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## The Total Solar Eclipse of 1869 in Iowa: What Remains Today

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# The Total Solar Eclipse of 1869 in Iowa: What Remains Today

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## Abstract

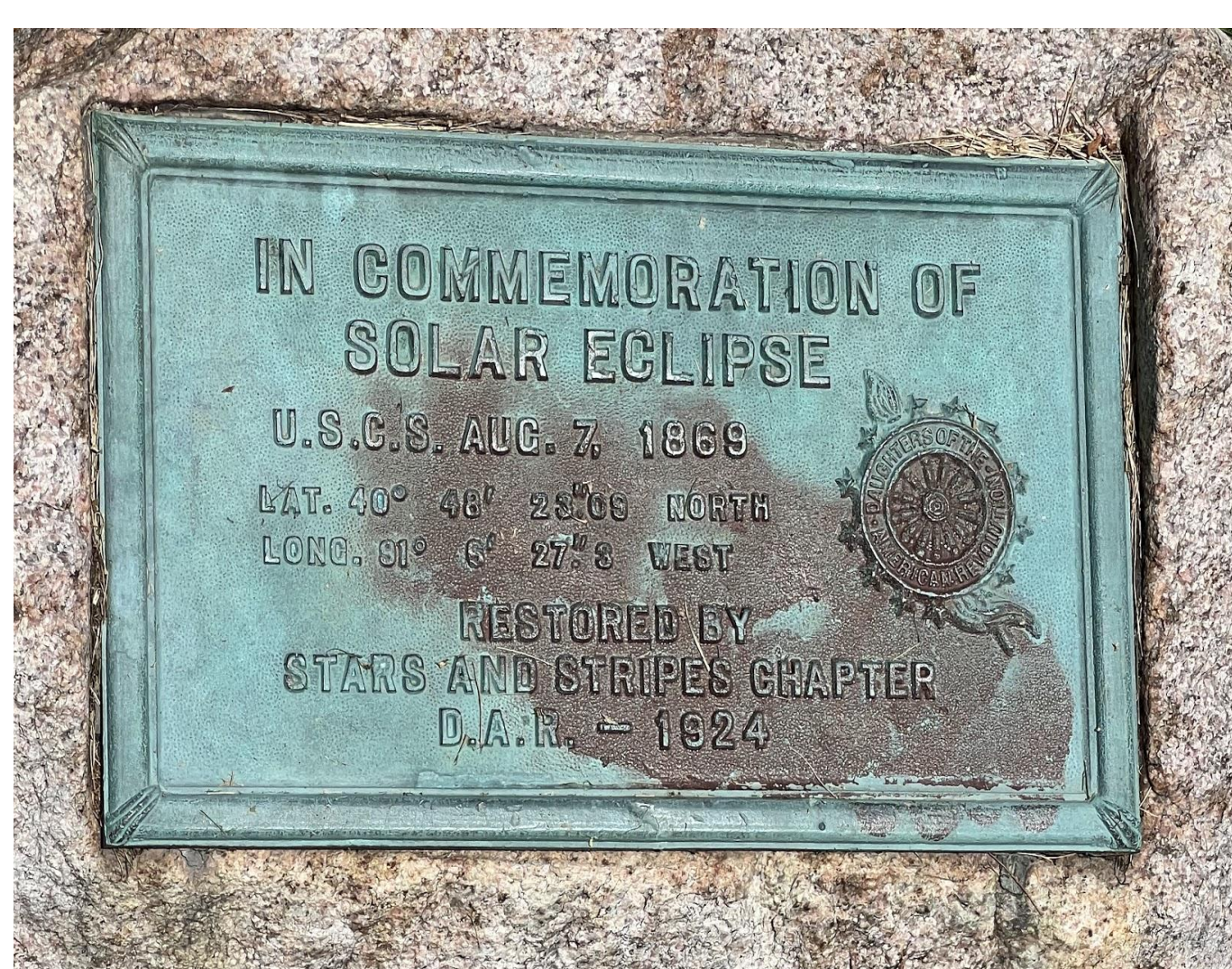
On August 7th, 1869, a total solar eclipse was visible in the United States. It carved a path through the heartland, nearly bisecting the state of Iowa as it ran from the northwest corner of the state, through Des Moines, and down through the southeast. As the scientists of the day flocked from universities and observatories on the east coast to the Midwest for a chance to make observations and measurements, many of the teams chose to set up in Iowa. Along the path of the eclipse, the parties built temporary observatories to house their telescopes, or simply picked buildings already standing and pointed the telescopes out the window. When it came time to leave, many of the groups left objects behind. The objects serve as latitude and longitude markers, as well as important historical artifacts. In 2022, many of the artifacts have faded into obscurity, lost to time like so many other relics from the 19th century. The goal of this project is to travel to the cities that the astronomers went to, find their observing sites, and reclaim the artifacts they left for us. Out of the 10 cities I visited in Iowa, and the 18 locations I explored, there were 5 places still standing from 1869.

## Question

What physical items remain today from the 1869 solar eclipse expeditions to Iowa?

