

**Is Evolution True?**

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# Two Theories of the Beginning of Life

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- **Evolution;** Descent with modification. This definition encompasses small-scale evolution (changes in gene frequency in a population from one generation to the next) and large-scale evolution (**the descent of different species from a common ancestor over many generations**).
  - **Natural Selection;** The process in nature by which, according to Darwin's theory of evolution, only the **organisms best adapted to their environment tend to survive and transmit their genetic characteristics in increasing numbers to succeeding generations** while those less adapted tend to be eliminated.
- **Intelligent Design (ID);** The theory of intelligent design holds that certain **features of the universe and of living things are best explained by an intelligent cause, not an undirected process such as natural selection.**

# The Rap on Theists

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Theists are often accused of being unscientific.

*“Evolution is the cornerstone of modern biology... Intelligent Design is not a scientific theory... **I don't regard Intelligent Design as a scientific topic.**”* John Marburger (President George W. Bush's Chief Science Advisor)

*“Even if all the data point to an intelligent designer, such an hypothesis is excluded from science because it is not naturalistic.”* Todd S. C. Correspondence to Nature 401(6752):423, 30 Sept 1999

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2. *“Theists ignore the scientific evidence”*
3. *“Theists believe something that is without evidence”*
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# Science Bias

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- **Science takes the position that evolution is fact**
  - No need or room for critical thinking or opposing facts
  - Accept theory at face value
- **Any discussion that poses problems with evolution are squashed (Movie; Expelled- No Intelligence Allowed)**
- **Why are some scientist so concerned about ID theory?**
  - If ID is so wrong, it should be easy to dismiss.

# Science Defined

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**Science** (from Latin *scientia*, meaning "knowledge"<sup>[1]</sup>) is a systematic enterprise that builds and organizes knowledge in the form of testable explanations and predictions about the universe

- **Critical Point; 'explanations and predictions'**
  - They interpret and form conclusions
  - Then devise experiments to see if their conclusions are correct
  - This is the methodology that embodies science

<sup>1</sup> Etymology dictionary

# ID Theory vs. Naturalism

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- ID Theory
  - Attempts to propose an explanation for the cause of nature
  - This is something that CAN'T be repeated in the laboratory
  - What experiments COULD really be conducted when examining the possibility of an intelligent designer?
  - How do you examine the first creative activities of the universe
- But how do you prove the Big Bang theory?
  - This can't be repeated in the laboratory
  - This is stated as a historical event (one time)
- How do you repeat the evolution of mud to man?

# Children Can't Handle the Truth

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“In my opinion, using creation and evolution as topics for critical-thinking exercises in primary and secondary schools is virtually guaranteed to confuse students about evolution and may lead them to reject one of the major themes in science.”

Eugenie Scott, leader of the anticreationist National Center for Science Education

# ID Theory is Rational & Scientific

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## ***Intelligent Design Theory is Rational***

- *Many very rational and reasonable scientists are, in fact, theists who believe in an intelligent designer*
- *ID proponents use reasoning through the evidence, utilizing the laws of logic.*
- *Proponents of intelligent design are as rational as opponents of intelligent design.*

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## ***Intelligent Design Theory Agrees with the Sciences***

- *ID proponents look at the same scientific data that ID opponents examine in an effort to understand the origin of life in the universe*
- *Their conclusions are certainly different than those of naturalists who oppose them (differing world view)*
- *Unfair to say that proponents of the ID Theory are either unaware or suppressing the science*

# **ID Theory is Follows Evidence & is Reasonable**

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## ***Intelligent Design Theory Follows the Evidence***

- *Proponents of ID will point to a number of evidences that they believe support their case*
- *Evidences come from the scientific data and collection that has taken place over the years*

## ***Intelligent Design Theory is Reasonable***

- *Issue is whether or not either interpretation of the evidence is the most reasonable conclusion*
- *INTERPRETATION of the data using the reasoning powers to examine the evidence before us*

# The Types of Evolution

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**Why do some people continue to hold to a theory proposed in 1859?    Rom 1:20-21**



# Can Microevolution lead to Macroevolution?

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“Are mutation and natural selection enough?”

*The central question of the Chicago conference was whether the mechanisms underlying microevolution can be extrapolated to explain the phenomena of macroevolution. At the risk of doing violence to the positions of some of the people at the meeting, the answer can be given as a clear, **No**.*

**Type 3 Evolution**

Macroevolution Conference

Roger Lewin, “Evolutionary Theory Under Fire,” *Science*, vol. 210, November 21, 1980, p. 883.

