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Population

A population is a community or a group of animals, plants or any living organism that can reproduce with each other and have fertile, viable offsprings.

Charles Darwin

- Charles Darwin also called "Father of Evolution" was an English Naturalist and Biologist.
- Five years expedition in a ship called HMS Beagle to Galapagos Island helped him write his theory of evolution.
- In 1859 he published a book called Origin of Species, in which he put his theory of evolution in detail.

Evolution and Fossils

Evolution

Evolution is a tangible change in the heritable characteristics of a population over several generations.

These changes can give rise to a new species or the species might change themselves to become better adapted to the surrounding environment.

Origin of species

- After a successful expedition on HMS Beagle, Charles Darwin wrote a book on what he observed at the Galapagos Islands.
- In the book named 'The Origin of Species', he wrote a detailed theory of evolution which was

mostly based on Natural Selection. **Origin of life - Haldane's theory**

- JBS Haldane was a British Scientist who theorized that life originated from organic and lifeless matter.
- His theory was proved to be correct by Urey and Miller's experiment.
- It was called the theory of abiogenesis.

Evolutionary evidence- fossils

- There are plenty of pieces of evidence to support the theory of evolution.
- Fossils happen to be the biggest of them.
- Fossils are the preserved remains of ancient animals or plants that died millions of years ago.
- The fossils help us understand the anatomy and even physiology of these organisms and understand how evolution worked and led to the formation of organisms that we see today.

Formation of Fossils

Fossils are important pieces of evolutionary evidence and are formed by following steps:

- Organisms die and they get buried in mud and silt.
- The soft tissues of the body get quickly leaving behind the hard bones or shells
- Over time sediments build over it and harden into rock

As the bones decay, mineral seep in to replace the contents cell by cell, process called as petrification

- If bones decay completely, it leaves behind the cast of the animal.