

## BRIEF NOTES ON THE NEW CASTLE TORNADO.

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C. C. BEALS—Indiana University.

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A number of destructive tornadoes occurred in Indiana during 1917. The first one of these passed over a part of New Castle. Mr. Melvin Kelleher and the writer mapped the tract of the storm under the direction of the Geology Department of Indiana University.

The New Castle tornado formed about 3:00 o'clock in the afternoon on March 11, 1917. At the point of origin objects were displaced by two currents of air. One from the southwest and the other from the northwest, meeting in Sec. 11, Tp. 17 N, R. 9 E. The wind from the southwest seemed to be a straight wind but the one from the northwest evidently had a spiral motion, judging from the direction the fences, trees and other objects fell. The first evidences of wind disturbance occurred about one mile southwest of Cadiz. The storm traveled almost due east except for a few short curves. It struck New Castle about the center on the west side, after crossing a broad glacial valley, and emerged near the southeast corner of the town. The tornado continued in a general eastward direction, going south of Hagers-town, and ceased inflicting damage about four miles southeast of that place.

The storm evidently continued eastward high in the air, going about eight miles north of Richmond into Ohio. Fragments of articles were found in Ohio.

One interesting feature noted was in a large wood about sixty rods from north to south which lay in the path of the wind where the storm first formed. Trees were uprooted and broken off, all falling toward the general direction of the wind except two trees at either end, which were crossed. The main destruction was caused by the portion of the storm south of the storm center and the crossing was produced by the opposite current in the whirl.

The track of the storm could be easily traced except at two points, where there was no disturbance for over one-half mile in each case.

The storm first appeared like a huge mass of black coal smoke

rolling, tumbling forward, which later formed a black cloud with a funnel-shaped tail. The noise made by it was described as being like a hundred autos running at once.

The noise of the wind was heard at Richmond for over an hour first coming from the west, then north, and finally from the east. The winds at Richmond were countershift winds, which blew at a velocity of perhaps forty miles per hour during the greater part of the day.

Most of the destruction was in New Castle where the side walls of numerous houses seemed to be blown out, especially near the center of the storm's path. The buildings on one side were thrown toward the center and forward. The storm did not make as wide a path of destruction as the one at New Albany a few days later.

The barograph record of the Richmond high school showed the same amount of fall in the air pressure as that of the Ben Davis storm of a few years ago which passed over the town. This storm was about eight miles to the north when nearest to the barograph.

The daily weather map for March 10th and 11th did not show unusual weather conditions for Indiana. The storm developed because of sudden local changes.

The New Castle storm seemed to form in a comparatively level district and crossed over the valleys and divides between the streams. The large glacial valley on the west side of New Castle extends from the northeast to the southwest, but it did not materially change the course of the storm although the width seemed to be greater at that point, due perhaps, to the wind rushing along the trough to the storm area. As the map shows, all the main streams flow in an almost north and south direction across the tract of the storm, and each of these follow a valley. The area between the streams is gently undulating.

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BY MELVIN KELTHER AND G. C. BEALS

Track of the New Castle Tornado.