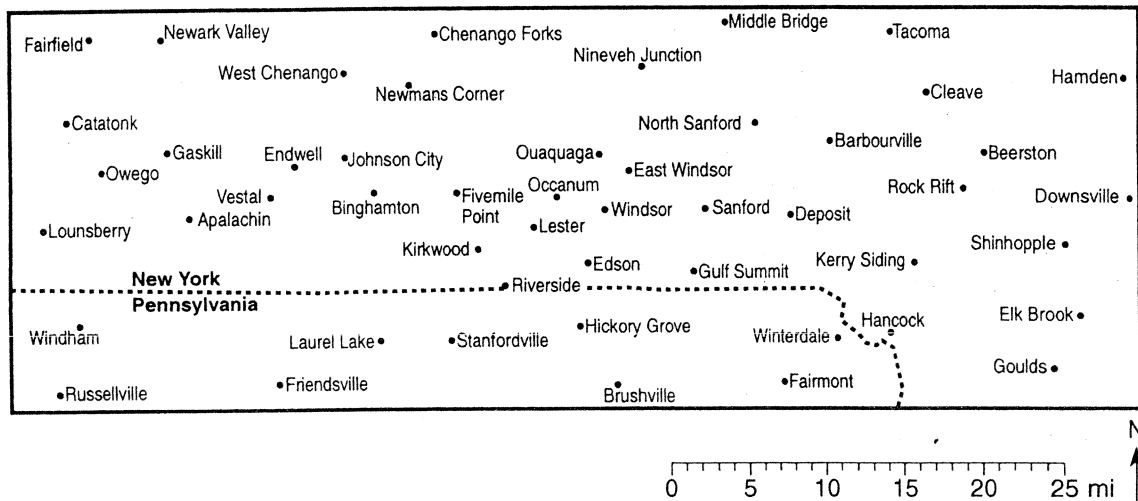


A New York Tornado

A small tornado formed near the town of Apalachin, New York at about 5:30 P.M. producing winds as strong as 70 miles per hour. It caused a path of destruction approximately 200 feet wide. By 5:45 P.M. the tornado had strengthened as it traveled thorough Vestal, New York with winds as high as 100 miles per hour. Considerable damage was reported along the path of the tornado.

By 6:10 in the evening the tornado moved to Binghamton with winds of about 130 miles per hour. It pushed over a 1000 foot high television transmission tower near Binghamton. Then the tornado lifted off the ground on its way toward Windsor, New York where only a few tree were damaged. In Sanford, New York a mobile home was completely overturned, although no greater damage was found.

The tornado arrived at Deposit, New York at about 6:30 P.M. and surface winds reached their greatest speed of approximately 180 miles per hour, causing severe damage to homes. However, after passing through Deposit, the tornado soon ended its more than 1-hour rampage and died out.



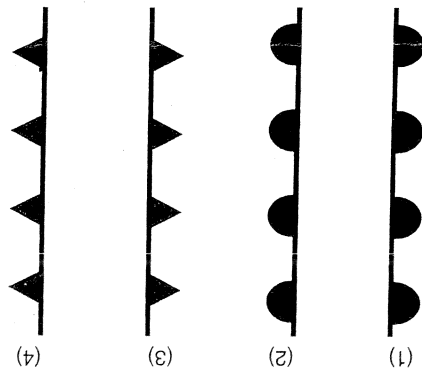
The map above shows the region affected by the tornado.

37. What was the maximum Enhanced Fujita Scale number of this tornado and where did it occur? (1) EF-1 at Apalachin (2) EF-3 at Apalachin (3) EF-4 at Deposit (4) EF-5 at Deposit
38. What was the Enhanced Fujita Scale number of this tornado in Sanford? (1) EF-1 (3) EF-3 (2) EF-2 (4) EF-5

EF-Scale Number	Wind Speed (mph)	Type of Damage Done
EF-0	65-85	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages sign boards.
EF-1	86-110	Peels surfaces of roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
EF-2	111-135	Considerable damage; roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light-object missiles generated.
EF-3	136-165	Roots and some walls torn off well-constructed homes; trains overturned; most trees in forest uprooted.
EF-4	166-200	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
EF-5	>200	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile-sized missiles fly through the air in excess of 100 meters; trees debarked; steel-reinforced concrete structures badly damaged.

Enhanced Fujita Scale

Base your answers to questions 37 through 39 on the table below, which shows the Enhanced Fujita Scale that is used internationally to classify tornadoes.



35. The tornado occurred as a continental-polar air mass replaced a maritime-tropical air mass. Which front symbol should be used on a weather map of this region to show this weather front advancing along with the tornado?
36. What was the average rate of speed at which this tornado advanced during the 1½ hours it was observed? (1) 0.04 mile per hour (2) 25 miles per hour (3) 38 miles per hour (4) 57 miles per hour