

ART. XL.—*The Great Nevada Meteor of 1894*; by WALTER P. JENNEY.

MR. HENRY C. CUTTING, of San Lorenzo, California, relates that in the winter of 1893-4 he was living in Candelaria, Nevada, and witnessed the explosion of a great meteor, which passed directly over the town, about 10 p. m., Feb. 1st, 1894. The night was clear and tranquil, and the stars were shining brightly. The meteor came from the west, exploded with a blinding flash of light, followed after a short interval by the sound of the explosion, and finally passed out of sight to the east. Mr. Cutting does not recall that any one at Candelaria claimed to have seen the meteor before the flash—the first notice was the intensely bright light illuminating the whole sky.

Candelaria is situated on the eastern slope of a high hill which shut off any view of the meteor, coming as it did from the west, until it was nearly overhead. Mr. Cutting was in his house, when there came a terrific explosion so that the house shook with the air-wave; he thought that a powder magazine had exploded, and ran out of doors. He states that he saw a bright light overhead in the star-lit sky, and heard a roaring sound that reverberated like thunder, but more metallic, which lasted for two to four minutes, dying away in a vibration like the sound given off by a telegraph wire when struck. The blinding flash first seen was so intense that the whole landscape was lighted up, and the sagebrush on hills several miles distant could be distinctly seen; within houses with shutters tightly closed, the illumination was so strong that the most minute objects were visible.

Different observers compared notes respecting the interval that elapsed between the first flash and the sound of the explosion, and agreed that it was nearly thirty seconds. Assuming that the explosion took place vertically over the town, this would place the meteor at the moment of explosion at a height of six and one-half miles above the surface of the earth. When Mr. Cutting got out of the house, nearly all of the people in Candelaria were in the streets; there were 75 to 100 Chinamen, living in Chinatown, who were terribly frightened. After the meteor passed, the Chinamen set off firecrackers to scare the devil away. Some thought that the meteor fell a few miles to the east, and several parties went out to Summit Springs in search of it, but it was never found.

Observers at Silver Star* did not note the sound of the explosion, and the operator at Benton,* when called up by

* Small towns near Candelaria.

telegraph, reported that he heard a faint noise; from all of which it appears that the explosion was nearly over Candelaria. The San Francisco Examiner telegraphed the operator at Candelaria for all the facts about the meteor, and an article on the subject was printed in the Examiner about February 5th to 10th, 1894.

Discussion by the Writer.

Other observers state that, immediately following the flash, the path of the meteor across the sky was a broad band of intense brilliant red, stretching from west to east; all the while the path was blazing with the combustion of material detached from the meteor in its flight. As the meteor passed on, the band of light gradually contracted in width, the sides coming together, and the light fading out until only a waning line of luminous smoke remained floating in the air for several minutes before it disappeared. Estimates made of the breadth of this band forming the track of the meteor vary widely; some saying it looked to be at least 25 feet wide; others, taking possibly into account the distance it must be away, thought the path blazed in the sky exceeded 100 feet in breadth, and might have been greater. Several tell that the meteor itself looked to be three to five times the diameter of the moon as she appears when rising.

It is probable that the explosion was caused by the formation of a thick crust resulting from the oxidation of the metal, which confined the gases generated in the nucleus—the force of the explosion dissipating in dust the outer shell. This is confirmed by the fact that no one saw the meteor break up; after the flash it continued its flight in a single path as long as it could be seen.

It should be noted that the meteor in its path, coming from over the Pacific Ocean, passed to the north of, and paralleled the Mount Diablo base line, passing north of San Francisco. This meteor is reported to have been seen, traveling across the sky far to the south, by people living at that time in Belmont, Nevada, so that it continued its flight at least fifty miles east of Candelaria, across the deserts of Nevada.

Peculiar interest attaches to the meteor of Candelaria since it seems probable that the great meteorite of Quinn Canyon, found in 1908, may be the part of it which reached the earth. This meteorite was described by the writer in the "Mining and Scientific Press" for Jan. 9, 1909, and the chief facts in regard to it are here repeated.

The meteorite was found in the latter part of August, 1908, by a prospector in the foothills of the Quinn Canyon range* in

* Called in some maps the Grant Mountains.

FIG. 1.