# Irreducible Complexity

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- Mouse trap illustration

- All parts must be present to have a working mouse trap
- Problem; how does the mouse trap evolve?
  - Evolution Rules; small changes & organism will retain a change only if it is beneficial



- Example

- Blood Clotting (21 steps evolving different systems)
  - When some steps don't work fully: Hemophilia
  - What happens to the host if a step is missing?

# There are No Simple Cells

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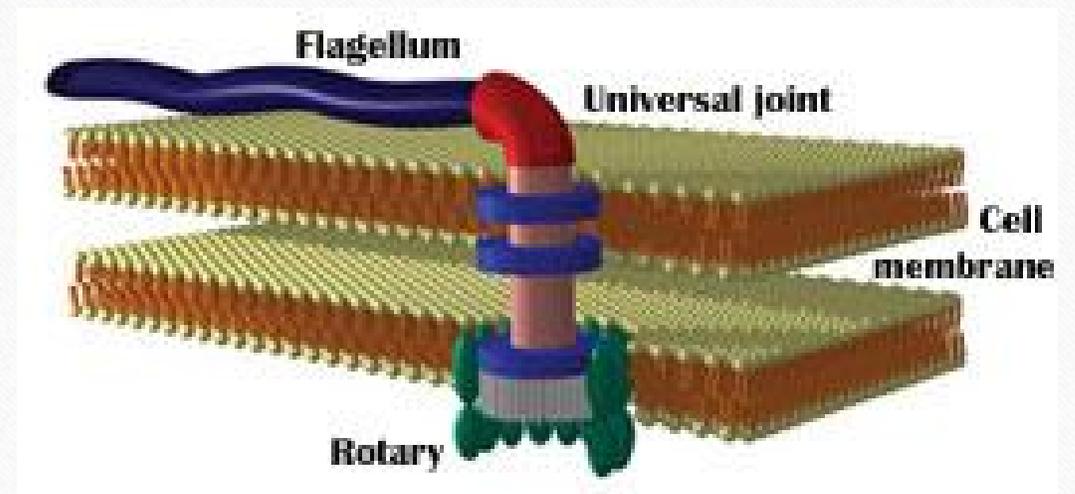
## **Escherichia coli (e. coli)**

- Contains 2.4 million protein molecules (30% of cell)
  - Made from 4,000 different types of proteins
  - 255,000 nucleic acid molecules
  - 1.4 million polysaccharide molecules
  - 22 million lipid molecules
  - Lipids work with millions of metabolic intermediate molecules
    - 800 different type of compounds that have to be at just the right concentration otherwise the cell will die.
  - Millions of mineral molecules
- 90% of nonwater components of a cell; 90% are biopolymers (proteins)
  - Links are created by dehydration (how can these be formed in a primordial watery environment?)

# The Amazing Motorized Germ

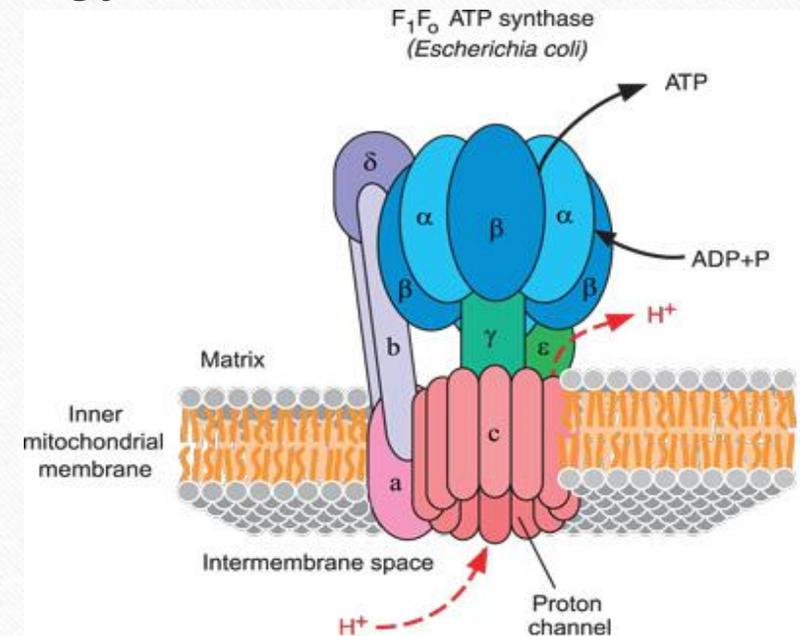
## Bacterial Flagellum

- Bacterium swims with a whip-like cord called a *flagellum*
- Flagellum motor is powered by proton flow
- This extremely efficient motor can quickly stop, start, change speeds, and reach a top speed of about 100,000 rpm!
- How did this evolve?



