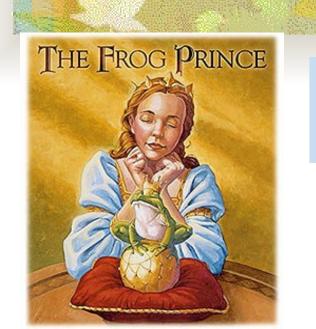
The Scientific Case Against Evolution

Dr. Heinz Lycklama
heinz@osta.com
HeinzLycklama.com/creation



Frog + time (instantaneous) -> Prince = Fairy Tale Frog + time (300 million yrs.) -> Prince = Science Dr. Gish, ICR

Overview

- What is (Macro) Evolution?
 - Macro Evolution vs. Micro Evolution
- Operational Science vs. Origins Science
- Our Assumptions and Thought System
- Five Challenges to Evolution
 - (Macro) Evolution Has Never Been Observed
 - There Are NO Credible Transitional Fossils
 - Life Can/Did Not Originate From Non-life By Chance
 - Evolution Violates the 2nd Law of Thermodynamics
 - Evolution is Only a (Unproven) Theory
- Conclusion Evolutionism Found Wanting



Evolutionary Theory in a Nutshell

How Evoluton Works:

- 1. Random chance mutations cause changes, or variation, in a population of organisms.
- 2. These different organisms then compete to survive and reproduce.
- 3. Those which are best able to survive and reproduce do so, and tend to leave the most offspring. This is called "natural selection."
- 4. Over time, if some organisms survive and reproduce more than others, a species will "evolve."

Evolution claims:

- All organisms are related through "common ancestry."
- All organisms arose through the process of mutation and natural selection.
- All organisms arose and persist because of the random chance processes of nature.

The story of evolution:

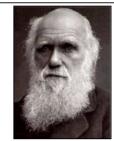
Origin of the Universe → Origin of Earth → Pre-Biotic Synthesis ("primordial soup")

— Bacteria ← First Cells ← DNA / Protein World ← RNA World ◆

▶Primitive Animals → Fish → Amphibians → Reptiles* → Mammals

Humans ← Hominids ← Early Apes ← Monkeys ← Lower Primates ◀

"Evolutionary theory says some reptiles also turned into birds.



The British naturalist, Charles Darwin, first proposed his theory of evolution in 1859 in *The Origin of Species*. (Picture from http://www.eeb.lsa.umich.edu/images/darwin.jpg)

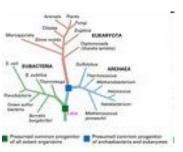
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Three Aspects of Evolution

- 1. Biological (Organic) Evolution
 - Evolution of organisms from common ancestor
 - Molecule to man (Macro-Evolution)
- 2. Biochemical (Chemical) Evolution
 - Evolution of first life from nonlife
- 3. Cosmic (Stellar) Evolution
 - Evolution of the universe, including galactic clusters, galaxies, stars, solar systems







Darwinian Evolution

- The forces of geographical isolation, natural selection, genetic mutation and drift gave some single cell life forms a superior ability to adapt to their environment
- Their survival ensured the production of offspring which shared their same genetic traits
- Over time small changes in the genome, combined with natural selection, and geographical isolation led to speciation of the original population of simple organisms

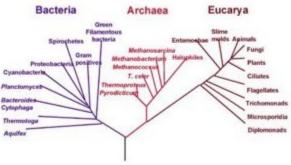
Darwinian Evolution - 2

- The descendants of the simple organisms developed into multi-cellular organisms
- Speciation eventually led to all of the life forms still present today
- Most genetic mutations are unfavorable and lead to extinction meaning that most species have since become extinct
- Shifting and movement of continental plates caused the isolation and environmental changes which natural selection acted on

Evolution Definitions

- Micro Evolution comparatively minor changes within a living organism that allow it to adapt to its environment
- (Macro)Evolution Living things (species) are related to one another through common descent from early life forms that differed from them (descent with modification)

Phylogenetic Tree of Life



Evolution Mechanisms

Natural Selection

- Selection of genes/mutations for survival of the fittest
- An observable process that supposedly underlies the mechanism of unobservable molecules-to-man evolution
- Requires a directional change

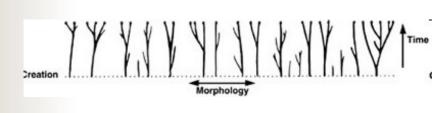
Mutations

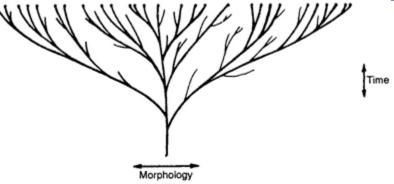
- Result of random copying errors/changes in genes (DNA)
- Supposedly source of new traits for Evolution
- Genetic information is lost/sorted
- Requires predominantly beneficial mutations

Natural Selection

- Selecting information that already exists
- Natural Selection Can
 - Decrease genetic information
 - Allow organisms to survive better in a given environment
 - Act as a "selector"
 - Support Creation's "orchard" of life

- Natural Selection Cannot
 - Increase or generate new genetic information
 - Allow organisms to evolve from molecules to man
 - Act as an "originator"
 - Support evolutionary "tree of life"





More Definitions

- Science A systematic process used to study the natural world and develop testable laws and theories about the universe
 - Based on empirical, repeatable observations
- Creationism The concept/belief that God created everything in six literal days
 - Created ex-nihilo (out of nothing)
 - Usually coupled with a "young earth" and global (world-wide) flood

Science Without Supernaturalism

Naturalism

- A belief denying that an event or object has a supernatural significance
- The doctrine that scientific laws are adequate to account for all phenomena

Materialism

- A belief claiming that physical matter is the only or fundamental reality
- All organisms, processes, and phenomena can be explained as manifestations or interactions of matter

What Is Science?

