

Darwin's Theory of Evolution

In 1859 Charles Darwin released his book *The Origin Of Species By Means Of Natural Selection*. Darwin demonstrated the scientific basis of evolution with a idea which he called 'natural selection'. By observing different species, Darwin saw that there is variation in every population and that within these there was competition for limited resources such as food, water and shelter from predators. The ones that survive pass on their favorable heritable traits to their offspring, and because more offspring are produced than can survive, this process of 'natural selection' continues. Darwin visited the Galapagos Islands during his journey on the HMS beagle. It was there he saw the variations in different species that led him to develop the idea of natural selection. The species on the islands resembled those on the South American mainland, but they were also different in many subtle ways. When he was back in England, Darwin began to develop the idea that the species from the mainland had reached the Galapagos, and then changed, adapting to their new environment. Until this point it was universally accepted that species did not change yet, Darwin's theory challenged that.

The Common Ancestor Theory

The common ancestor theory mean that species share common ancestors. For example humans and apes share a common ancestor that lived millions of years ago. This common ancestor diverged over time to form different species of hominid, only one of which survived to become modern humans. All the rest of the hominids, including early humans, became extinct.

Extinction

Extinction it was discovery in the late 1800s. It is the process of a whole species dying out, it is a pennant process can cannot be undone. Extinction occurs for many reasons:

- Over hunting is not giving animals enough time to breed and raise there young before being killed
- The birth rates being less than death rate which can eventually lead to extinction e.g. the panda.
- Climate change-It is happen to fast for the species to adapt too.
- Deforestation is destroyed habitats making resource are low so the native species are dying out.
- Islandisation is splitting up habitat with harms and roads, trapping animals and the gene pools are to small for them to breed.
- Pesticide used in farming are contaminating food and water sourer which a poisoning animals