Small populations - Genetic drift

'*Genetic drift* (drift) is such a change in the allele and genotype frequencies of a population that is caused by incomplete transmission of the allele pool from one generation to the next.

🔎 *For more information see Genetic Drift.*

- It is mainly applied in **small populations** and for alleles that occur in the population at a very low frequency; in the course of generations, it is manifested by fluctuations (fluctuations) of allele frequencies, "fixation" or "elimination" of some alleles and overall genetic homogenization of the population.
- The shift in gene frequencies is caused by a small number of crossings – i.e. an insufficient number of offspring; under this situation, however, the H-W equilibrium is not **established*, but the genetic structure of the population is** shifted* away from this equilibrium.
- Fluctuations in allele frequencies due to drift (in the absence of selection, mutation and migration) are random and have an unpredictable effect.
- Gene drift can act permanently if the population remains relatively small and the error of random selection of individuals for interbreeding is then applied significantly in each generation or is applied temporarily in populations whose numbers are periodically reduced (e.g. in hibernating insects).
- Evolutionary significance of gene drift: gene drift causes substantial changes in the genetic structure of the population (in the direction of homozygosity) and contributes to the emergence of genetic diversities (diversity) between populations.

Links

- ws:Malé populace – Genetický drift

Related Articles

- Genetic Drift
- Hardy-Weinberg equilibrium