- "Science is the search for truth"
- "Operational" Science
 - Postulate theory -> make observations -> prove/falsify theory
 - Using the Scientific Method
- "Origins" Science
 - "Forensic" science
 - Were you there at the beginning?
 - Model of Creation
 - Model of Evolution
 - Which model fits the observed facts best?

Scientific Methodology

- Make observations
- Develop a hypothesis or theory that explains the observations
- Conduct experiments to test accuracy and predictions made by the theory
- Draw conclusions
- Repeat experiments to verify results and eliminate sources of inaccuracy
- Report results so others can repeat the experiment(s)

Theory Criteria

- To apply scientific methodology, the theory must meet these criteria:
 - Must be falsifiable or verifiable
 - Must make quantifiable predictions
 - Experimental results must be repeatable
 - Must be as simplistic as possible with no unnecessary components (Occam's Razor)
- Adherence to the methodology allows for selfcorrection and increases confidence in the assumptions made by scientific philosophy

Origins - Evolution or Creation?

- "Science is the search for truth"
- Hypothesis, theory, model, law, or fact?
 - Fact proven to be true
 - Law no known exception
 - Theory testable, falsifiable, based on empirical findings
 - Hypothesis provisionally explains some fact
 - Model simplified representation of reality
- Which is Evolution? Creation?
 - A model let's see why ...

Models of Origins

- We can neither observe nor repeat "origins"
- Origins "theories" cannot be tested or proven
- We have two models (not theories) of origins
 - Creation and Evolution
- Models can be compared as to their respective capacities for correlating observable data
- Evolutionists regard Evolution as "a proven fact"
 - They believe that Evolutionism is science and that Creationism is religion
 - Evolutionists are unable to prove Evolution
 - Thousands of scientists believe in Creation

Two Models of Origins

| Evolution Model | Creation Model |
|--|--------------------------------|
| Naturalistic | Supernaturalistic |
| Self-contained | Externally directed |
| Non-purposive (random) | Purposive (designed) |
| Directional (increasing complexity) | Directional (decreasing order) |
| Irreversible | Irreversible |
| Universal | Universal |
| Uniformitarianism (the present is the key to the past) | Completed |

Basic Assumptions of Evolution

- Non-living things gave rise to living matter, i.e. spontaneous generation occurred (only once)
- Viruses, bacteria, plants and animals are related
- Protozoa (single-celled life forms) gave rise to metazoa (multiple-celled life forms)
- Various invertebrate phyla are interrelated
- The invertebrates gave rise to vertebrates
- Within the vertebrates the fish gave rise to amphibia, the amphibia to reptiles, and the reptiles to birds and animals
- All life originated from first living organism

The Evolution Model

- Explains origin, development and meaning of all things in terms of natural laws and processes which operate today as they have in the past
- No extraneous processes requiring an external agent (i.e. a Creator) are permitted
- The universe in all respects evolves itself into higher levels of order (particles to people), elements -> complex chemicals -> simple living systems -> complex life -> man

Basic Assumptions of Creationism

- The Bible is the inerrant Word of God
- God is Creator
- Man is created
- Man is fallen and dependent on God
- Creation is dependent on God
- God reveals Himself in Scripture (Special Revelation)
- God reveals Himself in nature (General Revelation)

The Creation Model

- Involved a process of special Creation in the beginning
- All the basic laws and categories of nature brought into existence by special creative processes which are no longer in operation today
- Distinct kinds of living matter exist today as they have existed in the past
- Processes of Creation replaced by processes of conservation

Which Model Best Fits The Facts?

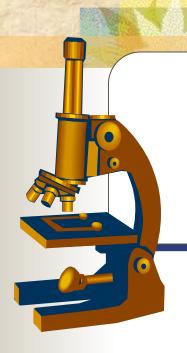
- Creation and Evolution are the only two models of origins
- Both models should be considered as equal alternatives and evaluated objectively in terms of their relative abilities to correlate and explain scientific data
- The model that incorporates the most data and has the smallest number of unresolved issues is the most likely to be true

Scientific "Proofs" of Origin

- What we <u>can</u> test scientifically
 - Observable/repeatable processes
 - Trends/tendencies in nature
 - Processes/events that left evidence
- What we <u>cannot</u> test scientifically
 - Identity/motivation of who/whatever brought the universe and life into existence
 - Historical events
 - Morality
 - Meaning

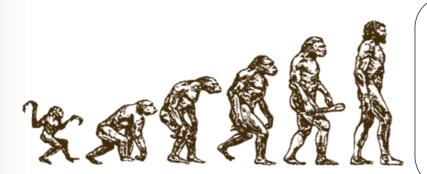
Origin "Proofs"

- Creation cannot be "proved"
 - Not taking place now (completed)
 - Not accessible to use of scientific method
 - Can't devise experiment to describe Creation process
- Evolution cannot be "proved"
 - If it is taking place, operates too slowly to measure
 - Transmutation would take millions of years
 - The scientific method cannot be used to measure it
 - Small variations in organisms (observed today) are not relevant
 - Can't be used to distinguish between Creation & Evolution



Present +
Repeatable +
Observable =
SCIENCE

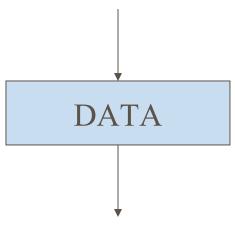
Past +
Non-Repeatable +
Eyewitness Account =
HISTORY



