stretch by 40%.

A Venus fly trap also catches insects It traps them on its leaves which then close and the insect is digested. Evolutionists believe that this plant developed gradually, but if its insect catching system was only half developed, how did it feed and survive?

Many organisms need each other to survive. This relationship is called SYMBIOSIS. Flowers and bees are a good example. The flower needs the bee to carry pollen to another plant. The bee needs the flower for its nectar as a source of food. How could this relationship evolve? Before flowers produced nectar to attract bees, how did the flowers reproduce, and what did the bees feed on?



E coli bacteria have a remarkable organ called a FLAGELLUM which propels them. It has a proper biochemical rotary motor with many parts, all of which are needed for it to work. This rotor system is *irreducibly complex:* take away any part and it won't work. It is very difficult to see how it could possibly have evolved in small steps, since until the *last* step it can't work. Most biological systems and organs are therefore irreducibly complex.

Insects ought not to fly! The complex physics of insect flight is only just being discovered, but how did it evolve? Not only had wings to develop but also the complex feedback mechanisms that enable an insect brain to control flight very precisely.

The Evolution of Flight

"The most accepted theory of the origin of wings *suggests* that they grew out of a gill-like apparatus present in the very earliest insects. Some of these gills *may* have grown over time, after they were supplanted in the adults by tracheae, to form little flaps. Initially, these proto-wings would have been useful for little more than jumping, *perhaps* adding a little to the distance over which an insect could leap. Gradually these wings would have grown larger, until they could be used for controlled diving, gliding, and then even flapping flight." [Italics added]

This text was taken with no editing from a serious, scientific, pro-evolution website.

Did life come from outer space?

Many people believe that our planet has been visited by alien life forms.
They base this idea on sensational stories in the media and watching too many science fiction films! There are conspiracy theories, such as Roswell, and many apparent UFO sightings. Belief in aliens originates from two ideas:
1. If evolution happened on Earth then it surely must have taken place on other planets.
2. Life may be too complicated to have started by chance, so aliens must have visited our planet and seeded it with simple life forms.

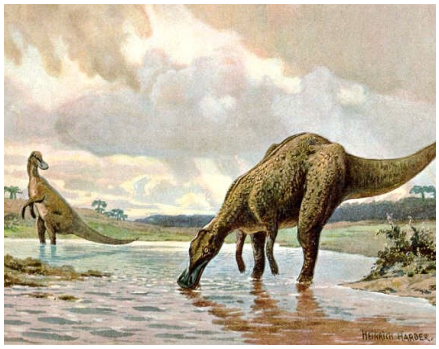
The problem:
If life on Earth needed aliens to start it, then these aliens must have needed other aliens to start their planet's life. This process never ends and there can be no beginning.

A much more serious theory is that bacteria developed in space and were carried to Earth on comets and asteroids.
Some mathematicians and physicists have calculated that the probability of life molecules forming by chance on Earth is incredibly small. So they must have developed in space and been carried to Earth. This theory is called PANSPERMIA. The problem with this idea is that bio-molecules are easily destroyed in the conditions of space when near to a star such as our sun. Ultraviolet, X-ray and gamma radiation, plus high temperatures, all destroy proteins, DNA and RNA. On Earth we are shielded by our atmosphere and so organic life can survive. Without this shielding, we would all die.

The probability problem still applies to the formation of bio-molecules in space. Despite the greater amount of material in space, and the long time-scales available, the matter is all very spread out. So the chance of even bacterial life arising in space and reaching Earth without damage, is still as near to zero as one can calculate. Even if bio-molecules could be produced in space, the jump from these to a cell structure is immense. A single living cell is the most complicated machine known to man.

