

EVOLUTION BASICS

BY DEFINITION: "CHANGE OVER TIME"

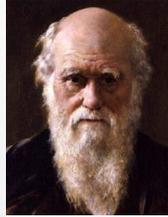


Evolution Basics

- **Charles Darwin trip to Galapagos Islands – On the origin of species**
- **Natural Selection**
- **Macroevolution vs micro evolution**
- **Creation and "Intelligent Design"**
- **Darwinism and the "Origin of Life"**
- **"Information" and DNA**
- **Richard Dawkins vs Stephen Meyers**
- **Earth's history & the Geologic Record**
- **Linnaean classification visible similarities vs Phylogenetic studies- cladistics 451-453**

Charles Darwin & Galapagos Islands

- Darwin was the Naturalist on the 5 year voyage of the HMS Beagle from 1831-1836
- Famous for his work on the Galapagos Islands- collected 100's of specimen. He theorized that the slight variations in the critters he found must be from gradual evolution as the adapted to their specific environment.
- In 1859 he first published "On the Origin of the Species"
- First referred to the process as "Natural Selection"
- He never really thought the "Darwin's Finches" were that big of a deal. It was 88 years later in a book w/ the same title by David Lack did it become "iconic".



Darwin's Theory of Evolution

- Darwin knew of the "man made" variations of domesticated pigeons created by breeders for specific traits.
- Natural Selection – preserves minor advantageous genetic mutations
- He thought that the great diversity of living organisms from 200 foot Redwoods to 100 foot blue whales to eukaryotic single celled amoebas and Prokaryotic methanogen Archaeobacteria has all evolved from a single common ancestor.
- He believed evolution was a slow gradual process taking advantage of "slight successive variations" ... Descent with modification
- He believed that the first ancestral specie of life evolved into several new species which finally changed enough to be classified into a new genus, after many generations later more new genera develop. Final millions of generations later, new families developed and millions of generations later new classes, etc. etc. etc. until finally new Kingdoms develop.
- Darwin conceded that, "If it could be demonstrated that any complex organ existed, which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down."
- During Darwin's time, scientist thought the cell was a simple glob of "gel" surrounded by a membrane. They had absolutely no idea that each living cell had more than 10,000 different protein machines with specialized jobs and functions. There are 100,000's of total proteins in each of our more than 37 trillion cells.



Macroevolution vs Microevolution

- **Microevolution is changes on a small scale – within a single “species” or maybe into genera. Examples might be different breeds of animals Labrador Retrievers and German Shepherds.**
 - **Peppered Moth population changed from predominantly white variety to the dark variety & then back to white variety depending on environmental conditions and are still Peppered Moths.**
 - **“Darwin’s Finches”, 14 species, after thousands of years of “speciation” still are able to interbreed and are still species of finches.**
 - **Certain bacteria have “evolved” to become resistant to antibiotics... but they are still the same exact species of bacteria that they started out as.**
 - **Virtually all Darwinists and Creationists believe in Microevolution**

Macroevolution vs Microevolution

- **Macroevolution – evolution on a grand scale. The compounded effects of microevolution.**
 - **Changes differentiating into different taxonomic groups including: Orders, Classes, Phyla and even different Kingdoms.**
 - **Mechanisms of macroevolution are the same as microevolution – genetic mutation, genetic drift and natural selection.**
 - **Regardless of the mechanism – the belief is that it was undirected, random actions**
 - **Virtually all Darwinists believe in Microevolution and most Creationists do not.**

CREATION AND “INTELLIGENT DESIGN”

- **Creationists are those that believe the Bible... That God CREATED the heavens and the Earth (Genesis 1:1)**
 - Generally speaking Creationists fall into “Young Earth” and “Old Earth” believers.
 - **Young Earth** are those that believe the literal reading of Genesis that God created the Earth in a literal 7 day (24 hour)
 - Biblical scholars vary but place the age of the Universe to 8,000 to 10,000 years
 - Old Earth scholars accept the age of 14 billion years but God was the mechanism, believes the Genesis account explains Creation, it is to be taken figuratively.
 - **Old Earth** are those that accept the traditional “scientific” idea that the universe is 14.5 billion years old & the Earth is about 4.5 billion years old
 - **Gap Creation** – Basic belief that after God created the universe there is a “gap” in the time before He created life on Earth
 - **Day-Age Creation** – Basic belief that each “day” in creation is not a regular 24-hour day that each “day” could be the equivalent of millions, or billions of years of human time
 - **Progressive Creation** - holds that species have changed or evolved in a process continuously **guided by God.**