Past +
Non-Repeatable +
No Eyewitnesses =
BELIEF

How Our Thought System Works

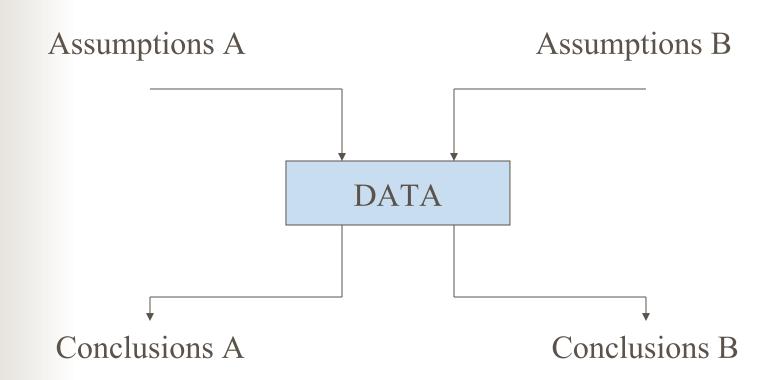
Assumptions (held by faith)



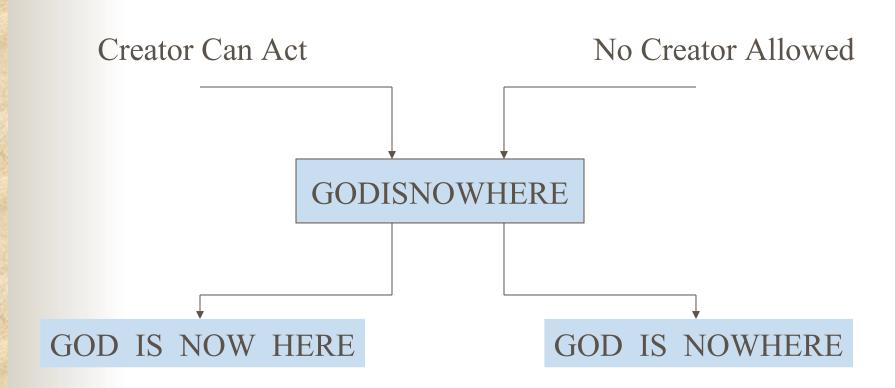
Conclusions

Logical thought is the means by which we draw conclusions from the facts/data after starting with certain assumptions.

Applying This Thinking To The Creation/Evolution Controversy



The Impact of Assumptions



Two Thought Systems

- Creator Acted
 - Supernatural origins
 - Purpose/design
 - Miracle
 - Event
 - Creation

- Creator Didn't Act
 - Naturalistic origins
 - Random chance
 - Properties of matter
 - Natural process
 - Evolution

Abuses of Scientific Theory

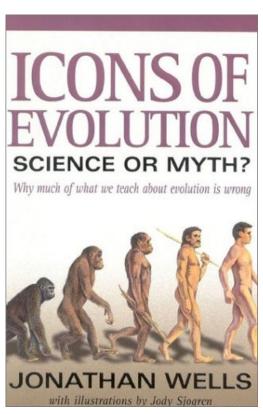
- Dogmatism
 - Theory equated/confused with fact
- Extrapolation
 - Theory extended to areas in which it is not known to apply
- Exaggeration
 - Theory accorded higher degree of verification
- Subjectivism
 - New facts explained as "error of observation"
- Exploitation
 - Theory used to justify activity in other arenas

Debunking The Myths in the Creation/Evolution Debate

- 1. The myth that the Neo-Darwinian Macro-Evolution belief system—as heavily popularized by today's self-appointed "science experts," the popular media, academia, and certain government agencies—finds "overwhelming" or even merely unequivocal support in the data of empirical science
- **2. The myth that** the alternative—biblical creation—somehow *fails* to find any compelling, corroborative support in the same data

Icons of Evolution

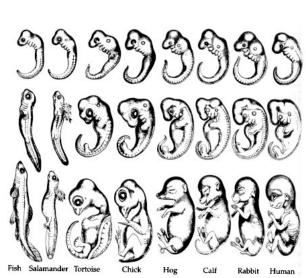
- 1. The Miller-Urey Experiment
- 2. Darwin's Tree of Life
- 3. Homology in Vertebrate Limbs
- 4. Haeckel's Embryos
- 5. Archaeopteryx The Missing Link
- 6. Peppered Moths
- 7. Darwin's Finches
- 8. Four-Winged Fruit Flies
- 9. Fossil Horses and Directed Evolution
- 10. From Ape to Human: The Ultimate Icon!

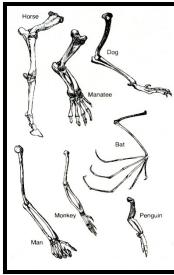


Similarity – Common Ancestry?

- We share 50% of our genes with bananas
 - Common parts
- Homology
 - Common purpose
- Haeckel's embryos
 - Fraudulent
- Vestigial organs
 - Useful after all







Challenges to Evolutionism

- 1. Macro-Evolution has never been observed
- 2. There are NO credible transitional fossils
- 3. Life can/did not originate from non-life by random chance
- 4. Evolution violates the 2nd Law of Thermodynamics
- 5. Evolution is only a theory it has not been proved

1. Macro-Evolution NOT Observed

- What is Macro-Evolution?
 - Molecules-to-man
 - Common descent
 - Emergence of new "advanced" features via mutations and natural selection
 - Simple to complex living organism with increase of genetic information
- Goo-to-you" (Macro) Evolution requires an increase in genetic information
- Macro-Evolution has not been, and is not being, observed

