

Naica Crystal Caves





The largest natural crystals on Earth have been discovered in two caves within a silver and zinc mine near Naica, in Chihuahua, Mexico, according to mine officials. Reaching lengths of 50 feet, the clear, faceted crystals are composed of selenite, a crystalline form of the mineral gypsum.

Largest Selenite Crystals In The World

The Naica Mine of Chihuahua, Mexico, is a working mine that is known for its extraordinary crystals. Naica is a lead, zinc and silver mine in which large voids have been found, containing crystals of selenite (gypsum) as large as 4 feet in diameter and 50 feet long. The chamber holding these crystals is known as the Crystal Cave of Giants, and is approximately 1000 feet down in the limestone host rock of the mine. The crystals were formed by hydrothermal fluids emanating from the magma chambers below. The cavern was discovered while the miners were drilling through the Naica fault, which they were worried would flood the mine. The Cave of Swords is another chamber in the Naica Mine, containing similar large crystals



Proyecto Naica



In April 2000, brothers Eloy and Javier Delgado found what experts believe are the world's largest crystals while blasting a new tunnel 1,000 feet down in the silver and lead Naica Mine of southern Chihuahua. Forty-year-old Eloy climbed through a small opening into a 30- by 60-foot cavern choked with immense crystals. "It was beautiful, like light reflecting off a broken mirror," he says.



He said that the sight was beautiful "...like light reflecting off a broken mirror". The translucent crystals lie pitched atop one another, as though moonbeams suddenly took on weight and substance. One month later, another team of Naica miners found an even larger cavern adjacent to the first one.



As a professional photographer who specializes in environmentally difficult, narrow and wet canyons worldwide, it was almost impossible to obtain clear photographs even using every trick and technique I know, because of the extreme ambient environment. These crystals are probably stable, as the temperature in the cave is over 150 degrees Fahrenheit with 100% humidity. In other words, these structures are enveloped in steam.



As a photographer used to working in dark and dangerous environments, this experience was unique. A human can only function in this environment for six to ten minutes before severe loss of mental functions occurs. I was so excited while photographing the crystals that I really had to focus and concentrate intensely on getting back out the door, which was perhaps only thirty to forty feet away.



"Walking into either of these caves is like stepping into a gigantic geode," said Richard D. Fisher, an American consultant with the mining company to develop the discoveries as tourist attractions. Fisher said that most people can endure only a few minutes in the caves due to their high temperatures.



The smaller of the two caves, which is about the size of two-bedroom apartment, is 100 Fahrenheit. The large chamber, which Fisher describes as the size of a Cathedral, is 150 F. Both are located approximately 1200 feet below the surface.



The largest previously known crystals were found in the nearby Cave of the Swords, part of the same mine system. Some of these are now on display at the Smithsonian Institution. The local government and mine owners hope to avoid removing any of the new discoveries for museum displays or private collections, Fisher said.



While the mine company is currently limiting visitation of the caves to scientific experts, mineral hunters have destroyed locks and broken into the chambers twice since they were first opened by mining equipment last April. One man was killed when he attempted to chop out a gigantic crystal that fell from the ceiling and pinned him. "The heat did him in" according to Fisher.



"We need more onsite protection of mine caves," said geologist Carol A. Hill, co-author of the book *Cave Minerals of the World*, who calls the new discoveries "by far the largest selenite crystals I have ever heard of."



Hill applauds the tourism plan. "Without it, the mining company would probably destroy the caves. Museums have enough crystals," she said. "It's important to preserve discoveries like this where they occur."



The mining company plans to air-condition the caves before opening them to the public next year, Fisher said. He adds that reducing the heat gradually will not harm the crystals.



Officials of the Penoles Company, which owns the mine, kept the discoveries secret out of concern about vandalism. Not many people, however, would venture inside casually: the temperature hovers at 150 degrees, with 100 percent humidity. A person can stay inside the cave for only six to ten minutes before becoming disoriented.



These mountains are 200 million year old limestone massifs hosting networks of caves crossed by very deep hot and mineralized thermal waters. When these waters reached the relatively colder and closer to the surface environments they deposited much of their salt content as lead, zinc and silver .



Groundwater in these caves, rich with sulfur from the adjacent metal deposits, began dissolving the limestone walls, releasing large quantities of calcium. This calcium, in turn, combined with the sulfur to form crystals on a scale never before seen by humans.

In addition to 4-foot diameter crystal columns 50 feet in length, the cavern contains row upon row of shark-tooth-shaped formations up to 3 feet high, which are set at odd angles throughout. This crystal form of the mineral gypsum, is known as selenite, named after Selene, the Greek goddess of the moon.



























When Naica's ores are no longer viable, the mine is closed and the pumping is stopped, then the caves will be submerged - and the crystals will start growing again. The only reason humans can get in the caves at all is because of the ongoing pumping operations that keep them clear of water.











Picture with flash only



Flash with backlighting





The city of **Chihuahua** is the state capital of the Mexican state of Chihuahua. It has a population of about 748,551. The predominant activity is light industry. The Naica Mine is located 100km to the N.E.



Chihuahua, Mexico is home to two hot caverns containing the largest natural crystals known to man. "Walking into either of these caves is like stepping into a (sweltering) gigantic geode," described one awed observer. One of the clear selenite crystals is over 50 feet long and weighs over 55 tons.



Naica Crystal Cave Of Giants

A forest of crystals, the largest on the Planet.
An unreal world, beyond imagination, beyond a dream.
A cave with a temperature of 50° C and 100% humidity; an
infernal place, where man can survive just a few minutes.
Still mostly unexplored.

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