# ATPase

- Every cell has rotary motors in cell membranes to create energy for cell use
- ATP synthase is the central enzyme in energy conversion in mitochondria
- Motor has nine components
- 10 nm across by 8 nm high—so tiny that  $10^{17}$  would fill the volume of a pinhead
- Life could not have evolved before this fully functional
- How did this evolve?



# DNA Errors

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- **“The overwhelming majority of random mutations are harmful - that is, they reduce fitness; only a small minority are beneficial, increasing fitness”<sup>1</sup>**
- **“On theoretical grounds random mutations cannot form the basis of evolution”<sup>2</sup>**
- **Genetic Entropy<sup>3</sup>**
  - Human DNA accumulates a huge 90,000 errors in just 6,000 years
  - 0.003% of our DNA becomes inoperative in less than 10,000 years
  - In 6 million years, 3 % of our DNA would be damaged and it is inconceivable that a genetic code would still function.
  - Dr. Sanford stated that his best estimate for the age of life on the earth was less than 100,000 years.

1 Biology professor H. Allen Orr (U. of Rochester), 2 Dr. Lee Spetner (Johns Hopkins University), 3 Geneticist, Dr. John C. Sanford

# DNA Indicators

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Junk DNA (*Barren. Non-functioning. Dark matter*)\*

- Evolutionists believed most of DNA was left over junk
- ENCODE project included 442 scientists in 32 labs around the world
  - Some 80% of the human genome is biochemically active
  - Gene switches - controllers

# Geologic Column

- Natural Science

- 1669, Danish physician Niels Stensen proposed that rock layers are deposited sequentially, each layer of rock is younger than layer beneath it.
- Present day time scale assumes the earth is 4.5 billion years old.

- Issue

- Evolutionary trees that adorn our textbooks are based mainly on inference, not on the evidence of fossils<sup>1</sup>



<sup>1</sup> Harvard Professor Stephen Gould

# Cambrian Fossils a Problem for Evolution

- Cambrian rock layer (530 million years) contain fossils of fully formed highly genetically diverse animals without any transitional forms below the layer
- Lack of fossils below the Cambrian layer was a problem for Darwin
  - “To the question **why we do not find rich fossiliferous deposits** belonging to these assumed earliest periods prior to the Cambrian system, **I can give no satisfactory answer.**”
  - “the **difficulty of assigning any good reason** for the absence of vast piles of strata rich in fossils beneath the Cambrian system is very great.”



# Cambrian Fossils a Problem for Evolution

- “Some of the most ancient animals, as the Nautilus, Lingula, etc., do not differ much from living species”<sup>1</sup> Darwin
- Living fossils; there are no evolutionary progression of Cambrian fossils living today like the horseshoe crab
  - Either evolutionary processes are working or not
  - Why hasn't the horseshoe crab evolved into something new?
  - Evolutionary Status; “the maintenance of stability within species must be considered as a major evolutionary problem.”<sup>2</sup>



<sup>1</sup> On the Origin of Species by Charles Darwin

<sup>2</sup> Gould, S. and Eldredge, N., Punctuated equilibrium comes of age, *Nature* **366**(6452):223–224, 1993.

