



*A caricature of Darwin published in 1871, as a partial orangutan.*

## Darwin and Evolution

Darwinist or naturalist evolution—the development of more complex organisms by the accumulation of slight variations in simpler organisms.

Natural selection— adaptation to an environment by means of selectively reproducing changes in the genes (the way that these variations were accumulated over time)

Drawing on the ideas of Thomas Malthus, Darwin saw nature as a brutal war for survival, because plant and animal species typically spawn far too many young (eggs), that can't all survive.

Darwinism combines three factors: **ruthless elimination of weaker members**, **mutations in genes**, and **migrations to new environments**. Mutant genes that are more efficient (or better adapted to the new environment) will, because of the battle for survival, quickly overwhelm organisms with the less-efficient genes. In a quick burst now known as “punctuated equilibrium,” the newly-created species will quickly overwhelm the older species.

Two main supports for evolution would be the following: (1) **gradual development of human anatomy** (cranium, feet, pelvis) from quadruped to biped) across the last few million years; and (2) **growing complexity of life forms**, across a 3.5 billion year span: from single-celled bacteria, to multicelled organisms, to reptiles, mammals, primates, and hominids with opposable digits.

Two main arguments against Darwinist evolution were (and continue to be) argued. One, that **nobody has seen (in the wild or in the laboratory) an evolution from one to the next of these basic categories**: from non-living matter to life; from non-conscious life to conscious life; and from merely conscious life to rational life. Two, the argument of **irreducible complexity** of some organs, such as the eye, the immune system, the ear, etc. An example of irreducible complexity would be a mousetrap, which has many parts that have to work together, in order for it to function. In the same manner, these complex organs and systems require not just one mutated gene, but numerous parts that work together that could not be produced by a single mutation.