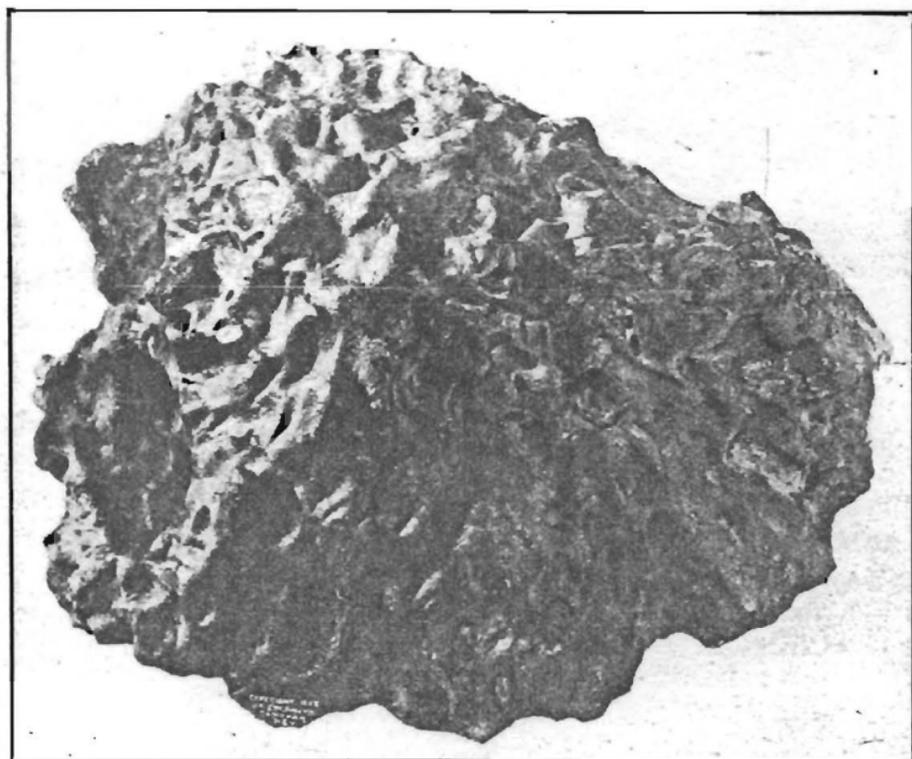


FIG. 1.—Quinn Canyon, Nevada, meteorite. Top view, length 44 inches, breadth 34 inches.

FIG. 2.

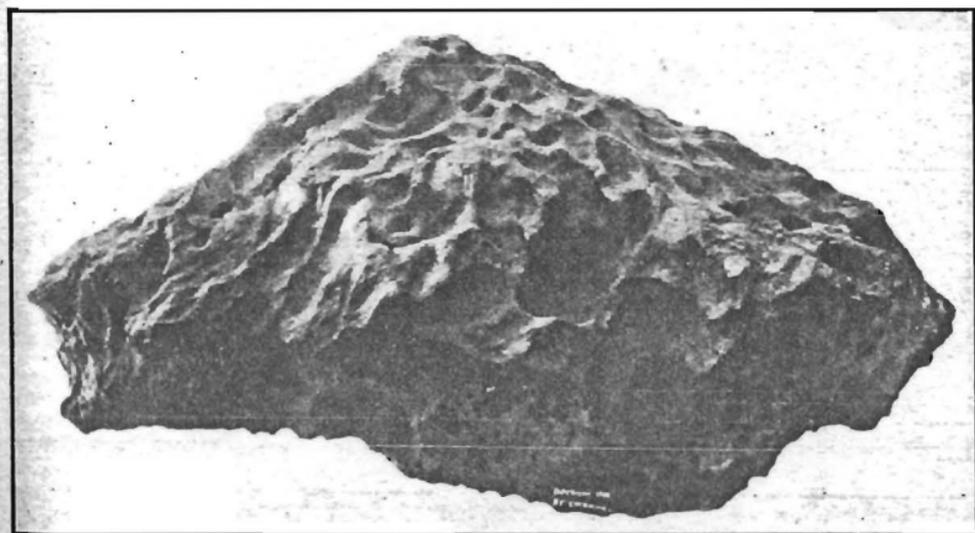


FIG. 2.—Side view; length, 44 inches, height 20 inches.

Nye county, Nevada; it was half buried in the soil. The place where the meteorite fell is almost uninhabited except for a few sheep herders; it is situated 90 miles due east of Tonopah, 18 miles north of the Mount Diablo base line, and 100 miles west of the Utah boundary.

The mass is roughly oval in shape, as shown in figures 1 and 2; the dimensions are 44×34 inches on the base with a height of 20 inches; the estimated weight is 4000 lbs. The upper surface is deeply channeled and pitted and covered with a thin smooth skin of magnetic oxide which has protected it from erosion; even the lower buried portion is but little rusted. The Widmanstätten figures appear on a smooth surface, when etched, as closely spaced, brilliant lines on a black ground; an octahedral structure seems to be shown on portions of the surface. A partial analysis has shown the presence of 5 to 10 per cent of nickel alloyed with the metallic iron.

The mass has been transported with much labor to Tonopah, where it is now preserved.* It has been carefully handled, and except for a few ounces cut off with a cold chisel by the prospector who found it, it is now practically as it fell. A careful inspection of the meteorite before it was removed from the spot where it was found, led to the conclusion that its fall was comparatively recent, probably within the last twenty years. It is with much plausibility connected with the Nevada meteor, described above, of February 1, 1894, since it was found just about where the nucleus of the meteor might have been expected to strike the earth.

Tonopah, Nevada.

* This meteorite has recently been acquired by the Field Museum of Natural History at Chicago.