# Other Problem Fossils for Evolution

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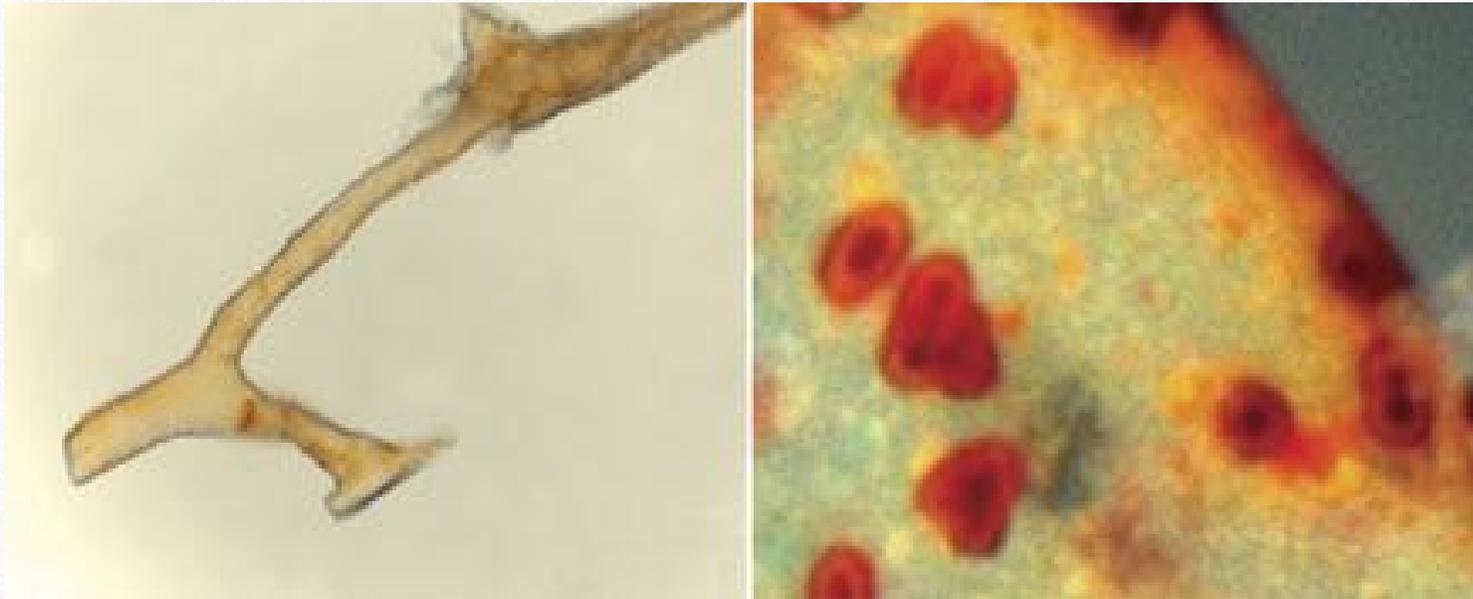
- Polystrate fossil trees (some trees 16 ft tall 30 inches in diameter)
  - These are fossils found all over the world in coal bed)
  - How do these fossils form over slow evolution time spanning multiple layers?



# Other Problem Fossils for Evolution

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- What does this look like (think medical)?

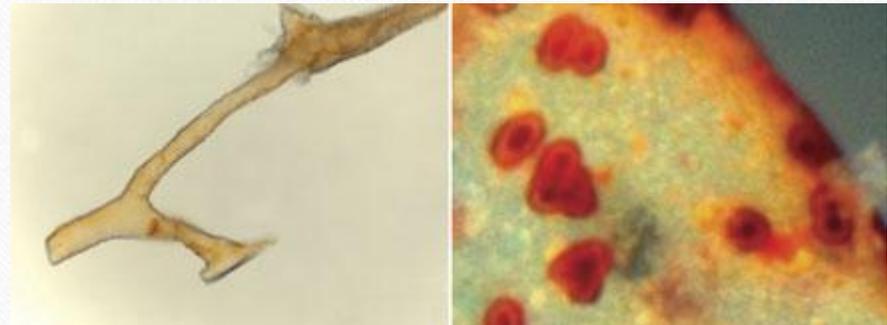


# Other Problem Fossils for Evolution

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- Fresh Dinosaur Bones?
  - 1990 Los Alamos National Lab found proteins in backbone of a sauropod dinosaur dated by geological column to be 150 million years old.
  - 1997 Dr. Mary Schweitzer found a piece of Tyrannosaurus rex bone containing red blood cells with hemoglobin.
  - 2009 Intact proteins, bone cells, part of DNA found in duck-billed dinosaur femur bone dated 17-20 millions years old.<sup>1</sup>

**How can fresh tissue survive for  
17-150 million years?**

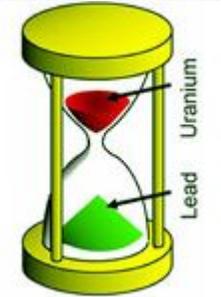


<sup>1</sup> American journal Science (M.H.Schweitzer, W. Zheng, C.L. Organ, May 1, 2009)