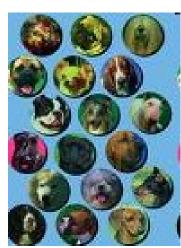


Micro-Evolution IS Observed

- What is Micro-Evolution?
 - Genetic variation, e.g (dis)appearance of existing/potential genetic traits through recombination of existing genetic code



- Adaptive variations arising from existing genetic potential already in population's existing pool
- Examples of Micro-Evolution:
 - Darwin's finches
 - Industrial melanism in peppered moths
 - Insects developing resistance to pesticides
- All observed change involves sorting and loss of genetic information



Dobzhansky's Fruit Flies

- Fruit flies experiment in the lab
 - Radiation-induced mutation of fruit flies
 - Involves deliberate action, not natural
- Results
 - Fruit flies with extra wings, no wings, huge wings, tiny wings
 - Changes detrimental to survival
 - No advantages over other fruit flies
 - Still fruit flies!
- No progressive beneficial changes from simple to complex
- No increase in quantity/quality of genetic information





Quote by Lewin (Evolutionist)

"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."

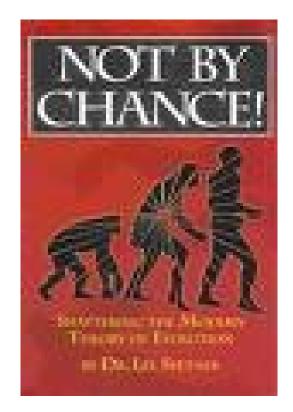
Reported by Roger Lewin, "Evolutionary theory under fire," *Science*, vol. 210 (4472), 21 November 1980, p. 883]

Mutations & Information

"Not By Chance", Dr. Lee Spetner

"But in all the reading I've done in the life-sciences literature, I've never found a mutation that added information ... All point mutations that have been studied on the molecular level turn out to reduce the genetic information and not to increase it."

Random (<u>chance</u>) mutation and natural <u>selection</u> are opposites!



Quote from Spetner

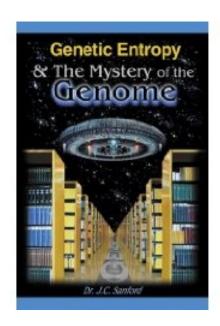
"... if adaptive mutations are stimulated by the environment, they contradict the basic dogma of Neo-Darwinism. ... that mutations are random, and the kind of mutations that occur are independent of the environment. If mutations are ... non-random (and/or) the environment can stimulate adaptive mutations, the paradigm of Darwinian evolution, which has dominated the biological sciences for close to 150 years, must be replaced."

Mutations and Information

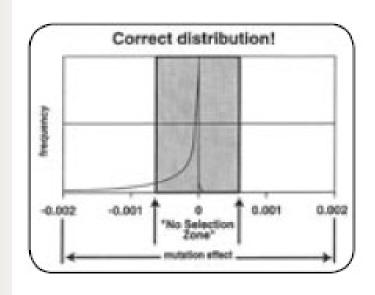
- Darwinism and the Deterioration of the Genome, Dr. Jerry Bergman
- DNA/RNA mutations
 - Can't provide significant new levels of information
 - Produce <u>degradation of the information in the genome</u>
 - Counter to the predictions of Neo-Darwinism
- Research shows:
 - No good example of a beneficial informationgaining mutation
 - Very few mutations are beneficial (< 0.01%)</p>
 - Thousands of deleterious mutations exist

Genetic Entropy

- John Sanford, (ex) Cornell Professor
- Questioning the "Primary Axiom"
 - We are the result of random genetic
 mutations + natural selection
 - An Axiom is untestable, yet is accepted as absolute truth
- The reality
 - Mutations mostly harmful, e.g. cancer
 - Random mutations destroy information
 - Selection can't eliminate all bad mutations
 - Good mutations are mostly unselectable



Deterioration of the Genome



- Most mutations are neutral or bad
- Chance of selection of good mutation essentially zero
- Agrees with Spetner

Figure 2. A corrected Kimura diagram (from Sanford, 2005) showing where beneficial mutations would occur. Their distribution is reduced in range and scale by a factor of ten thousand to one million. This part of the mutation distribution could not be drawn small enough, and a relatively large triangle is shown just to the right of the zero point. Even with beneficial mutations greatly exaggerated, essentially all beneficial mutations will still fall within Kimura's "no-selection zone."

Human Genome Deterioration

- No form of selection can stop genetic deterioration, only slow it down
- Living organisms show a process of devolution called genetic entropy
- Mutation accumulation causes genomic deterioration
- The Primary Axiom is impossible!

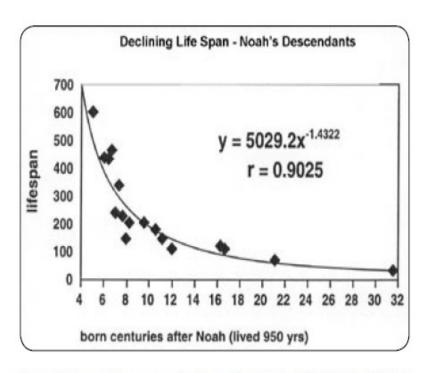


Figure 7. Human life spans in early history (from Sanford, 2005). When Biblical life spans are plotted against time for generations after Noah, a dramatic decline in life expentancy is shown. The curve shows a strong evidence of biological decay. It reveals an exponential curve following the formula $y = 5029.2x^{1.43}$. The curve is consistent with the concept of genomic degeneration caused by mutation accumulation.

