Forces of evolution
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A species is the basic unit of the biological nomenclature meaning a group of organisms that are in a position to inter breed and produce a viable offspring. A species forms part of a population and determines whether the generation of the species will be productive or not. This is because the species carries the genetics necessary for procreation. The evolutionary definition of the term species is the lineage of organism that shares similar genes and can pass the gene s to its offspring. The species need to maintain the unique integrity of its genes over time and the changes in space. This is not the case as there are times when he species break away from the original group and form a subspecies du e to the changes in geographical and ecological features that may lead to variation in the genetic composition and so me characteristics that distinguish the original species for the new one (Ehrlich & Holm, 1974). A population is a gr oup of organisms from the same species or those with similar characteristics who are in a position to interbreed. The species or group of organism share the same geographical area ad share common characteristics that distinguish the m from other species in the same area. The population does not necessarily have organism that are exclusively of the same species, but the organism are capable of interbreeding though they may not produce viable offspring.

The process of evolution has been continuous and the changes in the inherited characteristics of different organisms over generation are what define evolution. The process of evolution has brought about the variation and the diversity in the world as each organism develops to suit its environment. The process of evolution occurred because of four d riving forces that are the mutation, natural selection, genetic flow, and genetic drift. Heredity is the process where th e heritable genes or traits change with passing generations. The genes change over time to adapt to the environmenta l changes that in a way change the genetic variations of an individual and the genes are then passed on to the next ge neration (Curry & Chang, 2006). Over time the organism or the species adapts to the changes in the environment by modifying its genetic composition and pass no the traits to its offerings. The process of mutation occurs due to the c hanges in the genetic composition of the organism as it adapts to the change in the environment. The change in the DNA composition can have a positive, a negative or no change at all in the functioning of the organism. Natural sele ction is the process of enhancing the reproduction through genetic mutation that seeks to enhance the characteristics of organisms in the successive generations. It is based on three facts namely the heritable variation among populatio n, production among organisms is not directly proportional to those that survive and the offspring adapt to their own unique ways of surviving. Gene flow is another force and it is the process where species in a population exchange ge nes leading to variation in the genetic composition that occurs due to movement of species form, one population to t he other.

The genetic drift is the change in the alleles of a species leading to a variation or a drift in the species. The species a dapts new alleles and change its way of life from the parent alleles (Strickberger, 2000).This results in changes in th e population and gives rise to new species or some species are wiped out is the alleles disappears. Variation is the na tural differentiation of the genetic composition of individuals of the same species that enables it to live flexibly and s urvive in the changing environmental conditions that may be harsh. This occurs due to different forces like the matin g preference, migration, random forces like the feeding habits and the distribution of organisms in a population. Isol ating Mechanisms are the reproductive characteristics preventing organisms form the same species from fusing to pr oduce viable offspring. This may include things like temporal isolation, ecological, behavioral, mechanistic, gamete incompatibility and zygotic mortality. Speciation is the biological process where new organisms arise.

References

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