

Weather Interventions

By Dennis Payton Knight

Mark Twain is credited with a lot of familiar quotations. “Everybody talks about the weather, but nobody does anything about it,” is one he didn’t say but got the credit anyway. That witticism came from his friend Charles Dudley Warner, with whom Twain had partnered to write *The Gilded Age*. Mark Twain, according to an Encyclopedia Britannica blog in April 2010 blog by Gregory McNamee, was also miscredited for saying, “The coldest winter I ever spent was a summer in San Francisco.” Apparently, he was just passing along something a friend had said, but the Britannica article gave little further explanation.

Despite those two examples, there are plenty of accurate Mark Twain quotes that I can appropriate in creating this essay on weather. The best of them are, “Climate is what we expect, weather is what we get,” and “In the Spring, I have counted 136 kinds of weather inside of 24 hours.”

Weather is often attributed to divine intervention, and it’s a handy excuse, if a trifle unfair. It seems Twain was guilty of pointing that direction too, and in a terribly cynical way, when he offered, “Consider Noah’s flood – I wish I knew the real reason for playing that cataclysm on the public: likely enough, somebody who liked dry weather wanted to take a walk.”

Weather, whether it be by intervention or not, is divine caprice. Often in the big skies of Western America we see rain falling from clouds in the distance, frequently against the background of a mountain, but the rain never reaches ground. It’s a phenomenon called “virga,” where the air close to the ground is so dry the rain simply evaporates before it lands. The sun shining from behind virga can even produce a rainbow.

Sun and clouds work in collaboration year-round to produce enchanting scenery. Hole-punch clouds, or fallstreak holes, sometimes even called a cavum, are holes that occur when planes fly through thin sheets of clouds made of very cold water droplets, cooling them even more. The droplets freeze and grow, and, dropping through the atmosphere, appear like falling streaks of rain or snow.

Thunderstorms can distort wave lengths to produce beautiful colors in the skies, often appearing aquamarine, sometimes even emerald green or air force blue. Upward lightning can take the shape of an upside-down tree taking root in the skies. These strikes are rare and seem to occur when a thunderstorm’s electrical charges rapidly reverse due to previous lightning activity. In fact, the visible element in all lightning strokes is the “return stroke” of charge from ground to cloud, but it is too fast to be discerned by the human eye.

As I write on an October afternoon by the window, I am watching the first significant snowfall of autumn, 2018, and find it handy to appropriate yet another Twain line, “Winter is begun here, now, I suppose. It blew part of the hair off the dog yesterday and got the rest this morning.”