

## OBSERVATIONS OF A TORNADO NEAR FORT WORTH, TEX.

By D. S. LANDIS, Observer. Dated Fort Worth, Tex., June 3, 1908.

At 3:05 p. m. on May 29, 1908, a whitish, smoky-looking bank of clouds loomed up rapidly in the southwest, and within a few minutes similar banks of alto-cumulus clouds appeared in the west, then in the northwest. The fore front of each bank was flanked with whitish, curling, ragged-edged cloud substance, in appearance like billowy wood smoke from a distant forest fire. Within a period of five minutes cumulus clouds lying in the east and northeast began to move as tho sucked toward one common point on the Sansom ranch due north of the station, and about 4 miles distant. At this point a greenish-black cloud-core seemed to develop in the upper air, then bag downward, oscillate up and down in a careless rocking manner, drawing nearer and nearer to the earth, but failing to reach it by about 200 yards. This was the funnel of the tornado, the point of the funnel being ragged and misty looking, whirling and trailing inwardly upon itself. Presently the funnel bellied a little and at once became constricted to about half its original size immediately above the bellied portion. Next the whole cloud mass shot directly eastward for a distance of half a mile, stopt still, whirled rapidly for a few moments and then the funnel separated entirely at the stricture. The two portions of the funnel and the accompanying cloud mass now slowly backed, whirling gently, and again stopt, the tip now descending to the earth at the point where the funnel had formed. The upper portion then descended and the two parts of the funnel were reunited, the in-whirling motion becoming very energetic. Almost instantly after the union of the funnel portions the storm took on new electrical activity. Zigzag lightnings played in and out and about the funnel, which at times seemed like a great black transparent blood-vessel with the lightning a crimson fluid unleashed from the black walls to partially fall away, only to be grappled again by the darkness and hidden.

A thunderstorm prevailed during the passage of this peculiar cloud, and so continuous was the roar of thunder that one was at a loss to distinguish whether there were other sounds than its rolling.

At 3:08 p. m. the tornado center took on immense energy, and darted furiously toward the northeast, the funnel appearing very rigid and tapering down to a point within 200 yards of the earth. The funnel was ebony black, save when lit up by vivid sheet lightning on its east side. At one instant a spiral of lightning seemed to make two circuits of the funnel in its passage from the upper heights to the earth, the quiver of light leaping from the tip of the funnel to the earth. Within a space of two minutes more the dark funnel retired into the mother cloud overhead, and was lost from sight. Commotion in the clouds decreased rapidly, and they soon fell apart and so dissolved that only a few domes of cumulus clouds could be seen lying in the northeast, while the west and northwest sky was calm and cloudless. The whole affair seemed like a tornado on parade, sweeping the upper heights with threatening storm-tentacles of wind and mist and lightning, coming close down to earth as with death-dealing intent, only to repent and hide away from human eyes.

Among the weather features particularly noted were a very high relative humidity just before and after the storm, and a light wind from the south before the funnel formed. The wind direction changed very noticeably to various points as the storm past. At 3 p. m. the wind was prevailing from the south, and instantly it switched to the west, then to the northwest, north, and northeast in the course of the storm movement. The temperature during the whole storm period was 84°, but it fell quite decidedly for several hours after the passing of the clouds. Light rain prevailed at the station during the storm, also in the immediate vicinity of the tornado

funnel, but no hail was reported. No marked wind movement was noted at the station with the passing of the storm, but those who were in the immediate vicinity of the funnel report a high wind from the east, with brisk wind movement from all points of the compass as the storm was passing. No damage to person or property was reported, the funnel coming to the earth for an instant only, and then in a wide pasture, treeless, fenceless, and houseless. The movement of the cloud for the few seconds that the funnel touched the earth was toward the northeast, herbage only showing the disturbance, grasses and weeds being inclined on the east quarter of the funnel as tho the wind were whirling from left to right. The herbage inclination on the north, northwest, and west showed the same right to left whirling motion of the wind. At the center of the path the grasses showed a pulled-together-at-the-top-influence, as tho the suction had been inward and upward. The storm track visible on the ground was about 30 yards wide at the widest, and about 20 feet wide at the narrowest point. The earlier movement, directly eastward and then back to the starting point, was about half a mile each way, and the final northeastward movement of the cloud was about 4 miles to the point of dissolution. No glow was noted in the funnel or about it, nor any peculiar light, except the lightning, which varied from blood red to a blue flame like that of sulfur. No peculiar cloud form was noted, except that the clouds in the southwest and east elongated and dipt downward at the fore front, becoming torn and scud-like, whitish, and misty, seemingly rushing down an incline to a steep valley. With the union of all the clouds from the various points they changed color from the wood-smoke hue to a black cloud-core from which point the funnel lowered and the electrical display seemed to issue.

## TORNADOES IN MINNESOTA ON MAY 24, 1908.

(Abstract from Climatological Report of the Minnesota Section.)

On the afternoon of May 24, 1908, two tornadoes visited southern Minnesota following on the warm, sultry weather of the preceding day. The first tornado appeared at 4:15 p. m., 3 miles southeast of Imogene, Martin County. It moved northwestward for about 2 miles along a path 40 rods in width, destroying \$4,000 worth of property and injuring 4 persons.

The second storm formed at 4:30 p. m. in Blue Earth County, 25 miles northeast of Imogene, and traveled slightly east of north until it crost Lake Ballantyne when it disappeared about 4:50 p. m. The path of this tornado was 20 to 40 yards wide. One person was injured and property to the value of \$5,000 destroyed. Detailed accounts of both tornadoes and a map showing the path of the second may be found on page 36 of the Climatological Report of the Minnesota Section for May, 1908, prepared by U. G. Purssell, Section Director.—EDITOR.

## SEVERE LOCAL STORM IN FLORIDA.

Mr. C. L. Hobbs, cooperative observer of the Weather Bureau at Blountstown, Calhoun County, Fla., reports that a severe local storm occurred in the vicinity of his station about 1 o'clock in the afternoon of May 30, 1908. There was a well-defined pendant funnel-shaped cloud, with rotary winds of sufficient violence to uproot trees and prostrate buildings. The storm came from the northwest and moved toward the southeast.

Part of Mr. Hobbs's interesting description is given:

We had just finished dinner and heard a roaring noise and upon looking in a northwest direction we saw the tops of the trees swaying and bending in a terrible commotion. The greatest strength of the storm seemed to be some distance above the earth; however, the funnel dipt down right in the town, wrecked a new building 80 by 30 feet, then shot up to the tree tops and disappeared entirely. There were no trees prostrated in any general path; as before stated, the greatest violence