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THEORY OF NATURAL AND SEXUAL SELECTION

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KALIT SO'ZLAR:

Natural selection, sexual selection, evolution, hereditary traits, survival, reproduction, Charles Darwin, adaptability, population, reproductive success

ANNOTATSIYA:

The theory of natural and sexual selection is one of the main mechanisms of the evolutionary process, which explains the adaptation of living organisms to the environment and the way in which living organisms adapt to the environment and change over generations. Natural selection ensures that the traits most adapted to environmental conditions are preserved in the survival and reproduction of organisms. Sexual selection plays an important role in the process of mate selection, leading to the development of traits with external, behavioral, and reproductive advantages. These theories were founded by Charles Darwin. They are important in understanding evolutionary processes in biology

The theories of natural selection and sexual selection are one of the main mechanisms of evolution and play an important role in shaping the vital characteristics and sexual behavior of organisms. Each of these two processes adapts populations in its own way, but the differences and interactions between them raise many questions about the complex nature of

evolution. The theory of natural selection was proposed by Charles Darwin and is described as the process by which organisms adapt to their environment to improve their chances of survival. Natural selection is often expressed as “survival of the fittest,” but the process is driven by many factors, including competition for resources, predators, disease, and climate. Natural selection is the process by which beneficial traits are passed down from generation to generation in a population of organisms and harmful traits are reduced. Natural selection works through phenotypes, meaning that the phenotype of organisms that survive and reproduce (the beneficial phenotype) becomes more widespread, crowding out the phenotypes of other organisms in the population. If these phenotypes have a genetic basis, the frequency of the corresponding genotype increases in subsequent generations. Over time, this process can lead to organisms adapting to specific ecological niches and eventually giving rise to new species. Adaptation plays an important role in the process of natural selection. For example, changes in camouflage coloration, changes in feeding habits, or adaptation to other environmental factors are important for an organism's survival and future reproduction. Sexual selection mainly selects for traits that ensure success in the reproductive process. Darwin described this process as "selection between males and females." Sexual selection plays a key role in creating sexual differences and in the transmission of certain traits to offspring. Behavioral selection: In this form, females base their selection on certain behaviors of males. For example, female birds may select males for their fighting skills or their dances. This behavioral selection helps to show off the physical or intellectual potential of males. Physical selection: Sexual selection can be expressed in physical characteristics of males, such as dark plumage or long horns. This can often indicate the genetic potential or strength of the male, who is selected by females. Sexual selection, unlike natural selection, is often aimed at increasing the chances of reproduction rather than survival. Therefore, sexual selection can often lead to unstable or "regressive" traits, such as the colors and body structures seen in various animals, whose stability is shaped by sexual selection, but these traits are not primarily conducive to adaptation to the environment. Although natural and sexual selection are similar, they pursue different goals, and the relationship between them is extremely complex. While natural selection aims to ensure that organisms adapt to their environment, sexual selection aims to achieve reproductive success. In some cases, these processes may be contradictory. For example, traits that increase competition among males (such as large horns or fighting ability) may not be favored by natural selection, but these traits may be selected by females

during sexual selection. The concept of "evolution" is the basis for the theory of natural selection. Charles Darwin, the founder of the theory of evolution, was born on February 12, 1809, in Shrewsbury, England, into a family of doctors. After graduating from school, he entered the Edinburgh Medical School

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