

### North America's Story

The modern age began with a disaster. Many dinosaurs were already extinct 65 million years ago, when a giant object from space hit Earth in the ocean near Yucatan, Mexico. It must have been at least 10 kilometers in diameter! Dust and steam rose into the atmosphere. The shock waves flattened trees in North America. Hot ash burned many of the rest. Air pollution darkened the sky, and the Earth cooled. Cold-blooded animals froze, and many plants died without sunlight. Tiny mammals cringed in burrows, surviving on bits of plants and the remains of other organisms.

Eventually, the sky cleared. Continental movements lifted North America; inland seas dried. About 60 million years ago, the land became green with ferns and flowering plants. The land was steamy, like the rain forests of Brazil. The eastern and western ends of North America joined together. The mammals that survived the great meteor thrived. They changed and adapted, scurrying to take over the lands that the dinosaurs once ruled.

Time passed. 50 million years ago the continents began slowly cooling. Deciduous trees, such as oaks, walnuts, laurels, and legumes like peas and beans, grew across North America. Many of the animals there looked like ancestors of horses; others looked more like small rats, cats or dogs. At this time, India's plate crashed into Asia, wrinkling into the highest mountains in the world, the Himalayas.

By 40 million years ago, North America was a cool, seasonal land. The *Eohippus*, a tiny horse ancestor, thrived in the forests where it could hide. Deciduous trees flourished, providing a special environment that changed over the seasons.

The continents continued to grow more cool and dry. By 20 million years ago North America's summers were hot and dry. Grasses evolved. They had the special ability to become dormant during the hot summer. When lightning caused the fires, grasses could grow back faster than larger plants. But the treeless plains were a dangerous place for horses like *Mesohippus*. They adapted by evolving faster and taller, with hard hooves just right for running away from their enemies.

If you could travel to North America 15 million years ago, you might think you had landed in modern Africa. You would see tall grasses, grazing mastodons, buffalo, black and white rhinos, and predators like saber toothed tigers and lions. The main herbivores were camels (*Poebrodon*), horses, and *oreodonts* (sheep-sized herbivores). Some mammals grew to enormous sizes.

But the Ice Age challenged most of these animals to survive. Most large North American mammals became extinct between 5-6 million years ago. The Arctic Ice Caps grew and the Colorado Plateau was uplifted to form the Rocky Mountains. The first Ice Age in North America began 2-4 million years ago, and the last one ended 11,000 years ago. When North and South America were joined near Panama, North American animals traveled south to compete and eliminate most animals there, except sloths. The only southern migrant that did well here was the opossum.

Evidence of humans in North America begins at approximately 19,000 years ago. Some scientists think they crossed the Bering Sea from Asia, walking all the way to South America. Others think that some humans crossed the Pacific in boats. They found a land with wide prairies and high mountains. The horses were gone. We see evidence of their towns all over the Americas, where they hunted game with dogs. Horses did not return to the prairies where they evolved until 1492.