The Phylogenetic Tree Topples

- Article by Lynn Margulis, biologist
 - American Scientist, 2006

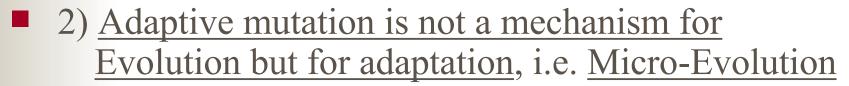


"many biologists claim they know for sure that random mutation (purposeless chance) is the source of inherited variation that generates new species of life ... No! I say."

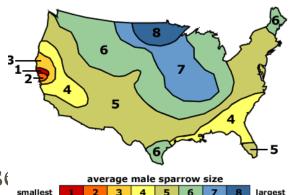
"new mutations don't create new species; they create offspring that are impaired."

Summary of Mutation Studies

- Spetner/Sanford/Bergman/Margulis
- 1) Adaptive, not random mutations
 - Not irrespective of the environment
 - Controlled by built-in cellular process
 - Lead to limited genetic and phenotypic changes



- Macro-Evolution assumes production of new information by mutations
- Mutations can't provide source of genetic information needed for selection
- 3) Mutational deterioration of the genome



Selection and Speciation

- Darwin provided no direct evidence for selection in natural populations
- Natural/Artificial selection involve only minor changes within existing species
- Evolution requires speciation, not local adaptations and differentiations of populations
 - Artificial selection demonstrated the limits experimentally
 - Primary speciation has never been observed





Evolution – Critical Transitional Steps *

- 1. Replicating molecules -> populations in protocells
- 2. Independent replicators -> chromosomes
- 3. RNA as gene & enzyme -> DNA & proteins
- 4. Prokaryotic cells -> Eukaryotic cells
- 5. Asexual clones -> sexual populations
- 6. Single-celled organisms -> multi-celled organisms
- 7. Solitary individuals -> societies
- 8. Primate societies -> human societies
 - * The Origins of Life, John M. Smith and Eors Szathmary
- Conclusion NO hard empirical facts; the problems are recognized!

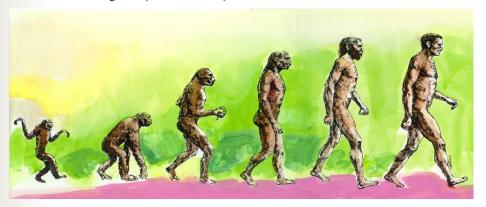
2. NO Transitional Fossils

- The "Cambrian Explosion"
- "Inverted" fossil orders
- Lack of empirical evidence for transitions
 - The archaeopteryx was a bird, not a transitional fossil between reptile and bird
 - Whale "evolution" debunked
 - Horse "evolution debunked
- "Living fossils", e.g. coelacanth fish
- Polystrate fossils
- No credible ape-to-human fossil identified



"Hominid" Fossils

- Neanderthal (1856) accepted as homo sapiens
- Java Man (1891) artificial construct
- Piltdown Man (1908) proven to be a hoax
- Nebraska Man (1922) an extinct pig
- Ramapithecus (1930) an orangutan
- Lucy (1974) make-believe creature



NO credible "ape-like -> human" fossil found!

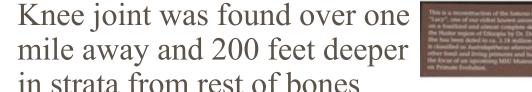
Lucy

- Discovered in 1974 by Donald Johanson
 - 40% complete skeleton
 - Dated at 3.5 million years old
- Evidence:
 - Arm/leg ratio of 83.9 %
 - Hip/pelvis walked upright
 - Knee joint walked upright
- Observations:
 - Fingers long and curved (for climbing)
 - Shoulder blade like gorilla
 - Brain size of chimpanzee

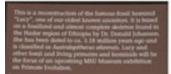


Lucy - Reconstructed

- Digging deeper, we find that:
 - Leg bone broken in two places and one end was crushed -> this invalidates the ratio
 - Hip/pelvis was incomplete, and thus reshaped to make it look as if it walked upright
 - mile away and 200 feet deeper in strata from rest of bones











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Fossil remains of two different creatures fitted to form a make-believe creature

Ida – The Latest Missing Link?

- Announced May 2009
- Found in 2 parts in Germany in 1983
- Skeleton of lemur-like monkey
- Claims being made
 - 47M years old (volcanic rock)
 - Selected similarities with humans – fingernails, 1 of 26 bones in foot (talus), opposable thumbs
 - "link no longer missing"
 - "in textbooks for 100 years"



Lord Zuckerman Chimes In

• "For example, no scientist could logically dispute the proposition that man, without having been involved in any act of divine creation, evolved from some ape-like creature in a very short space of time – speaking in geological terms – without leaving any fossil traces of the steps of the transformation."

Zuckerman, Solly. 1971. *Beyond the ivory tower*: The frontiers of public and private science. New York: Taplinger Publishing Company. p. 64.

Ape To Man?

- In a Science Digest article written by Lyall Watson, he states that:
 - "The fossils that decorate our family tree are so scarce that there are still more scientists than specimens. The remarkable fact is that all the physical evidence we have for human evolution can still be placed, with room to spare, inside a single coffin."
- David Pilbeam and Steven Gould (two evolutionists) report that:
 - "Unfortunately, the fossil record of pongids (*apes*) is nonexistent, making a glaring deficiency in the whole story."

Quote from Gould [Evolutionist]

"As we survey the history of life since the inception of multicellular complexity in Ediacaran times, one feature stands out as most puzzling—the lack of clear order and progress through time among marine invertebrate faunas."

[Gould, Stephen Jay, "The Ediacaran Experiment," Natural History, vol. 93 (February 1984), p. 22.]