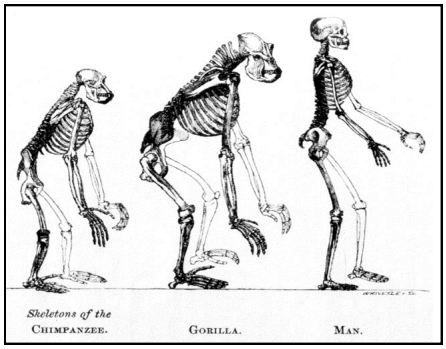
Creationists will regard panspermia with some amusement as they will say it is easier to believe that life was created by God rather than by aliens or on asteroids. Many evolutionists will embrace any theory that can enable them not to believe that God created life.

Is evolution a fact?



FACT..*definition*

Something that is certain to have happened or that is known to be true



Evolution has been defined in many ways. The most general definition, used in many textbooks, is that evolution is change over time. If this definition is used then everything in the universe evolves at every moment!

When biologists claim that evolution is a fact, they are certain to be correct if they use the most general definition. Creationists will be much more specific and define evolution as a theory or hypothesis which claims that man developed from simple chemicals by means of random and undirected processes.

If you start with the belief that there is no God and that no intelligence could be responsible for the existence of life, then by default evolution must be a fact. Life exists and we are here.
It doesn't matter in this case what the scientific evidence actually shows. It doesn't matter if there is no scientific evidence at all. Therefore, evolution could not be disproved by any means and is not a scientific theory: it is a philosophical belief. All true scientific theories must be open to being disproved by evidence.

If you start with the belief that there *is* a God who has the power and intelligence to design and create the Universe and life, then evolution as an undirected process cannot be a fact. It is now possible to look at the evidence that evolutionists present and to see whether it has any scientific merit.
Evolution can now be treated as a theory of historical science because in principle it can be disproved. By default, if the scientific evidence does not support evolution, then the creationist view is correct.

So is evolution a fact?

It all depends what you believe and whether you are willing to accept that if the predictions of evolution could be shown to be false then the theory would be disproved. Large scale evolution from species to species [macroevolution] has never been observed. Minor changes in species [microevolution] are easy to observe and result from natural selection of existing genes. No scientist has yet shown how a simple cell could over time develop into a complex multicellular organism. All experiments to artificially mutate bacteria and fruit flies in an attempt to accelerate evolution have failed to produce new improved organisms. All attempts to make giant bio-molecules by random synthesis have failed.
There is no direct scientific evidence that macroevolution is possible.
The fossil evidence is inconclusive and shows no trace of significant intermediate species. If you consider evolution to be a fact it will not be because of any scientific evidence - it will only be because of what you believe as an act of faith.

Is creationism against science?

It all depends upon what you mean by the word *science.*

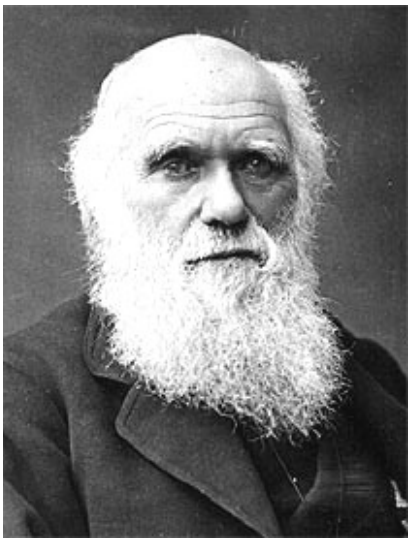
Science means different things to different people. If a scientific theory can be proved by repeatable tests and experiments then it is obviously true within its context.

Many ideas and theories such as evolution rely on the *interpretation* of scientific data. If you disagree with the interpretation, it does *not* mean that you disagree with the data.

Many creationists are branded as being anti-science because they will not accept Darwinian evolution. They reject evolution not just because of their biblical worldview but because they think that evolutionary theory is a very bad interpretation of available data.

An evolutionist will say that monkeys and men are so similar that they must have evolved from a common ancestor.

A creationist will say that monkeys and men are so similar that they must have both been designed and made by God using a common biological blueprint.