# Rock Dating Assumptions

- Scientific results are dependent on accuracy of assumptions
- Hourglass illustration (Uranium 238)
- Starting Assumptions
  1. **There are no lead atoms when rock formed**
  2. **The rate of decay (uranium to lead) is always the same through history**
  3. **There has been no additions/deletions to the rock (atoms of uranium or lead)**
- Expect consistency in rock ages regardless of method used



# Rock Dating; Case Studies

## Sample from the Cardenas Basalt in the eastern Grand Canyon

Dating Method	Millions of Years
Previous radiometric	1103 +/- 66
potassium-argon	577 +/- 12 to 1013 +/-37
rubidium-strontium	1111 +/-81 and 892 +/-82
Samarium-neodymium	1588 +/- 170
Lead-lead	1385 +/- 950

## 1997 Somerset Dam in Queensland, Australia, 15 rock samples from the Jurassic-Triassic intrusion

Dating Method	Millions of Years
Stata convention	216-225
potassium-argon	183-252
rubidium-strontium	393
Samarium-neodymium	259
Lead-lead	1425

# Rock Dating; Case Studies

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- **Zircon grains in the Jemez granodiorite of New Mexico**
  - Dated as 1.5 billion years old by the uranium-lead dating method
  - Dated only about 6 thousand years old by the uranium-helium diffusion method
- **Recent lava flows in Hawaii were dated as being up to 3.34 billion years old.**
- **Lava flows (1949 & 1954 eruptions of Mount Ngauruhoe volcano; New Zealand)**
  - Rubidium-strontium age 133+-87 million years
  - Samarium-neodymium age of 197+-160 million years
  - Lead-lead age of 3908+-390 million years

# Carbon<sup>14</sup> Dating

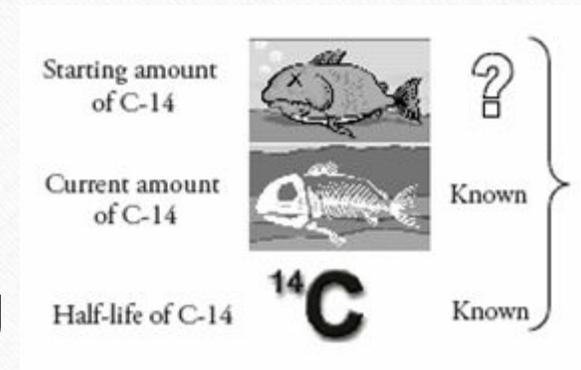
- **Assumptions**

1. Starting concentration of C<sup>14</sup> is known (C<sup>14</sup>/C<sup>12</sup> ratio)
2. Rate of C<sup>14</sup> decay is constant throughout history

- **If the assumptions are not valid; invalid dating**

- **What could invalidate assumptions?**

- Nonequilibrium of C<sup>14</sup>/C<sup>12</sup> (C<sup>14</sup> production/elimination; concentration)
- Magnetic field of Earth; 10% weaker than in 1845 (C<sup>14</sup> less in past – show greater age)
- Earth biomass (vegetation) greater before flood (make C<sup>14</sup>/C<sup>12</sup> ratio smaller)



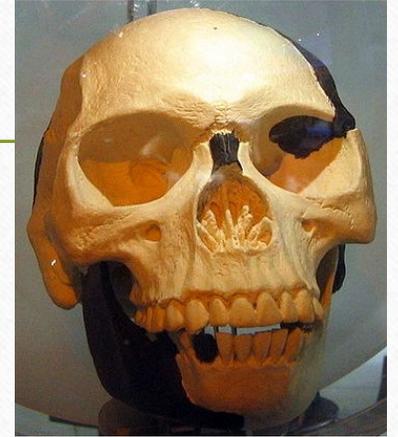
# C<sup>14</sup> Case Studies

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- **Fossilized wood samples** (40 – 250 million yrs old, geologic column)
  - C<sup>14</sup> gave ages ranging from 20,700 +/- 1,200 years and 44,700 +/- 950 years.
- **Coal sample** (tens of millions to hundreds of millions of years old)
  - C<sup>14</sup> in samples show they must be less than 100,000 years old
- **10 U.S. Department of Energy Coals Sample Bank** (40-300 million yrs old)
  - C<sup>14</sup> analysis show ages ranging between just 44,000 years and 57,000 years
- **Guinea diamonds** believed to be 1-3 billion years old
  - Found to contain measurable C<sup>14</sup>, projected age of only 55,700 year