Quote From Raup [Evolutionist]

"The record of evolution is still surprisingly jerky and, ironically, we have even fewer examples of evolutionary transition than we had in Darwin's time. By this I mean that some of the classic cases of darwinian change in the fossil record, such as the evolution of the horse in North America, have had to be discarded or modified as a result of more detailed information—what appeared to be a nice simple progression when relatively few data were available now appears to be much more complex..."

[Raup, David M. (evolutionist), "Conflicts Between Darwin and Paleontology," Bulletin, Field Museum of Natural History, vol. 50 (January 1979), p.25.]

Quote from Simpson [Evolutionist]

"...Every paleontologist knows that most new species, genera, and families, and that nearly all categories above the level of family <u>appear in the record suddenly</u> and are not led up to by known, gradual, completely continuous transitional sequences."

[George Gaylord Simpson (evolutionist), *The Major Features of Evolution*, New York, Columbia University Press, 1953 p. 360.]

Quote From West [Evolutionist]

"Contrary to what most scientists write, the fossil record does not support the Darwinian theory of evolution because it is this theory (there are several) which we use to interpret the fossil record. By doing so, we are guilty of circular reasoning if we then say the fossil record supports this theory."

[Ronald R. West (evolutionist), "Paleontology and Uniformitariansim." *Compass*, Vol. 45 (May 1968), p. 216.]

Evolution: The Fossils Still Say No!

"In the preceding chapters, we have cited example after example of failure to find transitional forms where evolutionary theory predicts such forms should have been found. ... The examples cited in this book are in no way exceptions, but serve to illustrate what is characteristic of the fossil record."

[Duane T. Gish (Creationist), *Evolution: The Fossils Still Say NO*!, page 333.]

The Fossil Record

- **Darwin** admitted in 1859:
 - "Why then is not every geological formation and every stratum full of such intermediate links? Geology assuredly does not reveal any such finely graduated organic chain."
- Paul Moody wrote in a standard textbook:
 - "So far as we can judge from the geologic record, large changes seem usually to have arisen suddenly. ... fossil forms, intermediate between large subdivisions of classification, such as orders and classes, are <u>seldom</u> [read never] found."

The Fossil Record

"I fully agree with your comments on the lack of direct illustration of evolutionary transitions in my book. If I knew of any, fossil or living, I would certainly have included them. . .I will lay it on the line, There is not one such fossil for which one might make a watertight argument."

-- Dr. Colin Patterson, senior paleontologist at the British Museum of Natural History

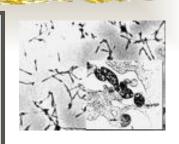
150 years after Darwin, and still no credible transition form!

Fully Formed

"It is considered likely that all the animal phyla became distinct before or during the <u>Cambrian</u>, for they all appear fully formed, without intermediates connecting one phylum to another."

Futuyma, Douglas J. 1986. Evolutionary biology. 2d ed. Sunderland, MA: Sinauer Associates, Inc. p. 325.

3. Life Did Not Originate From Non-Life by Random Chance



- Spontaneous generation (chemical evolution) has never been observed or shown to be possible
 - Redi in 1688, Spallanzani in 1780
 - Pasteur in 1860, Virchow in 1858
- Law of biogenesis has never been falsified
- Non-complex life form is impossible
 - Mycoplasma, simplest self-reproducing organism, has 482 genes with 580,000 'letters' (base pairs)
 - Requires parasitizing a more complex organism
 - Parasitism resulted from loss of genetic information

How Simple Can Life Be?

- Cell structure unknown by Darwin
- Smallest bacteria
 - 482 genes
 - 600 types of proteins
 - 600,000 DNA base pairs
 - Probability of chance formation is zero!
- Human genome
 - 3,000,000,000 base pairs

Relative Sizes and Detection Devices

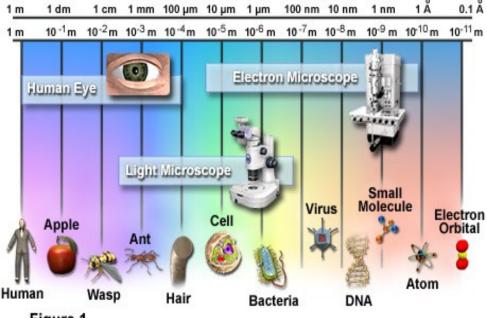


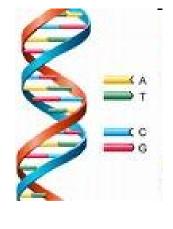
Figure 1

Presuppositions and Information

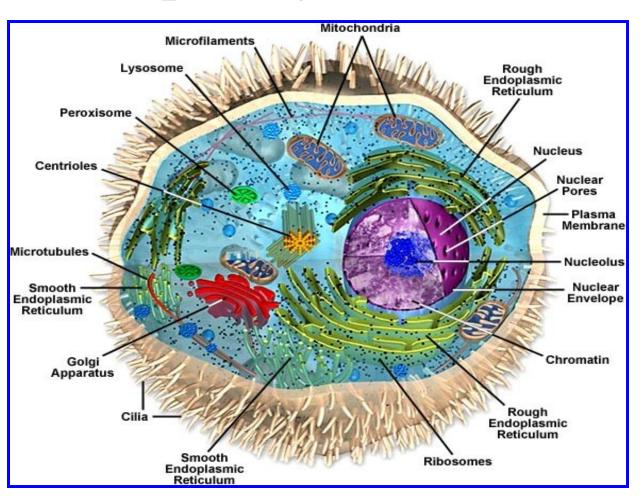
- Evolution presupposition
 - The universe consists of only two material fundamental entities <u>mass</u> and <u>energy</u>
- Creation presupposition
 - There is a third entity **information**
- Information is encoded within the DNA/RNA of all plant and animal cells
- Life = material + (nonmaterial) information
- Information has the following four components:
 - Code, meaning, action, purpose

Information in Biological Systems

- Code: 4 letters adenine (A),cytosine (C), guanine (G), thymine (T)
 - Words (codons) composed of 3 letters
- Meaning: each 3-letter word represents 1 of the 20 amino acids necessary for protein formation
 - Sequence of codons in the DNA represents sequence of amino acids in a protein
- Action: proteins needed for construction, function, maintenance, reproduction of the organism and its cellular components
- Purpose: reproduction of life



Complexity of the Cell



Probability

Chances of getting all heads in a row when flipping a coin?

