MEMORIAL DAY FIREWORKS

by

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After a fairly tranquil but wet month of May in New England, Memorial Day (30 May 1979) brought on weather that was anything but tranquil.

The day's features included a very unstable air mass and a weak area of convergence across the southern New England coast assisted by its geographical location. East coastal Massachusetts bore the brunt of a cool flow from the east, conflicting with the southwesterly sea-breeze encountered across south-facing coastal areas of New England. Later that afternoon all of this would combine to produce the severe weather outbreak experienced over the southern half of New England.

While the convergence zone was setting up at noon EDT, a cluster of thunderstorms was reported to the immediate east of Albany NY. It was the fate of that cluster to continue its eastward trek, closer to the area of convergence where it would strengthen further.

As the National Weather Service issued special bulletins warning of severe weather to several counties of Rhode Island and Massachusetts, sections of Rhode Island were being affected by the storms. In several instances between 1330 EDT and 1545 EDT, hail measuring up to one inch in diameter caused considerable damage to home windows, gardens, and vehicles.

A Rhode Island florist sustained thousands of dollars damage as the hail smashed through her greenhouses. Many of the surrounding companies suffered losses of over a quarter million dollars from the same hail which originated from the same cell affecting a large area. Among those towns feeling the worst of the storms were East Greenwich and West Warwick, RI. A telephone company employee described the storm as something he had never seen in his fifty-seven years (including the hurricanes).

Meanwhile in New Bedford MA, cirrus blow-off was visible overhead and growing denser. At 1534 EDT a patch of mammatus cloud formed, indicating the storm's ferocity nearby (Fig. 1). The cell gradually crawled northeastward as the anvil became more visible and better defined with distance (Fig. 2).

Several other cells had developed during the course of the afternoon. This is demonstrated clearly with the color-enhanced radar photo(s) in which two to three separate lines or clusters are depicted in green with the more severe cells in lighter shades of yellow and red (Fig. 3). In the meantime, the line depicted by radar to the immediate northwest of New Bedford was photographed as it displayed building columns of cumulus on its southern limit with a portion of its tremendous sprawling anvil caught in the upper right (Fig. 4).

The final cell collapsed as it encountered the sea-breeze of southern New England roughly at 2100 EDT. As the cell continued eastward with only a brief sprinkle of rain, the last three discharges of lightning were the most dramatic, as the bolts streaked across the sky from horizon to horizon. Later that night, the moon became dimly visible. A perfect picture-story ending of an exciting day in southern New England.

