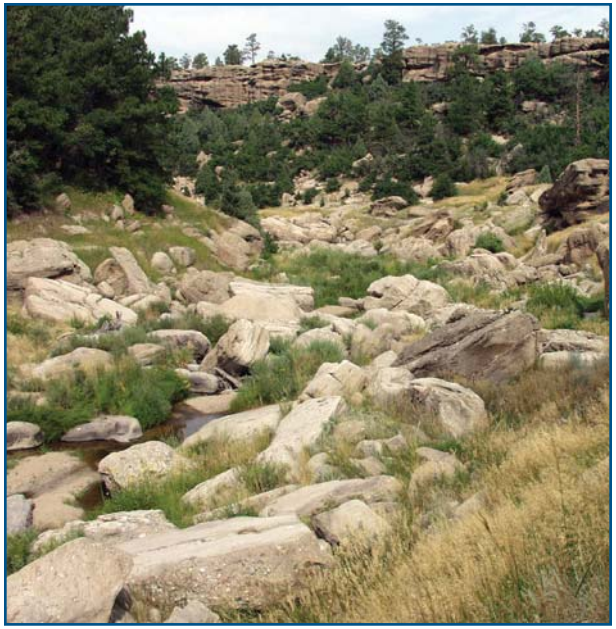
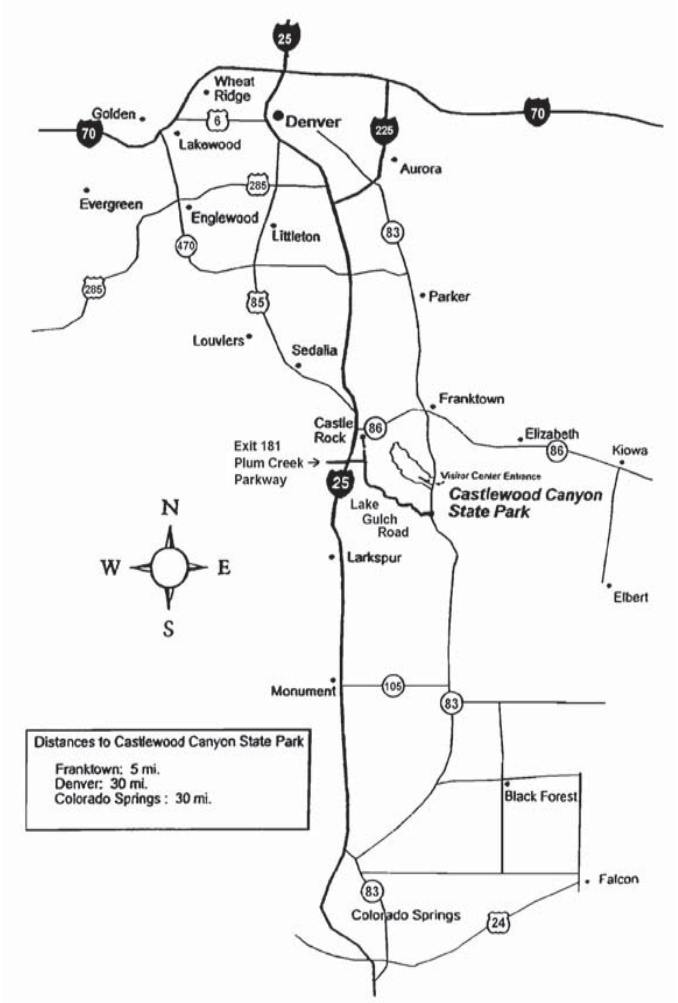


The Journey of the Rocks

Notice the large boulders in Cherry Creek as you walk the Inner Canyon Trail. Where did they come from? They began eons ago as molten rock deep under the surface of the earth and were raised with the Rocky Mountains. Erosion wore them down to grains of sand and washed them downstream to the area of the park, where they became part of the caprock. Some millions of years ago, they were broken off from the caprock by the forces of nature and fell to the canyon bottom. This is not the end of their journey. Erosion continues to work on them, and over the millennia, will wear them down to grains of sand and wash them further downstream–ultimately to the Gulf of Mexico.

