

Causes of heritable variations :

- (i) Inherent tendency of the organism to vary.
- (ii) Variation occurs due to modification in germinal constitution.

(iii) Amphimixis is the main cause of variation.

(iv) The congenital variation is due to the influence of the ever changing environment of germ cell producing individuals.

(v) Parthenogenesis is also cause of variation.

Role of hereditary variations in evolution.

Beneficial heritable variations occurring in parents pass on to the offsprings by heredity. These help the offsprings to adapt in everchanging environment. These variations increase in their extent in successive generations. In due course these become so prominent that their possessors differ in many characters from their ancestors. Variations prevent them from interbreeding due to changes of various nature. This gradually leads to the formation of a new kind of individual. Thus variation is a progressive factor in the absence of which one cannot imagine evolution.