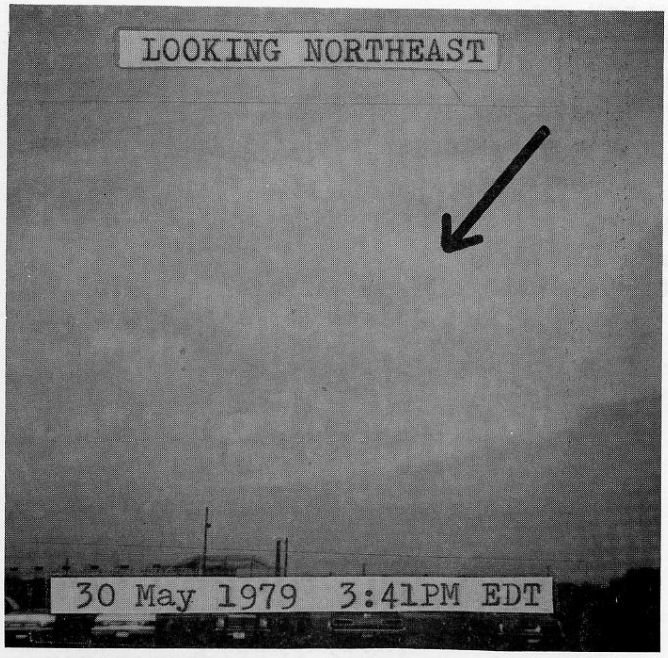

Figure 1

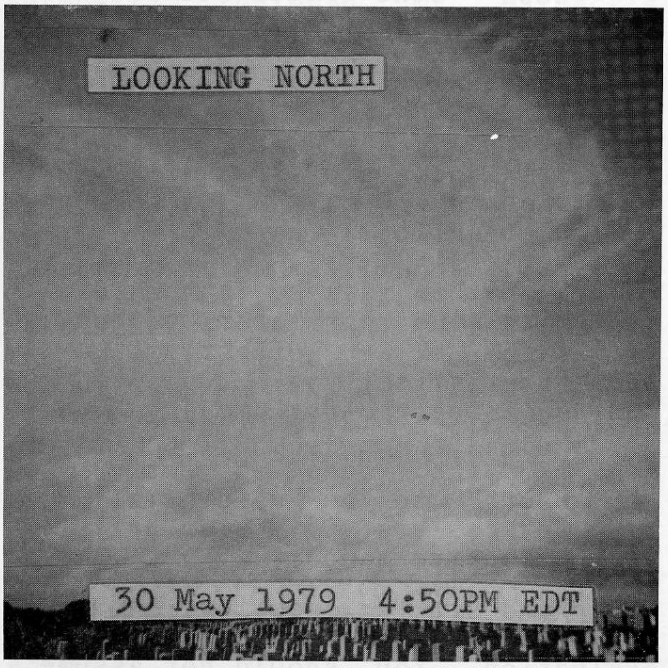

Figure 2

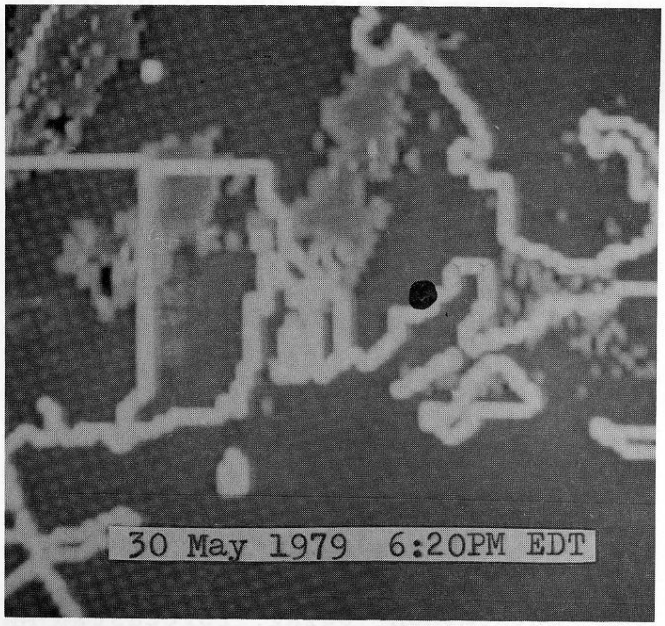

Figure 3

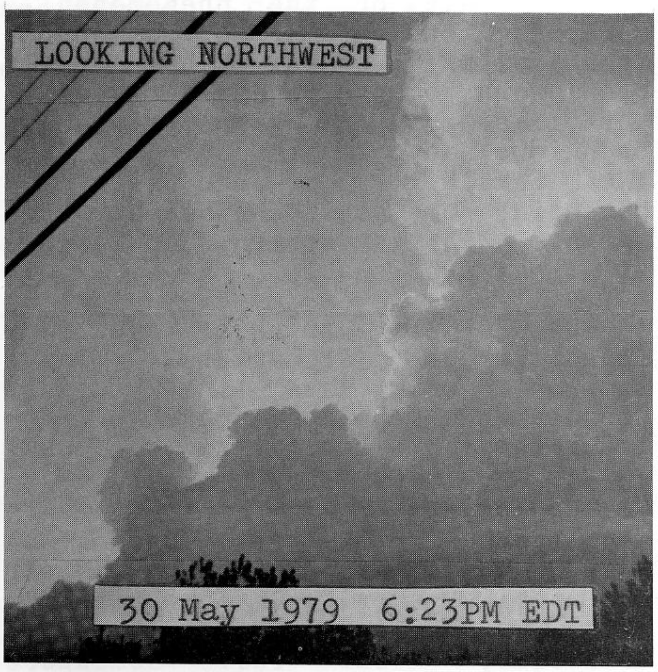

Figure 4