The same data can lead to very different conclusions.

Creationists will accept all good laboratory science and mainstream theories: Newton's laws. Relativity. The periodic table. Mendelean genetics. Newton's theory of gravity. Le Chatelier's principle. Electromagnetic theory. Inheritance by DNA recombination. Quantum mechanics. Natural selection. The valence/ electron theory of chemical combination. These are just a few basic examples.

Creationists will not accept many scientific ideas about unrepeatable historical events such as evolution, uniformitarian geology and the Big Bang theory.
In fairness it must be said that there is real concern in the non-creationist scientific community about the validity of these ideas.
Many scientists will cling on to a theory, despite contradictory evidence, because there is no better theory or due to their worldview.

Creationists accept good scientific theories because they believe that God made an ordered and predictable universe with rules and laws.

Is creationism a scientific theory?

NO! *The reasons for this are quite simple:*

1] It is impossible to perform a laboratory experiment, or indeed any scientific test, to determine the possible extra-material origin of the universe and life.

2] Scientific methods deal with repeatable [impersonal] phenomena and cannot be applied to situations involving single events that happened in the past.

It is fair to ask, therefore, why anyone should believe anything that can never be proved scientifically. The answer is again quite simple. Most assumptions that we make in order to live our lives cannot be proved scientifically e.g.

1] An objective physical reality exists outside of our own consciousness.
2] Other people are real and are not figments of our imagination.
3] Our thoughts and opinions have meaning and are not merely products of random chemical reactions in our brains.
4] We are not pre-programmed like a robot.

Here are some statements that lie outside the realm of scientific proof:

" The sunset looks beautiful"
" Lilies have a delicate aroma"
" It is good to be honest"
" My mother really cares about me"
" I'm in love with a boy I met at college"

None of our subjective experiences or thoughts can be tested scientifically. We have to make value judgements about most areas of our lives. The standards and rules we use to guide our behaviour cannot be derived from scientific analysis. Each individual must decide what is right or wrong based upon teaching from parents, schools, governments and religious organisations.

Although the account of God creating the universe and life as written in the Bible cannot be proved scientifically, it is still possible to look for consistency of evidence. For example, was plant life created before animal life? Was life created in distinct species rather than a continuum? Do we live in a perfect world? [The biblical Genesis account describes the "fall of man"]. In the end though, each of us must decide what we believe.

Is evolution a scientific theory?

NO! *The reasons for this are quite simple:*

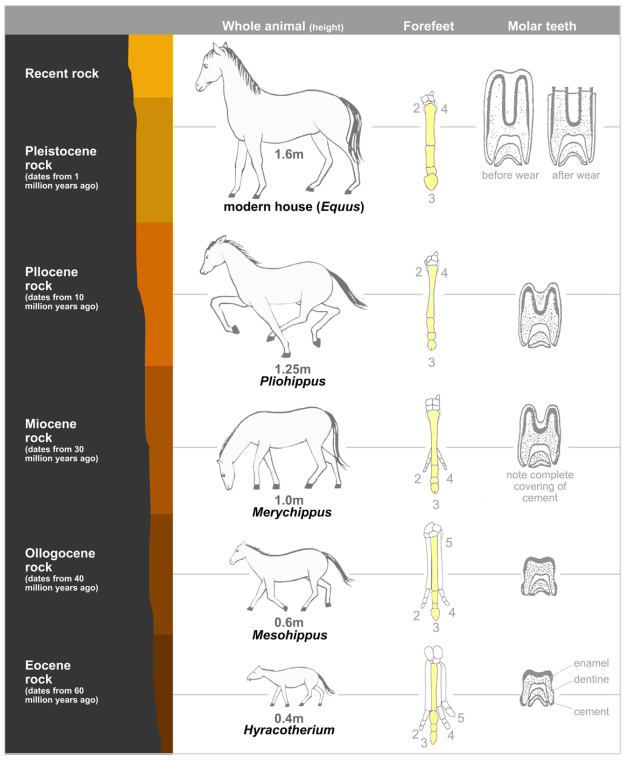
1] It is impossible to perform laboratory experiments to demonstrate the Possibility, or otherwise, of one species changing into another as the time scales would be far too long. [Attempts using fruit flies have failed].

