

# The Racetrack

## Death Valley National Park



Nestled in a remote valley between the Cottonwood and Last Chance ranges, the Racetrack is a place of stunning beauty and mystery. The Racetrack is a playa - a dry lakebed - best known for its strange moving rocks. A trip to the Racetrack is a full-day adventure requiring a capable vehicle and adequate preparation. A full tank of gas, plenty of water, and the ability to fix a flat tire or other vehicle problems will set you up for a safe and successful trip to this unique destination.

### Racetrack Road

**Length: 28 miles**

**Distance from Furnace Creek: 82 mi**

**Time from Furnace Creek:**

**3 hours one-way**

The road to Racetrack Valley begins near Ubehebe Crater. This unpaved 28-mile road is rough in the best conditions, with sections of loose, sharp rocks. Conditions can vary throughout the year – call or inquire at the Furnace Creek Visitor Center for updates. Flat tires are common on this road, so high-clearance vehicles with heavy-duty tires and two **full-size spare tires** are highly recommended. **Off-road driving is prohibited** as the desert is very fragile and vehicle tracks can remain for many years.

Watch for Joshua trees along the way. Often confused with cactus, Joshua trees are actually a type of yucca that can grow up to 30' tall.

Twenty miles in you will reach Teakettle Junction. Follow the road another six miles straight ahead to

Racetrack Playa. The road to the left leads through Hidden Valley towards the Hunter Mountain Road, which requires 4-wheel drive to travel.

Two miles further the short spur road to the right leads to the Ubehebe Lead Mine. This mine operated during the late 1800s and again during World War I.

### The Grandstand

**Distance: 0.25 mile walk**

**Time: half hour or more**

After traveling 26 miles you reach the north end of the Racetrack and the Grandstand parking area. A short walk out to the Grandstand can be rewarding. High points on this rocky “island” offer panoramic views of the Racetrack. The Grandstand is a spectacular outcrop of quartz monzonite, an igneous rock that formed during the Jurassic period, around the same time as the granite of the Sierra Nevada mountains.

Those interested in a longer hike might consider the old miners' trail to **Ubehebe Peak**. This strenuous 6-

mile round-trip hike involves an elevation gain of 1800 feet. Look for this trailhead west of the Grandstand parking lot.

### Sailing Stones

**Distance: one-mile walk**

**Time: one hour or more**

To see the moving rocks, drive two miles south of the Grandstand parking area. Walk at least a half mile toward the southeast corner of the playa for the best views of rocks and their tracks on the playa.

Erosional forces cause rocks from the surrounding mountains to tumble to the surface of the Racetrack. Once on the floor of the playa, the combined forces of ice, wind, and mud cause the rocks to move across the level surface, leaving trails as records of their movements (see other side for more information). Some of the sailing stones weigh hundreds of pounds and have traveled as far as 3,000 feet from their source.

### IMPORTANT:

**The surface of the playa is very fragile and driving on it or anywhere off established roads is strictly prohibited and will damage the desert scenery for years to come.**

**Do not walk onto the playa if the surface is moist or muddy. Footprints left in the soft mud can persist for many years, marring the playa's pristine beauty for future visitors.**

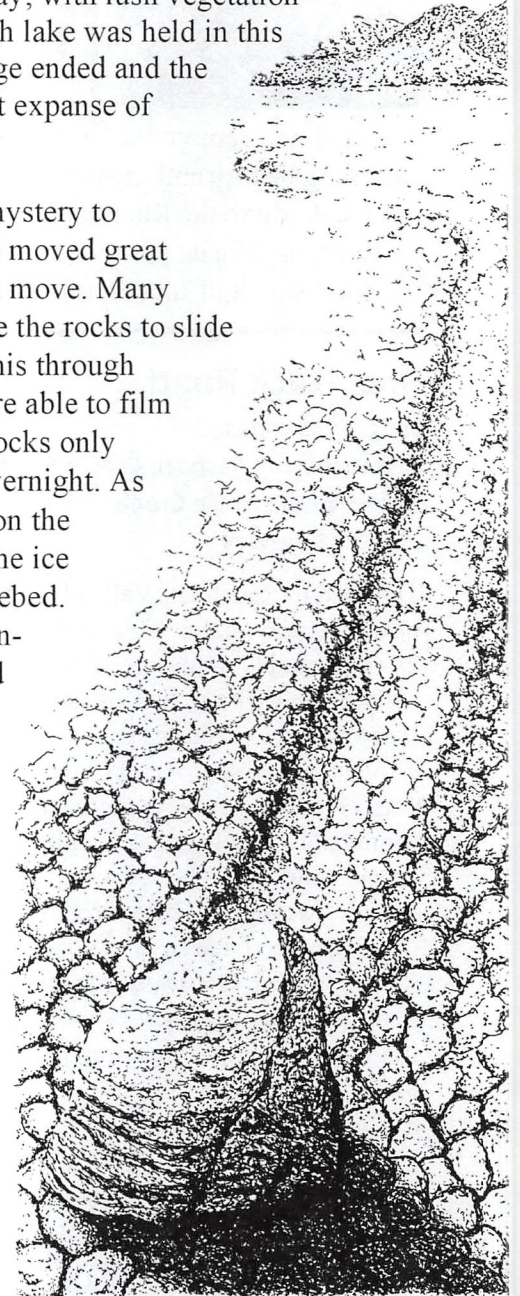
**Please do not move or remove any of the rocks. Each one has taken centuries to arrive at its current location, and will not be replaced in our lifetimes.**

## Understanding Racetrack Playa

The Racetrack is a playa (dry lakebed) about 3 miles long and 1 mile wide. Over 11,000 years ago, during the last Ice Age, this region looked very different than it does today, with lush vegetation and numerous lakes in what is now the continent's driest desert. One such lake was held in this small, high-elevation valley between two mountain ranges. As the Ice Age ended and the climate grew warmer and drier, the lake evaporated, leaving behind a flat expanse of beige-colored mud up to 1,000 feet thick.

For a long time, the famous "sailing stones" of Racetrack Playa were a mystery to scientists. The long, smooth tracks behind each rock show that they have moved great distances across the playa, but for a long time no one had ever seen them move. Many researchers suspected that exceptionally strong gusts of wind could cause the rocks to slide across the playa during muddy conditions, but attempts to demonstrate this through experiments were unsuccessful. Finally, in 2014, a team of scientists were able to film the rocks moving using time-lapse photography. They realized that the rocks only move when the lakebed fills with water after a rainstorm, then freezes overnight. As the ice melts in the morning sun, it breaks up into large sheets that float on the water surface. Gusts of wind push these ice sheets around the lake, and the ice sheets push the rocks, making them slide through the soft mud of the lakebed. These sheets of ice often move several rocks at once, explaining the often-parallel paths of neighboring rocks. Another surprise was how little wind was required to shove the rocks: light winds of 6-10 mph (3-5 meters per second) moved the rocks at up to 20 feet (6m) per minute. These sheets of ice can also push piles of mud across the playa – some examples of this are seen on the walk towards the southeast corner of the playa. Because the conditions have to be just right for the stones to move, it doesn't happen very often – perhaps once or twice a year at most, and sometimes not at all for years!

Even though the riddle of the sailing stones has now been solved, a visit to the Racetrack still manages to mystify. Rocks weighing hundreds of pounds are found thousands of feet from "shore," some with tracks indicating they moved there from still further out. Others cross paths or move in directions completely contrary to their neighbors. Each rock and each track challenges the imagination to visualize as the work of ice and mud and wind, forces that seem all the more abstract and distant on a Death Valley summer day.



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