MINNESOTA SHROUN CAVES
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The following is a list of the known show caves of Minnesota in chronological order, together with years of operation. All are either natural caves or artificially enlarged natural caves. The assistance of Gary K. Sourlie is gratefully acknowledged.

1. Fountain Cave, also known as New Cave and Spring Cave (St. Paul, MN, 1852-1857)
2. Chones Cave, also known as Newsmith Cave (Minneapolis, MN, 1875-1883)
3. Jesse James Caves, also known as Seven Caves (St. Peter, MN, 1929-1952)
4. Catacombs of Yosttan, also known as Buck Hammer Cave (Spring Grove, MN, early 1930s)
5. Niagara Cave (Hartford, MN, 1934-present)
6. Old Mystery Cave (Spring Valley, MN, late 1930s-1942)
7. Wolfe Brewery Caves (Stillwater, MN, 1945-present)
8. Mystery Cave (Spring Valley, MN, 1947-present)
9. Minnesota Caverns, now the Mystery II entrance to Mystery Cave (Spring Valley, MN, 1966-present)

THE HISTORY OF WINDLEWER CAVE
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During operating seasons in 1946, Windlewer Cave was discovered, and in 1952, the cave was filled in under unexplained circumstances. After 20 years, the Diablio Grotto reopened the cave and they since have managed it.

Prior to 1946, Windlewer Cave did not have a natural entrance. The cave was discovered by Charlie Windlewer and other miners, and they permitted the new tenants, Stanford Groves, to explore the cave in the years 1950-1952. The entrance gate has been broken into seven times. Windlewer Cave has been surveyed to 900 m and is unique to the Mother Lode area because of its many speothos and pristine condition.

During the management of Windlewer Cave, the Diablio Grotto has had to patrol, use electronic surveillance equipment, redesign gates, go to court to prosecute two vandals who were charged under the 1977 California Protection Law, and inf in the entrance. Much of the problem has been traced to a person who wrote a fantasy of words and sold it to many who were interested in seeking out their fortune in the era of high gold prices.

Scientific exploration was attempted, with Dr. William Elliston labeling one small water creature after Windlewer. One of the limits in exploring Windlewer was the requirement of electric lights, which studies were to be coordinated on, but this only led to vandalism by some of those who broke it during the 70s.

IDENTIFICATION AND ANALYSIS OF A CIVIL WAR SOLDIER'S NAME IN SOUTH CAROLINA CAVE, TENNESSEE
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In May 1999, a possible Civil War inscription was found in South Carolina Cave, Tennessee. On a return trip, an intensive visual inspection was inconclusive, as photographs of the inscription were made. These were later examined electronically using exploratory data analysis, which revealed additional information and resulted in a positive identification. The inscription was made by John C. Reed of the 11th Ohio Infantry. Subsequent research indicates that Reed had a spotty military record and that he visited the cave between March 20 and June 4, 1863 while encamped near South Caruth. Reed's cave trip coincided with Union soldiers visiting more caves, including relatively unknown caves, than previously suspected, and that American patterns of interactions with the cave environment persisted in the Civil War, despite the dislocations of the period.

EDMUND RUFFIN AND THE CYMBEE OF WOODBOO
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Edmund Ruffin was a noted 19th century agriculturist from Virginia as well as a staunch supporter of slavery. Civil War enthusiasts may remember him best as the individual who was selected to fire the first shot on Fort Sumter, South Carolina, thus beginning the War Between the States. Less known, perhaps, is Ruffin's arborelogical and palaeontological endeavors. In 1845 at the request of Palmetto State governor, James Hammond, Ruffin spent 8 months conducting an intensive agricultural and geological survey of South Carolina. Much of his time was spent in locating limestone and marl deposits, which he felt could be used wisely for agricultural purposes. During his field work, Ruffin turned up interesting caves and karst features within the state. He described these in detail in his private diary. While visiting and walking with some of the locals, he was also introduced to a bit of folklore concerning the legendary inhabitants of a particular karst spring. This was a peculiar supernatural being or water sprite that the local Negritos called "the Cymbee of Woodboo.

CATTLE CAVE: HISTORIC ARCHIVE
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Cattle Cave in Lee County, Virginia, was mined for saltpeter. Civil War era writings on matlock marks in sediment contain more detailed inscriptions than just the names of miners. The most startling sentiments were the following: "Nathan S. Cox Was born January 2nd 1842 and the 6th day of March 1862. Age 20 years 2 months & 4 days War is upon us But we will not be subjugated. We will fight them as long as there is a woman or little boy large enough to raise a gun to fire. Huzza! Huzza! Jeff Davis & the Southern Confederacy Nathan S. Cox Thursday Eve 1862."

He served in the 50th Virginia Infantry and survived the Battle of the Wilderness and the war. A younger brother, Mitchell C. Cox, age 17 years 9 months and 6 days, recorded his thoughts during that March 6th evening. He served in the 64th Virginia Infantry and was captured at Cumberland Gap, exchanged as a prisoner, and served again before he was "Murdered and robbed in Cass Co., Va on 8/4/64." A sister, Mary A. F. Cox, and her friend, Cynthia Ann Pratt, also inscribed the sediment bank that March evening. Cynthia married another Cox brother in February 1865. A partially obliterated name dated 1860, may be that of General Crocco. He enlisted the same day as Mitchell Cox and was captured at Cumberland Gap, sent to Camp Douglas, he was held until he died of dysentery on December 19, 1864.

DISPOSING A NEGATIVE: THE ALLEGED BLIND CATTLE PIE FROM PENNSYLVANIA NEVER EXISTED
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In 1864, Edward Drinker Cope published a report on what he thought to be a new species and genus of troglobitic (blind, dipigmented) cave fish, from Pennsylvania. As late as 1946, some authors, based on Cope's article, have continued to assume that there are troglobitic fishes in that state. Our study of the historical, biological, and speleoecological evidence failed to provide any evidence that such fish exist or ever existed. The original unsubstantiated reports seem to be based on the assumption that you cannot prove a negative, i.e., that we cannot prove that something does not exist just because we have not found it.

+ CAVEFINDER CALENDAR: ESTABLISHING THE PRECISE CHRONOLOGY OF EARLY DISCOVERIES OF CAVE FISHES
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The history of the discovery of the first true troglobitic (blind, dipigmented) fish has been unclear. Different claims have been made at different times about the primacy of discoveries in this area. There are at least three references for European cave fish for pre-Linnean times: Beesow (1569), Kircher (1665), and Montenlant (1748). All these citations are unsupported by scientific evidence and may have been based on uncritical observations. Even if they were true, they would all be preceded by a description of a cave fish in China in 1541 that seems to refer to a true caveamicole.