Scientific evidence has shown that dinosaurs once roamed the Earth. A more surprising fact is that dinosaurs once roamed the area now known as Antarctica. Because of the sub-zero temperatures recorded today, it is puzzling to imagine how dinosaurs could have survived in the bitter cold of Antarctica.

Today, Antarctica is a harsh, frozen terrain. At over five million square miles, Antarctica is the fifth-largest continent on Earth. It is roughly twice as big as Australia. Almost its entire surface is covered in a mile-deep layer of ice. Its land mass also contains mountains and active volcanoes. The wind, ice, and snow make Antarctica an extremely cold, challenging environment for the continent’s few inhabitants, who are there conducting scientific experiments.

Antarctica was not always this way. Around 600 million years ago, Antarctica was part of the supercontinent Gondwana. Gondwana, the southern part of the even bigger supercontinent Pangaea, included Antarctica, South America, Africa, India, Arabia, and Australia. Gondwana started to break apart around 80 million years ago, during the early Jurassic period.

During the time that Gondwana was breaking apart, Antarctica’s climate was very different from that of today. Plants and animals flourished in a much warmer climate.

While finding dinosaur fossils in Antarctica may be likely, the fossil record in this area is somewhat sparse. The region is difficult to explore, and fossils are often embedded in thick ice. This has not stopped paleontologists from learning more about ancient creatures that lived in Antarctica. As modern scientists brave the icy Antarctic climate, they are discovering fascinating new dinosaurs and other fossilized organisms that offer clues about life millions of years ago.
Jurassic Period
The Jurassic period began around 200 million years ago and lasted through 145 million years ago. The Jurassic period is known as a time when dinosaurs ruled both land and sea. Paleontologists are discovering that this was true in Antarctica, where evidence of new dinosaur species has been discovered.

In late 2003, scientists found a fossilized plant-eater in the mountains of Antarctica. The dinosaur was found at an elevation of 13,000 feet. The dinosaur was classified as a sauropod, a dinosaur with a long neck, thick legs, and a relatively small head.

This particular sauropod measured about 7 feet tall and 30 feet long, making it the largest dinosaur discovered so far in Antarctica. However, compared to later sauropods (such as the massive Diplodocus, which reached up to 100 feet long), this new dinosaur is relatively small.

Another dinosaur whose fossilized remains have been found in Antarctica is the Cryolophosaurus. The name Cryolophosaurus means “frozen crested reptile.” This 22-foot-tall, meat-eating beast was first discovered in 1990, high in the mountains of Antarctica. A fearsome carnivore, Cryolophosaurus has been given the nickname “Elvisaurus.” The name refers to the crest on its head that resembles the hairdo of Elvis Presley in the 1950s.

Cretaceous Period
The Cretaceous period lasted from the end of the Jurassic period until 65 million years ago. During the Cretaceous period, the Antarctic climate was still much warmer than today. It was also wetter and covered with trees. The climate of the Cretaceous period was similar to that of today’s Pacific Northwest region of the United States.
Evidence of Dinosaurs in Prehistoric Antarctica

Compared to the Jurassic period, paleontologists have found a greater diversity of species during the Cretaceous period. One of the more interesting dinosaurs is the hadrosaur, which means “bulky lizard.” Hadrosaurs were duck-billed dinosaurs with distinctive crests on top of their heads. Scientists think the crests may have been used for making sounds, as a way of communicating with other dinosaurs. This raises the intriguing possibility that these dinosaurs formed social groups because of their ability to communicate.

In 1998, paleontologists discovered a hadrosaur on Vega Island, located just off the coast of Antarctica. This was the first hadrosaur found outside the Americas. Hadrosaurs were large herbivores, standing up to 20 feet tall. Scientists believe the presence of such a large herbivore indicates that the climate in Antarctica during the Cretaceous period produced sufficient vegetation to support such a massive creature.

In 2011, Argentinian paleontologists unearthed fossilized remains of a massive sauropod called a titanosaur. The evidence for the creature’s presence in Antarctica was small—just a 7.5-inch piece of vertebrae that scientists think came from the middle portion of the dinosaur’s tail. From this tiny bit of evidence, paleontologists deduced that the fossil had to be a titanosaur. Although scientists are still examining this fossil, other titanosaurs are known to have reached 80–100 tons in weight and up to 100 feet in length, making them the largest animals ever to roam the Earth.

After the Cretaceous Period
After the Cretaceous period, Antarctica’s climate slowly cooled. In the Paleocene era, the climate was cool and rainy. By the Eocene era (40 million years ago), the first ice caps formed as Antarctica settled into its current position at the South Pole. By the Miocene era (25 million years ago), the continent was covered by a sheet of ice.
Dinosaurs worldwide became extinct at the end of the Cretaceous period. No dinosaur fossils dated after the Cretaceous period will ever be found, even in Antarctica. However, knowledge of dinosaurs and the prehistoric climate they lived in will continue to expand as new dinosaur species are discovered in the now-frozen Antarctic landscape.