

## **DARWIN'S THEORY**

**Darwin-Wallace Theory of Natural Selection:** This theory was based on the following concept;

[1] **The universal occurrence of variation:** In all the living things variations are found even the siblings do not bear much similarity.

[2] **An excessive natural rate of multiplication: Every species:** In the absence of environmental checks, tends to increase in a geometrical manner. With any check, a population multiplies at exponential rate. Such a great reproductive potential of different species may be easily observed in nature. It has been estimated that a common Atlantic coast oyster may shed as many as 80 million eggs in one season. A salmon produces 28,000 eggs in a season Darwin calculated that even a pair of elephants which are known to lowest reproductive rate could, in the absence of any checks, have million descendants at the end of 800 years.

Thus, more organisms of each kind are born than can possibly obtain food and survive. since, the number of each species remains fairly constant under natural conditions, it must be assumed that most of the offsprings of any species reminded alive and reproduced they would soon crowd all other species from the earth.

[3] **Struggle for existence:** Since more individuals are born than can survive there is an intraspecific and interspecific competition for food, mates and space along with environmental struggle for survival.

[4] **survival of the fittest :** Some of the variations exhibited by living things make it easier for them to survive; others are handicapped which brings about the elimination of their procedures. This idea of "the survival of the fittest" is the core of the theory of natural selection.

[5] **The inheritance of the variations:** The survived individuals from the struggle of existence only could get the chance to reproduce and transmit or inherit that advantageous variation in their descendents. The less fit will tend to be eliminated before they have reproduced.

Successive generations tend to become better adapted to their environment; as the environment changes, further adaptation occur. The kind of selection of it individuals and allow them to reproduce is called 'natural selection'; The operation of natural selection over many generations may produce descendents which are quite different from their ancestors, different enough to be separate species.