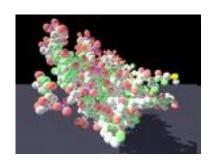


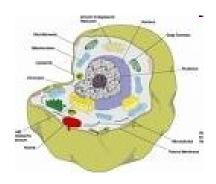
- 1 head
- 2 heads in a row
- 3 heads in a row
- 10 heads in a row
- 100 heads in a row
- 1000 heads in a row

- 1 in 2
- 1 in 4
- 1 in 8
- 1 in 2¹⁰ (1024) or 10³
- \blacksquare 1 in 2^{100} or 10^{30}
- \blacksquare 1 in 2^{1000} or 10^{300}

Probability & Life

- A single protein: 10²⁴⁰
 - 400 amino acids
- A single cell: 10^{40,000}
 - Spontaneous formation of life
 - Atoms in the universe: 10^{80}
 - Law of Probability: 10⁵⁰





Spontaneous Formation of Life?

"The likelihood of the spontaneous formation of life from inanimate matter is one to a number with 40,000 noughts after it. It is big enough to bury Darwin and the whole theory of evolution. There was no primeval soup, neither on this planet nor on any other, and if the beginnings of life were not random, they must therefore have been the product of purposeful intelligence."

Wickramasinghe, professor of applied mathematics and astronomy, UK

The Origin of Life

"Research on the origin of life seems to be unique in that the conclusion has already been authoritatively accepted What remains to be done is to find the scenarios which describe the detailed mechanisms and processes by which this happened. One must conclude that, contrary to the established and current wisdom, a scenario describing the genesis of life on earth by chance and natural causes which can be accepted on the basis of fact and not faith has not yet been written."

Yockey, H. P., A calculation of the probability of spontaneous biogenesis by information theory, Journal of Theoretical Biology 67:377-398, 1977.

A Self-Replicating Organism?

"Prebiotic soup is easy to obtain. We must next explain how a prebiotic soup of organic molecules, including amino acids and the organic constituents of nucleotides evolved into a self-replicating organism. While some suggestive evidence has been obtained, I must admit that attempts to reconstruct this evolutionary process are extremely tentative."

[Dr. Leslie Orgel (evolutionist biochemist at the Salk Institute, California), "Darwinism at the very beginning of life," *New Scientist*, 15 April 1982, p. 150]

Living Matter and Information

- "It's a shame that there are precious few hard facts when it comes to the origin of life. We have a rough idea when it began on Earth, and some interesting theories about where, but the how part has everybody stumped. Nobody knows how a mixture of lifeless chemicals spontaneously organized themselves into the first living cell."
 - Paul Davies, Australian astrobiologist [Evolutionist]
- "There is no known law of nature, no known process and no known sequence of events which can cause information to originate by itself in matter."
 - Werner Gitt, German information scientist [Creationist]

4. Evolution & 2nd Law of Thermodynamics

- The Second Law of Thermodynamics
 - Increasing entropy (unavailable energy)
 - Order -> disorder (systems left to themselves)
- Evolution requires
 - Disorder -> order
 - Simple -> complex
- What do we observe in nature?
 - Order -> disorder (deterioration)
 - Less available energy over time
 - Increased randomness over time





More on the 2nd Law and Entropy

- Classical thermodynamics/entropy
 - Energy can never be 100% converted to work
 - Entropy is the amount of unavailable energy
 - First discovered in study of energy & heat engines
- Statistical entropy
 - Energy to construct & maintain complex systems
 - All organized systems tend to become more random and disorderly
- Informational entropy
 - Applies to transmission and storage of information
- No known exceptions to 2nd Law

Quote by Isaac Asimov

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

[Isaac Asimov, Smithsonian Institute Journal, June 1970, p. 6]

Application of 2nd Law of Thermodynamics: Cosmic, Chemical & Biological Evolution



Open vs. Closed Systems

- Evolutionists argue
 - 2nd Law only applies to a closed system
 - Living systems are exceptions because they represent open systems
 - Solar energy is added to the earth
- But 2nd Law applies to the whole universe
 - Entropy is increasing
 - Things become less organized, less complex, more random in the universe
 - Raw solar energy increases entropy, e.g. heat

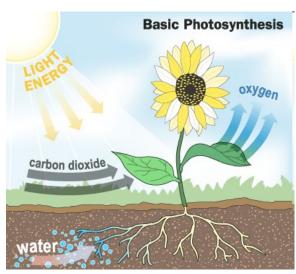
Quote by Dr. John Ross

"...there are no known violations of the second law of thermodynamics. Ordinarily the second law is stated for isolated systems, but the second law applies equally well to open systems ... there is somehow associated with the field of far-from equilibrium phenomena the notion that the second law of thermodynamics fails for such systems. It is important to make sure that this error does not perpetuate itself."

