

SHORTER CONTRIBUTION

TORNADO, NORTH RICHMOND, 20th FEBRUARY, 1956

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Following is a description of a tornado as seen from the Meteorological Office at R.A.A.F. Station, Richmond, New South Wales on 20th February, 1956. The tornado was also reported by the Sydney Sun photographer who took the picture shown in the frontispiece while flying over flooded Richmond. His comments which were extracted from the Sun newspaper on the 20th February are appended.

Large cumulus and cumulonimbus passing just south of R.A.A.F. airfield at 1030, passed southwestwards to the foothills of the ranges and there was a belt of torrential showers in this area. Observation of the large cu and formative cu-nimb showed a very turbulent and ebullient motion in their tops just over the R.A.A.F. station. Build up of this cloud system appeared to be occurring in the rear and northern sector. As the storm moved further towards the ranges, the dark base now over the North Richmond area assumed an unusually black and intense appearance. Finally, from the base, at about 1500 ft. a funnel cloud extended downwards and appeared to reach the surface. Whilst I did not actually witness the inception of the funnel cloud, my attention was drawn to it by the Operations Officer, at Richmond, and then I followed its course until obscured. Rotation and writhing motion in the lower part of funnel could be discerned. Movement in the top part was faster than at the bottom and so the funnel assumed a thin, sloping whitish appearance which subsequently broke up. Its final stages were obscured by a local shower of rain. There was very heavy rain to the southwest (and in advance) of the tornado, and an occasional lightning discharge and thunder were noted, although the thunder was not pronounced. The tornado was visible from the tarmac area near the meteorological office from 1049 to 1057 EST, but local Richmond residents

had a grandstand view in the main street for about 10 minutes.

Later, I made a personal inspection and investigation in the area concerned, and the track and details of surroundings are shown in figure 1.

The vortex formed not far away from the farmhouse shown, over flooded farmlands. It moved south west approximately, for less than a mile, passing over flooded cornfields and lifting spray and cornstalks high into the air. A hotel employee at the North Richmond hotel said that some roaring noise could be heard (about $\frac{3}{4}$ mile off). The vortex reached the embankment of the now disused Richmond-Kurrajong railway line and broke up. According to eye witnesses it tried to reform after this but failed and finally dissipated. There was no property damage reported and there appeared to be no damage to plants, trees etc., but it would be hard to distinguish wind damage from flood water damage. The sketch shows dry weather conditions, but the track was over well flooded flat country at the time. No hail was reported from the area.

Meteorological conditions: A moist warm, tropical type air mass was over coastal districts of N.S.W. on 20th., having flowed in from tropical Tasman sea area during the previous few days. Winds in the upper levels were north-east 5-12 kts. up to high levels. The air mass was also rather unstable.

The weather some hours prior to the storm was as follows:

from 0400 to 0600, thundershower moving over western and far western suburbs of Sydney; heavy shower at Richmond at 0400; fog and fog stratus covered big areas of country between Penrith and Richmond from 0600 to 0830; rapid lifting of fog and rapid build up of large cumulus was seen, reaching cu-nimb stage (without anvils) by 1030, although much Ac - As was being formed from L Cu and CB activity.

Weather subsequent to storm was as follows: following a moderate shower at Richmond R.A.A.F. 1100 to 1115 EST the weather slowly cleared to fine and sunny by 1400, with light southerly winds and scattered large cu; no further showers occurred during the afternoon; dew points were high, from 69 to 72° F all day.

Assistance to convection, locally, may have been afforded by the foothills to ranges on one side of the tornado and some downdraft from showers which were approaching from the north-east over the R.A.A.F. area, and which obscured the final stages of the tornado. That the tornado formed under an area of intense convection is without doubt.

Extract from the Sun Newspaper, 20th February, 1956.

Sun photographer, Baden Mullaney said "I left Bankstown in a high-winged light Moth As soon as we reached Windsor we were hit by strong winds and a thunderstorm. We flew towards Richmond over flooded homes, ruined crops and washed out orchards. As we neared Richmond I saw the waterspout a few miles away. It was slowly moving down towards the ground, slanting as it went down. When it got near the ground which was covered by three or four feet of floodwater, a cloud of spray went up..... After we had gone about a minute I looked back and the water spout was still going."

Harry Jasprizza, Manager of the Bronte Stud, North Richmond said - "It was one of the most marvellous sights I have ever seen. The water seemed to be sucked out of a lagoon in a column about 15 feet in diameter, rising to about 2000 feet. It disappeared into heavy cloud and a few minutes later I had to run for cover as the heaviest rain in my experience pelted down."