To Get There



Colorado State Parks

Castlewood Canyon State Park
2989 S. State Highway 83
Franktown, CO 80116
303-688-5242
Email: castlewood.canyon@state.co.us
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CSP-CAST-200-4/07

Castlewood Canyon State Park

Geology

Colorado State Parks

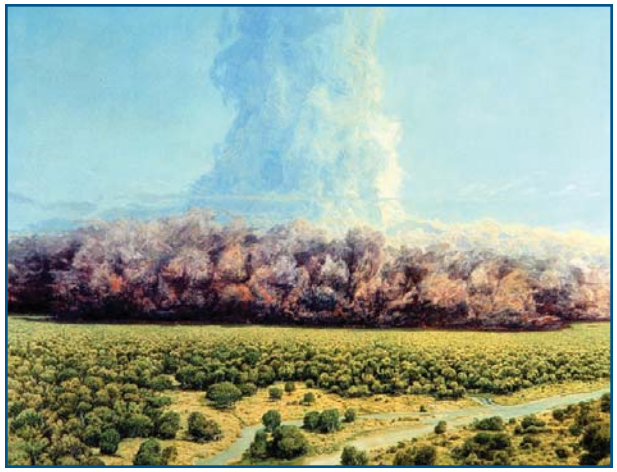
Building a Rock Layer Cake

Millions of years ago, a tropical rainforest covered what is now Castlewood Canyon State Park. How do we know? Because plant and animal fossils from those tropical forests have been found in the oldest visible rocks in the park, called Dawson Arkose. This approximately 55-million-year-old rock layer can best be seen on the west side of the park downstream from the dam, brought to light by the scouring action of the flood waters unleashed when the dam collapsed in 1933.

Petrified wood is one of the most common fossils found in the Dawson Arkose. You may come across a beautiful butter-scotch-colored rock that is, in fact, petrified wood from an ancient tropical tree. This type of fossil is so common in the area that it is often called "Parker wood." Be sure to leave fossils and rocks where you find them so others may enjoy discovering them too.

Let's see what we can find in the layers above the Dawson Arkose. The rocks in these layers are younger by many millions of years, and they are harder–more resistant to the forces of wind and weather.

Dawson Arkose



Late Eocene

The Layer Forged in Fire

Although the rocks above the Dawson Arkose cannot speak they tell the story of a tremendous volcanic eruption that occurred precisely 36.7 million years ago. The eruption, which happened about 90 miles away near present-day Salida, filled the air with a glowing cloud of 2,000 degree molten rock, ash and poisonous gases. It reached the area of the park in just a few minutes.

The liquid rock and superheated ash welded into a thick layer of solid rock as they hit the ground cooled, and were buried. This rock has several names: ignimbrite (Latin for "fiery cloud", Wall Mountain Tuff (named for the mountain northeast of Salida where it was first discovered), and rhyolite. You can find pieces of this once liquid rock laying all over the park. Look for rocks with sharp angles and edges, tiny air holes, and shiny specs. It can be pink, purple, gray or brown in color. Rhyolite has been mined in this area as a decorative building material for more than 100 years. Rhyolite blocks were used to build the outside walls of the park Visitor Center and picnic shelters and those of the famous Molly Brown House in Denver.

The Layer Worn by Water

The "icing" on the park's rock layer cake of Dawson Arkose and rhyolite, and its most distinguishing geologic feature, is Castle Rock Conglomerate. These 34 million-year-old rocks, washed down from the eroding Rocky Mountains, form the park's canyon walls and caprock. Conglomerate rocks are easy to identify–they're like cookie dough with bits of chocolate chips sticking out. The "dough" is sedimentary rock and the chips are pebbles and boulders that are smoothed and rounded in ancient rivers and cemented into the rock by the water's high concentration of silicates–nature's concrete.

As you walk the paved trail between Canyon Point Parking Lot and the Inner Canyon Trailhead on the park's east side, do you see anything that makes you think this area was once covered by water? Do the rock patterns remind you of the patterns the surf makes in the sand? Water formed these tell-tale cross beds millions of years ago and deposited sand, grave, pebbles, cobbles and stones. Do you wonder why many of the stones are smooth while the rhyolite stays angular? Think about the time each spent in the streams and rivers. The stones were tossed and turned in the water as they traveled many miles out of the mountains onto the plains. The rhyolite came by air, so it was not as worn down by the action of the water.

Cross Beds