[Dr. John Ross, Harvard scientist (evolutionist), *Chemical and Engineering News*, vol. 58, July 7, 1980, p. 40]

Add "Open" + "Energy"

- Apparent increase in organized complexity in living matter requires 1) an <u>open system</u> and 2) an available <u>energy supply</u>. Also requires:
 - 3) A "<u>program</u>" (information) to direct growth in organized complexity
 - 4) A <u>mechanism</u> for storing and converting the incoming energy
- Examples:
 - Plant photosynthesis, sun's energy -> proteins
 - Seed -> plant
 - Animal metabolism,energy -> compose diet



Living Systems & 2nd Law

- Living systems have a "program"
 - Living organism's DNA contains the code (DNA, information) to direct process of building organism
 - Process continues throughout life of organism faster than natural processes (via 2nd Law) can break it down
- Living systems have "storage/conversion"
 - Built-in mechanism to convert and store incoming energy
 - Photosynthesis converts sun's energy into usable/storable forms, e. g. proteins
 - Animals use <u>metabolism</u> to convert and use stored, usable, energy from organisms in their diets

Order vs. Organized Complexity

Order from disorder occurs in non-living systems

"'Organized' systems are to be carefully distinguished from 'ordered' systems. Neither kind of system is 'random,' but whereas ordered systems are generated according to simple algorithms and therefore lack complexity, organized systems must be assembled element by element according to an external 'wiring diagram' with a high information content ... Organization, then, is functional complexity and carries information. It is non-random by design or by selection, rather than by the a priori necessity of crystallographic 'order.'"

[Jeffrey S. Wicken, *The Generation of Complexity in Evolution: A Thermodynamic and Information-Theoretical Discussion*, Journal of Theoretical Biology, Vol. 77 (April 1979), p. 349]

Order vs. Organized Complexity

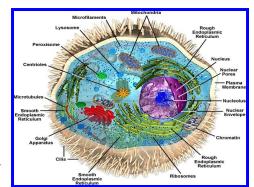
- Examples of <u>order in nature</u>:
 - Snowflake, crystal, stalactite, lightning, etc.
 - No intelligent "program" required
- Organized complexity
 - All living things, even single-celled organism **
 - Each functioning according to its instructions
- Spontaneous generation disproved
 - Redi (1688), Spallanzani (1780)
 - Pasteur (1860), Virchow (1858)
 - Life from non-life <u>NEVER</u> observed











Challenge Posed by the 2nd Law

"The thermodynamicist immediately clarifies the latter question by pointing out that the Second Law classically refers to isolated systems which exchange neither energy nor matter with the environment; biological systems are open, and exchange both energy and matter. The explanation, however, is not completely satisfying, because it still leaves open the problem of how or why the ordering process has arisen (an apparent lowering of the entropy), and a number of scientists have wrestled with this issue. Bertalanffy (1968) called the relation between irreversible thermodynamics and information theory one of the most fundamental unsolved problems in biology."

[C. J. Smith (evolutionist), Biosystems 1:259 (1975)]

5. Evolution is Only a Theory; It Has Not Been Proved

- Working general biological meaning of "evolution" to most evolutionists is:
 - "a continuous naturalistic, mechanistic process by which all living things have arisen from a single living source which itself arose by a similar process from a non-living, inanimate world."
- A theory implies:
 - Self-consistency
 - Agreement with observations
 - Usefulness

Evolutionism is Not Self-consistent

- By requiring multiple "definitions",
 depending on the need of the moment
- In the varied, and contradictory camps connected with thermodynamics, phylogeny, proposed mechanisms, and various sub-theories, etc.

Evolutionism Does Not Agree With Observations

- The fossil record
- Geology
- Genetics
- Molecular biology
- Thermodynamics
- Various dating methods radiometric and geological/geophysical
- Probability mathematics

Evolutionism Has Not Proved Useful

- No new advancements in scientific knowledge or technology, i.e. science does not require belief in Evolution
- No advancements in medicine (hindered in some cases because of false claims (now discarded) re: "vestigial" organs)
- No positive contribution to society through evolution-based social "sciences", e.g. justification for racism, nazism, communism, other societal/ideological ills

Evolution Cannot Be Proved!

- It operates too slowly to be measurable (if it is taking place)
- The scientific method cannot be used to measure it
- Small variations in organisms, observed today, are not relevant (can't be used to distinguish between Creation and Evolution)

Dr. Heribert-Nilsson, Director of the Botanical Institute at Lund University, Sweden, said "My attempt to demonstrate evolution by an experiment carried on for more than 40 years has completely failed. ... The idea of an evolution rests on pure belief." (*Synthetische Artbildung*, 1953).

British Evolutionist Colin Patterson noted: "No one has ever produced a species by mechanisms of natural selection. No one has ever gotten near it and most of the current argument in new-Darwinism is about this question."

Evolutionism Found Wanting

- Evolution has never been observed
- There are NO credible transitional fossils
- Life can/did not originate from non-life by chance
- Evolution violates the 2nd Law of Thermodynamics
- Evolution is only a (unproven) theory

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- 5. Dismantling Evolution, *Ralph Muncaster*, 2003.
- 6. Creation Scientists Answer Their Critics, *Duane Gish*, 1993.
- 7. The Scientific Case Against Evolution, *Henry Morris*, 2001.

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- http://www.trueorigin.org A website dedicated to the scientific support of Creationism and the scientific response to Neo-Darwinian macroevolution. It hosts hundreds of useful papers.
- 2. http://www.discovery.org/a/10661 An article by Jonathan Wells of the Discovery Institute on "Why Darwinism is False," May 18, 2009.
- 3. http://www.ncc-1776.org/tle2001/libe136-20010827-03.html - "The Scientific Case Against Evolution" by Robert Locke published in The Libertarian Enterprise, August 2001.



Thank you for your attention!

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