2] Scientific methods deal with repeatable phenomena and cannot be applied to theories involving single random events that happened in the past.

BUT *As a theory of historical science, techniques of forensic science and evidence evaluation can be applied. For example:*

1] Can any random unaided process be found that will enable simple chemicals in the environment to turn into complex bio-molecules?
2] Can any random unaided process be found that will enable bio-molecules to join together in their millions to form a living cell?
3] Is it possible for random mutations in cells to generate new genes that can give rise to completely new features in organisms?
4] Does the fossil record contain abundant evidence of intermediate species, as would be expected from a gradual evolutionary process?
5] OR if evolution is supposed to happen in "very short bursts", can a mechanism be demonstrated that would allow this, and where is the evidence in today's animals and plants?

EVOLUTION FACT AND FICTION



Modern horses come in a wide range of sizes; their heights are usually measured in hands. One hand = 10 cm. The largest is the English Shire horse, at 20 hands. The Fallabella is just over 4 hands when fully grown. Modern horses can have 17, 18 or 19 pairs of ribs. Three-toed horses are known today, and some horses have equal length toes.
So does the evidence show that horses have evolved? No, because all fossil finds were probably different sub-species of the horse family [just as there are many breeds of dogs]. Most of these sub-species are living today and have not become extinct in an evolutionary selection process. Proposed horse evolution is not science but merely speculation.

How does the creation/evolution debate affect us?

You might think that this debate has no effect on our lives.
You would be quite wrong.

Adolf Hitler embraced the ideas of evolution to help justify his military campaign which was intended to start a thousand year reign of the master race. In a world where only the "fittest" have any right to live there is no problem in conquering other nations, or setting up concentration camps to kill groups of people who are considered to be inferior, such as gypsies and Jews.

If mankind is considered to be the highest point on the evolutionary chain, then this must have come about due to a brutal struggle for survival when only the most aggressive individuals or groups lived to reproduce. If man is to continue evolving to become a more advanced creature then this struggle must go on.

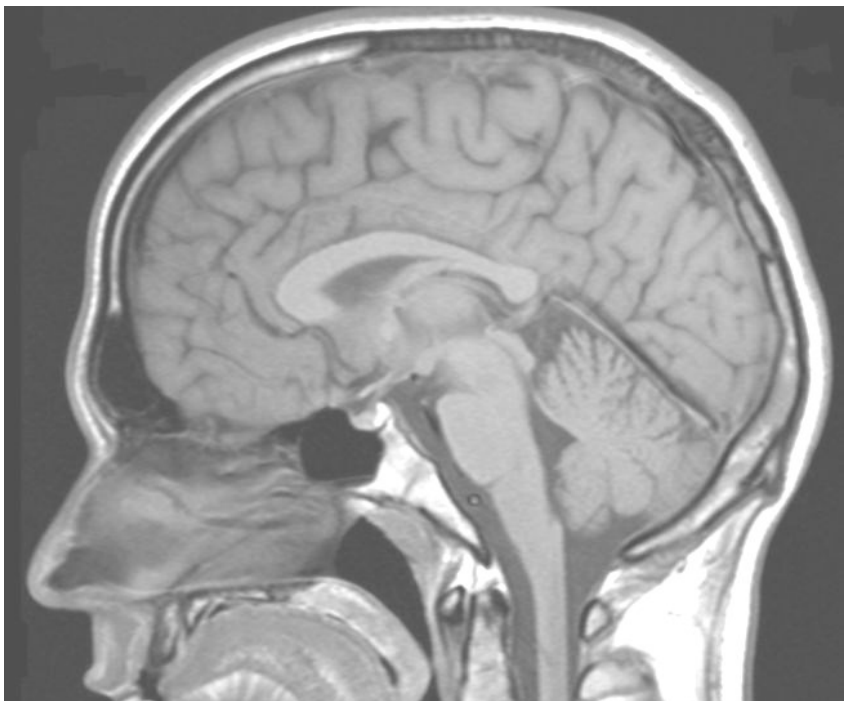
Historically, black races were considered to be inferior human species and as a result the slave trade existed. Evolutionary ideas helped to reinforce this view. In the nineteenth century, William Wilberforce, a devout Christian, successfully campaigned to make the slave trade illegal.

