

NEW ZEALAND METEOROLOGICAL OFFICE CIRCULAR NOTE NO.1.

551.575.1(931)

FOG - PEGASUS BAY - TUESDAY, 12th NOVEMBER 1940,

by J.F. Gabites, Wigram Aerodrome.

I was able to secure some observations on the sea fog which drifted inland over Christchurch late in the afternoon of Tuesday 12th November, 1940.

During the morning, the surface wind was SW, up to 20 mph. at about 9 a.m., but decreasing in the late morning. At 12.30p.m. it changed to ENE 10-15 mph, and reached its maximum of 20 mph at about 6 p.m. It decreased gradually during the night, and changed to a light NNW breeze (10 mph) at Wigram at 5 a.m. (Wed. 13th Nov)., but probably before that over the surrounding plains.

On Tuesday, the early morning inversion was destroyed rapidly after sunrise. The maximum surface air temperature (72.7 F., 22.6 C), was reached at 12.30 p.m. just before the onset of the ENE breeze.

The air reaching Wigram in the ENE current had been cooled considerably over the sea but warmed again after crossing the coast. Fog formed over Pegasus Bay during the afternoon, and by 3.30p.m. could be seen from Wigram to be crossing the coast in the vicinity of New Brighton.

I took temperatures from an aircraft which took off from Wigram at 4.20p.m. At that time fog completely covered the sea for at least 30 or 40 miles eastward of the extremity of Banks Peninsula, and northward to beyond Motunau Island. The top was very uniform at 1000-1050 feet (penetrated in several places for confirmation). We came down below it in a clear space in Lyttelton Harbour made a widesweep to seaward, and crossed the coast near New Brighton. The base was mostly at 50 feet, but could be seen down to the surface in numerous patches; tall trees along the beach had their tops covered. The visibility beneath was 500-1500 yards, except where the fog was right down to the surface.

When we took off, the edge of the stratus had reached Christchurch City, where the base was at 100-200 feet. On our return at 4.50 p.m. the edge had reached Wigram. By 5.30p.m. the whole sky there was covered, and the ceiling 100 feet. During the afternoon the air must have been heated about 5 C in its 10-mile journey over land to Wigram; even during the evening our minimum (52.3 F., 11.3 C) was still appreciably warmer than the temperature over the sea.

With the strengthening of the NW winds aloft the stratus began to disperse inland at about 9 p.m.. It had broken to 5 tenths at midnight, and had cleared completely before 2.30 a.m. on Wednesday 13th. At 4.30 a.m. there was no sign of fog over the sea for at least 70 miles out.

Temperatures:

Ground Level	5.30am	6 am	8.30am	9.30am	Noon	3p.m	4.30p.m.	6p.m.
°F		47.8	64.2	65.7	69.7	65.7		53.0
°C	8	8.8	17.9	18.7	20.9	18.7	15	11.7

Midnight.

°F 54.1

°C 12.3

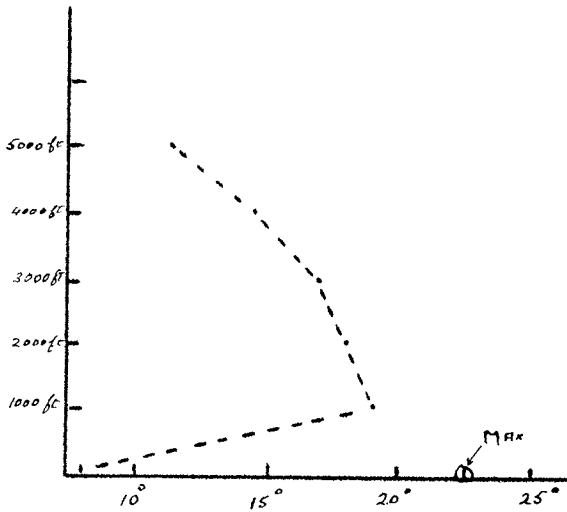
		4.30p.m.
1000 Feet.	19	12
1100 "		15
2000 "	18	16
3000 "	17	16
4000 "	14½	16
5000 "	11½	
at 50 feet over the sea	10	

Upper Winds:

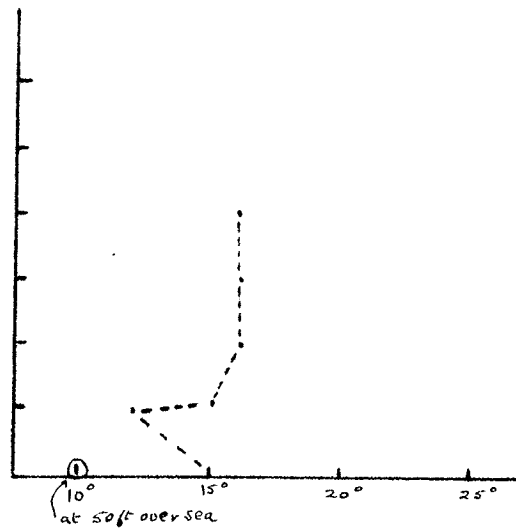
Tuesday 12th Nov.

Wed. 13th Nov.

	5.30 a.m.	11 a.m.	4 p.m.	4 a.m.
200 m.	180° 10 mph	200° 10 mph	050° 25 mph	360° 15 mph
500 m.	220 15	030 5	050 25	330 20
1000 m.	210 25	330 5	360 25	320 30
1500 m.		310 10	320 30	280 35
2000 m.		290 20		
3000 m.		230 40		
4000 m.		230 50		
5000 m.		230 50		



5.30 a.m. 12th Nov. 1940



4.30 p.m. 12th Nov. 1940