

Vocabulary: Microevolution

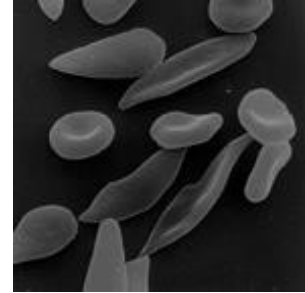


Vocabulary

- Allele – one of two or more forms that a gene could take.
- Cystic fibrosis – an inherited condition characterized by the production of abnormally thick mucus.
 - The thick mucus tends to clog the lungs and the ducts of the pancreas. This impairs breathing and often leads to infections.
 - Cystic fibrosis is caused by a *recessive allele*. Only individuals possessing two copies of the allele will have cystic fibrosis.
- Deleterious – harmful.
 - A deleterious allele may significantly reduce an individual's chance of survival.
- Dominant allele – an allele that is always expressed when it is present.
 - Dominant alleles are usually represented by capital letters, such as *D*.
- Fitness – describes how well an organism can survive and reproduce in an environment.
- Genotype – the genetic makeup of an organism.
 - The alleles possessed by an organism are represented by symbols. For example, a parrot with dark green feathers might have the genotype *DD*.
- Heterozygote superiority – a pattern of natural selection in which the *heterozygous* variety has a greater fitness than either of the *homozygous* varieties.
- Heterozygous – having two alleles that are different.
 - A *Dd* parrot is heterozygous.
- Homozygous – having two alleles that are the same.
 - A *DD* or a *dd* parrot is homozygous.
- Incompletely dominant – a pattern of inheritance in which the recessive allele is not completely masked by the dominant allele.
 - If the alleles are incompletely dominant, a heterozygote will have a phenotype that is intermediate between the phenotypes of the homozygotes.
- Malaria – a disease caused by a protist belonging to the *Plasmodium* genus.
 - Malaria is spread by mosquitoes and is common in tropical regions throughout the world.
 - Malaria causes fever, joint pain, violent shivering, vomiting, and convulsions. Malaria can be deadly if not treated.



- Predator – an animal that kills and eats other animals.
 - Examples of predators include hawks, owls, lions, wolves, snakes, and sharks.
- Recessive allele – an allele that is not expressed when the dominant allele is present.
 - Recessive alleles are usually represented by lowercase letters, such as *d*.
- Sickle cell anemia – a disorder characterized by abnormal red blood cells.
 - Sickle cell anemia causes the production of abnormal red blood cells that tend to stretch into a characteristic crescent shape when deoxygenated. These cells often become lodged in capillaries, blocking blood flow and reducing the supply of oxygen to body cells.
 - Sickle cell anemia is caused by a recessive allele. Only individuals with two copies of the allele will have sickle cell anemia.
 - Individuals with one copy of the sickle-cell allele do not experience sickle cell anemia but do have a resistance to malaria, a common tropical disease.



Sickled cells and oxygenated cells