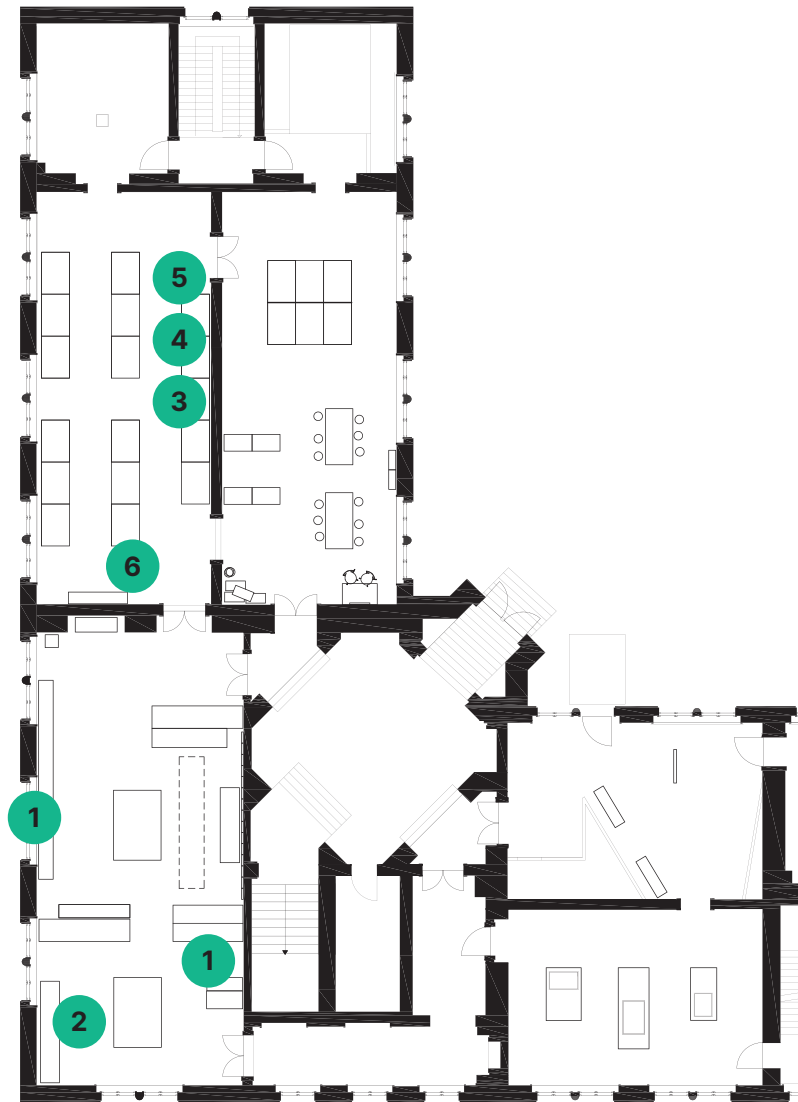


Discover the exhibition

Wild Wonderful World

# Wonders of Evolution

Evolution is a constant, natural selection, where the traits of the individuals with the greatest reproductive success will dominate. This means that the best adapted will pass their genes on. Species evolve when small individual variations reinforce or disappear over time. Evolution has given the earth a wonderful and diverse nature, full of surprising forms and functions, that you can experience in the exhibition.



Exhibition floor plan

DENMARK  
NATURAL HISTORY  
MUSEUM

UNIVERSITY OF  
COPENHAGEN

### 1 **Narwhals, seal skulls and tooth whorl**

Teeth are a clear indication of how an animal's anatomy has been specialized to eat or hunt over time. The molars of the sea lion are shaped to sift tiny crustaceans from the water. The prehistoric whorl tooth shark had a rolled-up jaw, that we haven't seen in any modern animal. The narwhal has one long tusk, which purpose we are still not completely certain about.

### 2 **Peacock**

The peacock originates from India and is related to pheasants. There is a significant difference between the males and females. The females have brown plumage and have no tails, whereas the males' feathers are bright blue and green, and they have a tail that can unfold into an enormous fan. The feathered tail has no practical function for the survival of the male, almost quite the opposite. Scientists believe that the feathered tail on the males has evolved to attract females by showing them, that the male is healthy and has good genes, which the female should want to give on to her offspring.

### 3 **Horseshoe crabs**

The horseshoe crab is related to spiders and scorpions and lives in the ocean. It is one of the oldest currently living animals in the world. 440-million-year-old fossils that look like horseshoe crabs have been discovered. There are four different species of horseshoe crabs today, which are all threatened by extinction, because they are used as bait in the fishing industry, their natural habitats are being destroyed, and their special blue blood is used in the medicinal industry to show, whether bacteria has contaminated vaccines.

### 4 **Gifted barnacles from Darwin**

The theory of evolution was described by English natural scientist, Charles Darwin, in his book 'Origin of Species' from 1859. Darwin had traveled in great parts of the world, where he had observed differences between animal species in different environments. Since then, he did detailed research in barnacles – a kind of crustacean. Darwin borrowed some barnacles from Danish natural scientists, and as a thank you he gifted them an entire collection of barnacles which are now a part of the museum collections.

### 5 **Wolf and thylacine**

The Tasmanian thylacine is not a wolf, but a marsupial related to kangaroos. It became extinct in the beginning of the 20th century but was up until then the largest indigenous predator in Australia. The similarity between the thylacine and the wolves living in the rest of the world is because they play the same role in the ecosystem – meaning similarities in behavior and prey. This is called convergent evolution. Convergent evolution is when animals, who are not closely related species, develop similar traits due to similar ways of life. Both the thylacine and wolf hunt large and fast mammals.

### 6 **Tardigrades**

The tiny tardigrades have existed on the planet for more than hundreds of millions of years. There are thousands of species of tardigrades, and they have evolved to survive everywhere. There are tardigrades living in the ice sheet in the Arctic, in dried up salt lakes, in the deep sea and in the highest mountains – but also in moss and lichen in your backyard. They survive extreme temperatures, drying out, radioactive radiation and lack of oxygen. Tardigrades can go into hibernation and wake up again after more than 100 years. Some species of tardigrades have even survived space travel as a part of a scientific study.