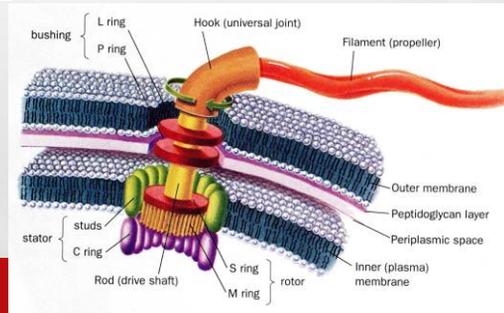
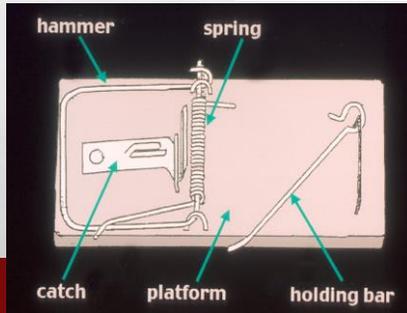
CREATION AND “INTELLIGENT DESIGN”

- **“Intelligent Design” is the theory that life, or the universe, cannot have arisen by chance and was designed and created by some intelligent entity**
 - **DESIGN — THE PURPOSEFUL OR INVENTIVE ARRANGEMENT OF PARTS OR DETAILS’,**
 - **DESIGN IS SIMPLY THE PURPOSEFUL ARRANGEMENT OF PARTS**
 - **WE INFER DESIGN WHENEVER PARTS APPEAR ARRANGED TO ACCOMPLISH A FUNCTION**



IRREDUCIBLE COMPLEXITY

- MIKE BEHE INTRODUCED THE CONCEPT OF IRREDUCIBLE COMPLEXITY IN HIS BOOK, *DARWIN'S BLACK BOX*
- SOMETHING IS IRREDUCIBLY COMPLEX IF IT IS COMPOSED OF TWO OR MORE NECESSARY PARTS
- REMOVE ONE PART AND FUNCTION IS NOT JUST IMPAIRED BUT DESTROYED
- A MOUSETRAP IS IRREDUCIBLY COMPLEX
- A BACTERIAL FLAGELLUM IS IRREDUCIBLY COMPLEX



“INTELLIGENT DESIGN” – MODERN BEGINNINGS

- BEGAN WITH THE WORK OF CHARLES THAXTON, WALTER BRADLEY, MICHAEL DENTON, DEAN KENYON AND PHILLIP JOHNSON
 - SCIENTIFICALLY, DARWINISM IS AN INADEQUATE FRAMEWORK FOR BIOLOGY
 - PHILOSOPHICALLY, DARWINISM IS HOPELESSLY ENTANGLED WITH NATURALISM
- MICHAEL BEHE, WILLIAM DEMBSKI, STEPHEN MEYER, PAUL NELSON AND JONATHAN WELLS
 - PROPOSED POSITIVE RESEARCH PROGRAM WHEREIN INTELLIGENT CAUSES BECOME KEY FOR UNDERSTANDING THE DIVERSITY AND COMPLEXITY OF LIFE

“INTELLIGENT DESIGN” - BOOKS

- ***THE MYSTERY OF LIFE'S ORIGIN*, CHARLES THAXTON ET. AL. IN 1984**
- ***A THEORY IN CRISIS*, MICHAEL DENTON IN 1986**
- ***DARWIN ON TRIAL*, PHILLIP JOHNSON IN 1991**
- ***CREATION HYPOTHESIS*, DEAN KENYON IN 1994**
- ***REASON IN THE BALANCE*, PHILLIP JOHNSON IN 1995**
- ***DARWIN'S BLACK BOX*, MICHAEL BEHE IN 1996**
- ***THE DESIGN INFERENCE*, WILLIAM DEMBSKI IN 1999**
- ***ICONS OF EVOLUTION*, JONATHAN WELLS IN 2000**
- ***THE DESIGN REVOLUTION*, WILLIAM DEMBSKI IN 2004**
- ***SIGNATURE IN THE CELL*, STEPHEN C. MEYER IN 2009**

Darwinism and the “Origin of Life”

- **Darwin & modern Darwinism have no accurate theory on the origin of life**

Information and the DNA molecule

- **Information and the DNA molecule**

RICHARD DAWKINS VS STEPHEN MEYERS

- **Richard Dawkins is a leading Darwinist who has brought his religious philosophy (Atheism) to the evolution discussion.**
 - **"DARWIN MADE IT POSSIBLE TO BE AN INTELLECTUALLY FULFILLED ATHEIST."**
- **Stephen Meyers is a leading advocate for Intelligent Design. He believes Intelligent Design should also to be included as an alternative to undirected random Evolution arguments.**

Earth's History & the Geologic Record

- **3 types of rocks – Igneous (fire rock), Metamorphic (“changing form”) and sedimentary**
 - **Most fossils are found in sedimentary rock layers**
- **Relative ages of rocks**
- **Earth 4.54 billion years, earliest known prokaryotic fossils 3.46 billion years old**
- **Geologic Time scale - eras & epochs**

Modern Taxonomy– Classification

- **“Intelligent Design” is the theory that life, or the universe, cannot have arisen by chance and was designed and created by some intelligent entity**