## Burlington Artifact

Burlington, Iowa, is where I found the first artifact from a viewing party. This lead was the strongest one that we had, so I knew exactly where to find it. In South Hill Park, between 7th Street and Elm Street, there is a stone set into the ground that is just shy of one square foot, and it appears to be dug into the ground for at least a few feet. Once I started to move the pine straw out of the way to investigate just how deep it went, I quickly realized that there was an anthill buried along the side of the stone that I had just disturbed, so I decided to stop digging. The stone on the ground is engraved with USCS, along with the date of the eclipse, August 7th, 1869. Up on a small boulder, there was a plaque set commemorating the eclipse party. The plaque is not original to the day of the eclipse but was put there years later in 1923 by a local charity group. The party in Burlington consisted of John H. Coffin, B.A. Gould, Charles A. Young, Alfred M. Mayer, and O.H. Willard.



The plaque set above the artifact found in Burlington, Iowa.



The artifact found in Burlington, Iowa.

## How the Land Changes

As the title of this project suggests, the spots occupied by astronomers in 1869 are not likely to be exactly as they were at the time of the eclipse. As Iowa grew and developed, the locations chosen as ideal grounds for observing got changed as well. The cities of Boone and Cherokee in Iowa are examples of this. For each city, the latitude and longitude taken by the observer is now in a portion of farmland. Unfortunately, when a field is converted into farmland, nothing that stood there stays there. As the field is plowed, any stones, plaques, or signs get removed. This means that any artifact that once was there has been lost unless the new farmer decides to save it by donating it to a museum of some kind. If this is the case, the artifact becomes much harder to track.

Another example of the land changing uses is in Jefferson, Iowa. The hill that was used for viewing the eclipse was chosen because it was the highest point in the city, offering an unobstructed view of the sky. I consulted with a historian for the county, and she was able to tell me on which hill the temporary observatory was constructed. The hill is reachable fairly easily. But over the century and a half since the eclipse, the grounds have been turned into a cemetery for the local Catholic Church. Instead of trees and tall grass, there now sit headstones and manicured lawns on the hill. The cemetery built on this hill has taken away any chance to discover a marker left by the astronomers of 1869.



Saint Joseph's Cemetery in Jefferson, Iowa



The farmland where the coordinates from the R. T. Paine report are in Boone, Iowa.

## Null Results

Sometimes while doing work in the field, I might approach the coordinates I am looking for, and find a building that was mentioned in the primary literature. This happened in Mount Pleasant, Iowa, and Davenport, Iowa. Although in both cases the buildings are not as they were; they have been changed or rebuilt. The building in Mount Pleasant was the Brazelton Hotel, a historic building where Edward Pickering viewed the eclipse from a room on the third story. However a closer look at this building reveals that it is no longer a hotel, but a US Cellular with loft apartments overtop. A quick check of the National Registry of Historic Places plaque confirms it is the same building, but what is inside has changed over the years.

A more extreme example of this is in Davenport, Iowa. This time, there was no latitude and longitude from which to work. Instead, there was a street address of 2nd Street and Main Street, where there was a bank building of the First National Bank. Preparations for this trip showed that there is still a bank building on this corner, an old-looking bank at that. It is currently a US Bank, but still, the interior of the building looks fairly well preserved from photographs found online. During the 1869 eclipse, there was viewing out the third-story window, and a record remains that there had been some structural alterations made on that floor in order to house the telescope, and so the "artifact" I was to look for in this building was the alterations made to the third floor. However, there was a sign on the wall referring to the construction of this historic building in 1923. The full story was revealed after finding some literature in the local public library. The original bank was built in the aftermath of an 1863 bill authorizing national banks like this, this was the original three-story building that astronomers watched the eclipse from. In 1923, the bank decided it needed a larger building. So rather than add stories to the existing bank, the old building was demolished and a newer, six-story, bank was built directly on the footprint of the old one. This destruction of the old building also destroyed any chances of viewing the alterations made to the 1860s-era building.



Photograph of the eclipse taken by J.C. Watson in Mount Pleasant, Iowa

## Conclusion

Throughout the summer, in city after city, I found the sites of observation from this eclipse constantly changed. Whether the buildings were torn down, the fields were plowed into farmland, or any markers were taken and moved so many times they could be anywhere, the majority of artifacts were gone. The fact is that artifacts from the 19th century are seldom preserved unless they have a massive historical significance, like a Civil War battlefield, or something of a similar scale. Local artifacts like small stone markers are often moved to make way for new things. Even though in 1869 the eclipse captured the interest of most of the country, as the years passed this one-day phenomenon began to fade in the memories of locals. Now we are getting ready for another solar eclipse that will be visible in the heartland in 2024. Public interest in eclipses is at a high, and it will be interesting to see the comparisons that will be drawn between the 1869 eclipse and the one we will see in 2024. What kinds of markers will the astronomers of today leave for the next generation? If there are markers left, how long will they last until they too get removed to make way for the next thing, whatever it may be? As to the question of this project, what items still remain of the 1869 expeditions? There are few still left to see today, the ones that are still around are usually preserved in a location that would not be subject to much change. Unfortunately, most of these historic markers are lost to time, relics of an expedition over 150 years ago now that are best learned about through the written reports of the astronomers.

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