

Darwin: His Life, Work, and Legacy

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Introduction: What do *you* know about Darwin?
Fish wars: Accounts of Creation vs. accounting for creation

I. Species, Speciation, and the Evolution of Living Things

- A. Orders: The Tree of Life, “higher” and “lower” life forms
 - 1. Evolution of natural life forms: humans as part of nature
 - 2. The search for theory to *explain* the facts of evolution
- B. Evidence or origins: Fossils and contemporaries
 - 1. The nature of *scientific* theory
 - 2. Historical science and empirical science

II. Charles Darwin (1809-1882): The Theory of Natural Selection to Explain the Evolution of Species

- A. Darwin’s Life
 - 1. Family, influences, education, culture
 - 3. Colleagues and teachers
- B. Experiences: Voyages of the *HMS Beagle*
 - 1. Diversity of life in the New World
 - 2. Human “savages”

III. On the Origin of Species (1859)

- A. “The Devil’s chaplain” writes *Origin*
- B. Alfred Russel Wallace -- and the Rush to Publicize the Theory
- C. Key Concepts of Darwin’s Theory of Evolution by Natural Selection
 - 1. Species evolve: populations change over generations & speciate
 - 2. Genetic possessing adaptive features survive, procreate and pass inherited features to offspring. Maladapted species become extinct.
 - 5. Species variations create inherited differences.
 - 3. Populations compete for ever scarcer resources: environmental forces naturally select for adaptive inherited features.
 - 4. Individuals continually evolve away from original forms in new environments.

IV. The Paradox of Darwin

- A. Other works: *The Descent of Man, (1871); Expressions of Emotion in Man and Animals (1872)*
- B. A Man of His Time, but a Man of Disturbing Vision
 - 1. Religion “versus” Darwinism
 - 2. Empiricism & Naturalism

VI. References and Recommendations