**Results indicate that the entire geologic column is less than 100,000 years old—and could be much younger.**

# Evidence for Evolution



## Piltdown Man

- Found (1912) at Piltdown, East Sussex, England
  - Fragments consisted of parts of a skull and jawbone
- Fossil evidence in defense of John Scopes during the 1925 Scopes Monkey Trial
- Exposed in 1953 as a forgery
  - Lower jawbone of an orangutan deliberately combined with the skull of a fully developed modern human
  - Microscopic examination revealed file-marks on the teeth
  - Appearance of age by staining the bones with an iron solution and chromic acid

# Evidence for Evolution

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## Nebraska Man

- Described by Henry Fairfield Osborn in 1922, on the basis of a tooth that rancher and geologist Harold Cook found in Nebraska in 1917
- 1925 revealed that the tooth was incorrectly identified
  - Other parts of the skeleton were also found
  - Tooth belonged to peccary (pig) called *Prosthennops*

# Theories Must Be Falsifiable

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Who said this?

“The abrupt manner in which whole groups of species suddenly appear in certain formations, has been urged by several paleontologists ... as a fatal objection to the belief in the transmutation of species. If numerous species, belonging to the same genera or families, have **really started into life at once**, the fact would be **fatal to the theory of evolution** through natural selection”

Charles Darwin

*Origin of Species* (London: John Murray, 1873), p. 282.

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Cambrian Explosion Torpedoes the Theory

# 10 Reasons to Reject Evolution

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1. There are known no known proven mechanism explain how the new purposeful genetic information could arise and statistically it's impossible
2. There're no known proven mechanisms that can explain all the steps for a living cell to form from nonliving molecules and statistically it's impossible
3. Abiogenesis has never been observed and all experiments to initiate it have failed
4. Fossil record is a record of extinction of fully form animals and plants -- not a record of evolution of life forms
5. There are no fossils to proven mutant evolutionary intermediate organisms yet there should be millions and millions of fossils of such mutations (Cambrian Explosion). That is we have no evidence of actual evolution in the fossil record

# 10 Reasons to Reject Evolution

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6. Some of the oldest fossil-bearing rocks contain fully developed advanced animals such as trilobites, with no evidence of evolutionary ancestors
7. There is not enough ocean sediment or volcanic deposits for the continents to be an old enough to allow for supposed evolution
8. Radiometric dating results get old ages for recent rocks so we cannot accurately know the age of rocks.
9. Finding of carbon-14 in coal and diamonds means that these deposits must be less than 100,000 years old, which is insufficient time for supposed evolution
10. The rate of mutation of human DNA currently observe suggested DNA must be less than 100,000 years old which is not enough time for evolution

# Why the Bias?

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Ro. 1:20-22

For since the creation of the world God's invisible qualities — his eternal power and divine nature — have been clearly seen, being understood from what has been made, so that men are without excuse.

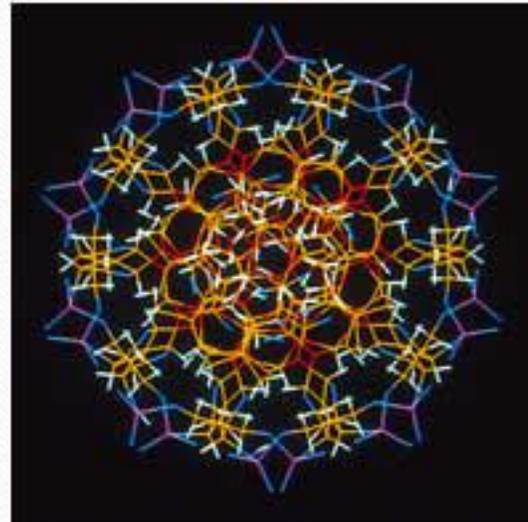
For although they knew God, they neither glorified him as God nor gave thanks to him, but their thinking became futile and their foolish hearts were darkened.

Although they claimed to be wise, they became fools

# Intelligent Design

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- Intelligent Design is clearly the best and most reasonable conclusion from the evidence



**I DON'T HAVE ENOUGH FAITH TO BE AN EVOLUTIONIST**