The creationist view of life is quite different:

If man is a created being then we are accountable to God for our actions and behaviour. There has been no selfish struggle for survival and so we need not be cruel in an effort to ensure the survival of the species. Creationists who believe the Bible will go back to the Ten Commandments [given to Moses by God] as a basis for living, and also the teachings in the rest of the Bible.

If God created man, then all men are equal and there are no inferior races. The lame and weak and old need not be eliminated in an effort to help the survival of the fittest. There is no need of war as a means of obtaining territory or resources for the superior races or groups. There is more to life than pleasure, instinct or survival when man is considered to be created in the image of God. The whole of our planet should be treated with respect if it has been created by God.

The human brain is the most complicated thing known to man and has around 200 billion neurons [brain cells]. Each neuron is capable of connecting to at least 5000 other neurons. This gives the brain a simply awesome power to process information. The number of possible information routes in the brain exceeds the number of atoms in the universe. Evolutionists believe that this highly complex organ arose by chance.



There is much more to the brain than mere processing power. We experience emotions e.g. love, hate and fear, and we have curiosity. We are aware of our own existence i.e. we are conscious. How can a biochemical machine produce these experiences? Evolutionists have no answer to this question as the theory of evolution can only deal with the development of biological structures. Creationists believe that God gave man the "gift of life" and that we have a soul or spirit that lives inside our material body. We are not just chemical machines.

There are only two certain facts of life:
1. We are here.
2. One day we will no longer be here.

Life does not go on forever and each of us must come to terms with our own mortality. For an evolutionist who believes that matter is all that exists, death is the end of everything. For a [Christian] creationist there can be the hope of life after death: our body dies but our spirit will live on.

Many young people ask questions such as: "What is the meaning of life?" "Why am I here?" "Why are there so many wars?" "How can people be evil?"
The evolutionist's answer to these questions is that life has no meaning because it has resulted from random processes; we are a fortunate accident in the universe. Wars happen because we have evolved through a struggle for success when only the fittest survive, and war just continues this process.
The creationist's answer to these questions is that our lives can have meaning because we were created for a purpose by God. Wars happen as a result of man's misuse of freewill. We are accountable to God for our conduct.

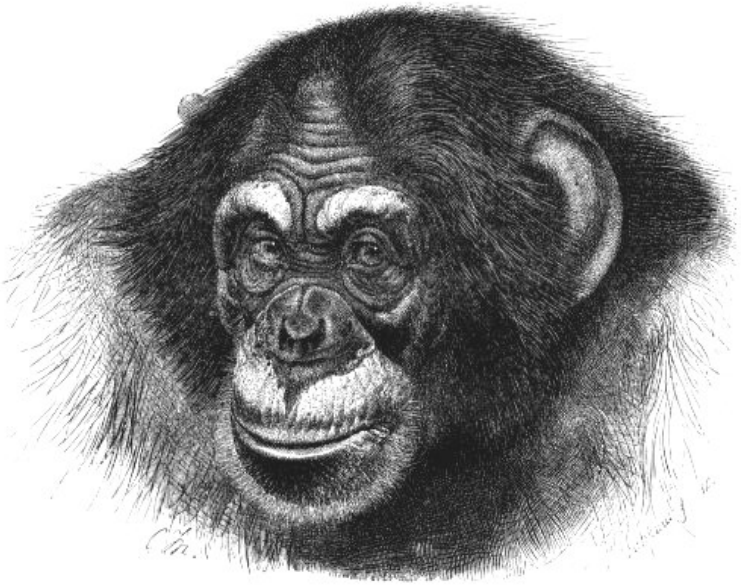
Our worldview (creation or evolution?) has a real impact on how we regard life. Only you can choose what to believe, but your beliefs will affect the way you live.

