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Variation

Genetic variations

The differences in the DNA sequences among every organism leading to the diverse gene pool are called genetic variations.

These differences lead to different/varied physical characters or biochemical pathways.

Natural selection

It is the phenomenon by which a favourable trait in a population of a species is selected.

- Changing natural conditions exert equal pressure on all the existing species. The
- species/organisms which are better adapted to the changing conditions survive and reproduce i.e. selected by nature and species/organisms which cannot adapt perish i.e. rejected by nature.

Speciation

Genetic drift

Natural selection can play an important role in deciding the traits that survive in a population. However, random fluctuations in gene variants are seen on many occasions. This phenomenon is known as genetic drift.

Thus, genetic drift is a change in the frequency of an existing allele in a small population.

Genetic drift may cause a gene variant to disappear from the population and thus reduce genetic variation.

Speciation

It is the process of formation of a new species from existing ones due to several evolutionary forces like genetic drift, isolation of populations, natural selection etc.

Speciation leads to diversity in the ecosystem and the diversity and diversity lead to evolution.

Gene flow

Gene flow is the transfer of genes from one population to the next.

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.
- In 1859 he published a book called Origin of Species, in which he put his theory of evolution in detail.