Charles Darwin

1809-1882
British naturalist
proposed the idea of evolution by natural selection

Voyage of the HMS Beagle

travel around the world
1831-1836
made observations about the natural world
main mission was to chart South American coastline

Unique Species of Galapagos

Galapagos birds
22 of the 29 species of birds on the Galapagos are endemic (found only on those islands)
Darwin studied the finches and their different breaks

The Theory of Natural Selection

variation exists in natural populations

many more offspring are born each season than can possibly survive to maturity

as a result, there is a struggle for existence

characteristics beneficial in the struggle for existence will tent to become more common in the population, changing the characteristics of a species

over time, and given a steady input of new variation into a population, these processes lead to the emergence of new species

Mutations and Adaptations

genetic variation and mutation play roles in natural selection
a diverse gene pool is important for the survival of a species in a changing environment
an adaptation is a genetic variation that is favored by selection and is manifested as a trait that provides advantage to organisms

Forms of Natural Selection

predation selection	camouflage, speed, behaviors and habits, defenses (physical and chemical)
physiological selection	fitness, physiology efficiency, disease resistance, protection from injury, biochemical versatility
sexual selection	attractiveness to potential mate, fertility of gametes, differential reproductive success

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