How should we regard human beings?

IF GOD CREATED US

We have been designed by God and we should look to Him in order to find out our reason for living. Therefore, human beings have significance because we are not accidents but have been made by God to reflect his personality. To this end, God has given us a set of moral guidelines to live by, for our benefit.

IF WE EVOLVED FROM APES



We are simply advanced animals and have no reason to exist. We are only a lucky accident in a vast cosmos that arose by chance and there is no reason for us to adopt any particular standards. There can be no absolute right and wrong and life can have no ultimate significance. We are free to do whatever we choose [if indeed freewill has meaning for creatures that are only complicated biochemical machines]. We cannot condemn cannibals - or indeed those who kill others - as they only carry out those actions because they evolved to do so. When we die that is the end for us. We have lived only to replicate our genes as part of a complex chemical reaction called life.

Our view of human origins determines how we regard people.
Are we merely advanced biochemical reproducing machines or have we been created by God to have significance and purpose?

The problem of evil

Most thoughtful people will have considered the existence of God and the implications of faith. Even if the ideas of evolution are not found to be very satisfactory, the idea of a good creator God can present even more problems due to the state of the world in which we live. Our planet is full of violence, war, famine and natural disasters etc. Despite the beauty in nature and human love and care, our lives are always touched by death and suffering at some point.

Those who believe in a godless universe have no answer to this. A universe created by chance will produce chaos and suffering with no purpose or meaning.

Christians who believe the Bible do have an answer, but it is not always well accepted. The biblical answer is that God did indeed create a good world, including the first humans. They made a decision to stray from God's instructions which resulted in a world containing death and violence and disasters, i.e. God's oversight was rejected. The whole human race has suffered as a result of this. We are all imperfect to some degree. The immediate response to this is often that God must be a monster to allow this state of affairs to continue. God could indeed stop the process but only by removing our freewill. We would become robots and only capable of "approved" behaviour: God could heal our world - but at what cost?

Has God done anything about the problem of our war-torn and imperfect world?
The Christian answer is that God has addressed the root cause of the problem, which is human imperfection [the biblical term is sin]. He has offered to forgive our sin and to set us as individuals on a new course in life. This is possible only if we admit our imperfections and ask to be forgiven and changed. Therefore, anyone who wants to be reconciled with God can be accepted, but only if the price of wrongdoing is paid.
This is why Christians believe the biblical account of Jesus Christ, who said that his death on a Roman cross would pay the penalty for human sin. Jesus claimed to be the Son of God and therefore was able to pay this price. God has provided a solution to the problem of our imperfect world, but on a person by person basis for those who accept their own imperfections and wish to change. Each person can choose to accept or reject God's offer of forgiveness and a new life: our freewill is not lost, and God can say to us, " I want to heal your world but this starts with you."

CREATION or EVOLUTION?

Did God create us or are we a product of gradual evolution?

The mainstream media and much of the scientific community believe that human beings are the product of a long development process called Darwinian Evolution.

The Bible teaches that human beings are a special creation by God.

This booklet seeks to contrast the two worldviews and to examine simply the possible scientific basis of evolution .

David Shires
David Shires taught physics in a 6th form college for many years. He has a keen interest in creation/evolution issues and how belief in evolution has changed our culture and our view of God.

Living Stones
Bible Fellowship

www.livingstonesnewforest.org.uk