

GENETIC BOTTLENECK

I A Threat to Cheetah Survival I



A genetic bottleneck occurs when a population is greatly reduced in size. The bottleneck limits the genetic diversity of the species because only a small part of the original population survives. With a greatly reduced gene pool, the remaining members of the species may have trouble adapting to new environmental conditions, such as climate change. A genetic bottleneck can be caused by a number of factors, including natural disasters, overhunting, or habitat destruction.

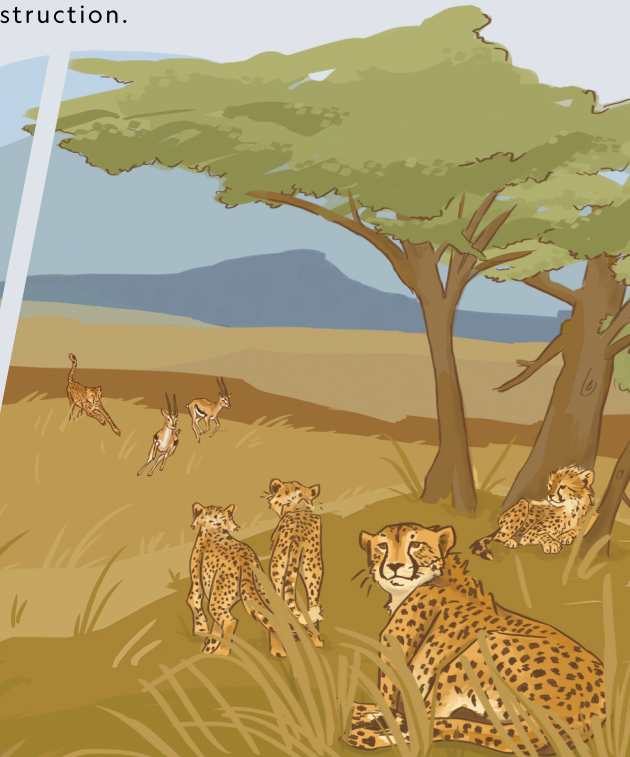
Scientists believe cheetahs have already survived at least two genetic bottleneck events.



The first event occurred about **100,000 years ago** when cheetahs left America to spread out across multiple continents. This left only small pockets of cheetah populations, which were too far apart from each other to interbreed.



The second event was about **11,000 years ago, at the end of the last ice age**, when many of Earth's large mammals became extinct. At that time, the cheetah populations in both North America and Europe died out, and scientists believe **as few as seven cheetahs survived in Africa**.



Cheetahs eventually made a remarkable comeback. The cheetah population grew to over 100,000 cheetahs by the nineteenth century. But stress from both human presence and faulty genes have caused their population to dwindle to **fewer than 8,000 today**. With decreasing numbers, cheetahs could be heading toward another genetic bottleneck.

100,000
years ago

11,000
years ago

Today?