## The Tornado of June 30, 1976

It has been thirty years since this tornado, which started in the vicinity of Lake Waramaug in west central Litchfield County Connecticut and eventually traveled some 21 miles before ending in Tolland, Massachusetts, vented its wrath on Colebrook.

The weather system that produced this event was a particularly violent one for the foothills of the Berkshires, and whereas tornadoes and blow-downs have been recorded in these parts since colonial times, seldom have they persisted over such a great distance with the potential for destructive behavior. Fortunately for the region, the word "potential" can be applied here, as no lives were lost, no injuries reported and only one occupied building, a summer cabin at Camp Jewell in North Colebrook, was severely damaged. However, it wreaked havoc in the forest.

Before proceeding, a clarification of some of the terms associated with violent weather should be made.

A <u>tornado</u> is always associated with <u>thunderstorms</u>. It has a rapidly revolving vortex, which may or may not reach the ground. On the ground it can produce damage anywhere from a few feet to many hundreds of yards in width. In conjunction with tornadic winds, large bursts or jets of air can be directed straight downward, and upon contact with a forest, are capable of flattening large areas containing many acres. The signature for these <u>downbursts</u> is an area containing trees all lying in the same direction.

The meteorological event that produced the tornado of 1976 was documented by then student meteorologist William Jacquamin, at the request of The National Weather Service. The following is a synopsis of observations he made:

It touched down in Goshen on Route 63, and moved northeastward at an average speed of 30 mph. The average width or damage was 600 feet, with the widest and most severe at Grant Station/Grantville Roads near the Norfolk - Winchester town line, where it was 1,000 feet wide. Average wind speeds were 80-90 mph, with the maximum winds reaching 100-125 mph in the Grantville Road area. It took 30 minutes to go from Goshen to the Connecticut/Massachusetts border and another 10 minutes to reach Tolland, Mass.

Aerial recognizance and ground observations reveal two paths of destruction, sometimes manifesting tornadic winds, other times as downbursts. Both phenomena are to be seen in North Colebrook.

The effected area traversed two scientifically protected areas known as the Beckley Bog Area in the Wolcott Preserve, and the Phelps Research Area in North Colebrook. The last is a legally preserved natural area under the protection of The Nature Conservancy, and monitored by the Colebrook Land Conservancy.

In September of 1976, a suggested study procedure was agreed upon, which established a permanent research project in the two above-named natural areas that are legally preserved in perpetuity. In each of the targeted areas plans were drawn up providing for a study to be made every twenty years using exactly the same criteria as originally established. Photographs incorporating specific trees, utilizing fixed objects such as a prominent stone or the end of a wall, anything calculated to be recognizable by the next group twenty years hence, make up the thirty some-odd photos. This kind of study is only possible in a controlled situation such as these legally owned and protected areas. Private land is subject to too many possibilities for disruption. As the study is to be undertaken every twenty years for a two hundred year period, you can well imagine how difficult it would be if undertaken on private land.

The Phelps Research Area chosen for the photographic study, while relatively small in area, never the less meets the criterion recommended in the study procedure. Specifically, an area of approximately two acres bounded on the northwest by a footpath that once, during the first decade of the nineteenth century, had been a public road leading from the vicinity of the bridge crossing Sandy Brook to the Phelps iron works, located directly on the Norfolk-Colebrook town line. On the south by a stonewall extending northeast southwest for some 350 feet and on the southwest by an extensive swamp.

This wall commences a few feet from the southeast corner of a carriage barn built into the base of an embankment and terminates at the northeast side of the swamp. This swamp is at the juncture of Brummagem Brook and Sandy Brook. Brummagem Brook, so called in Colebrook for historic reasons, is named Doolittle Brook on the U.S. Geological maps. Facing southwest along the stonewall, the wooded, level ground between the wall and Sandy Brook was at one time a field; the land to the right, which begins to gain elevation within 20-30 feet of the wall is the study area. The tornado's path roughly parallels this stone wall.

Those of us in the 1997 study added one feature that was omitted from the 1977 research paper, and that is the Colonial Pine. This tree, which was mature when named in 1787, stands on the western edge of the tornado's path; indeed, a White Pine growing adjacent to it some 40 feet away, had its top snapped off by the winds, and was dead in 1997. It thus came that close to sharing the fate of the Cathedral Pines in Cornwall.

Arah Phelps named the Colonial Pine soon after he purchased the land it was growing on. He had been a soldier during the American War of Liberation, and when he noted that this large Pine possessed thirteen distinct branches, the symbolism in comparison to the thirteen American Colonies became immediately apparent, and he so noted these observations in his journals. It thus is officially recognized by the State of Connecticut as being the oldest named tree in the State. In the 220 some-odd years since being named, several of the thirteen branches have been broken off, but the stumps can easily be counted today.

The first twenty-year study noted the most marked difference in reforestation is the fact it is recovering in Maple (*Acer acer*) and several types of Birch. This is likely because of its proximity to the treeless swamp, which affords plentiful sunlight, and the wooded area to the southeast of the stonewall, which has a majority of deciduous trees to supply seeds.

There is an area of a half to perhaps three quarters of an acre about a quarter of a mile southwest of the tornado touch down that was leveled by a powerful downburst. Many of the Oaks, Maples and Birches flattened by this event were at least two feet in diameter, yet none were spared. This area is quite close to several homes located along the northern end of Bunnell St. and Shantry Road. On the grand scale of things, Colebrook escaped a major disaster by a cat's whisker, as the old timers would have said.

## **Historic Bytes**

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