

Melbournes' Highest

by H. STERN

Melbourne's extreme maximum temperature of 45.6°C was recorded on 'Black Friday', 13 January, 1939. Table 1 presents hourly temperatures in the city on that day.

The synoptic sequence leading up to this event (see Fig. 1) depicts persistent northerly flow over most of the inland eastern Australia, with incursions of air from the south being confined to coastal districts. Table 2 lists daily maximum temperatures at Melbourne over the period 6 January to 14 January inclusive. The failure of weak cool changes to penetrate very far inland is illustrated by Table 3, which gives daily maximum temperatures at Wangaratta over the same period (Wangaratta is 200 km north east of Melbourne, on the northern side of the Great Dividing Range). The table shows that on both 9 January and 12 January when Melbourne experienced relatively mild weather, the temperature exceeded 40°C at Wangaratta.

How adequately was the public warned of the 20°C 'jump' in Melbourne's maximum temperature between 12 January and 13 January? Predictions of air temperature were not quantified in Australia at that stage in history. However, the following newspaper items show that some indication of a substantial temperature rise was given (although it would be difficult to infer the extreme event that did occur from them):

1. The Herald, Thursday evening, 12 January 1939 (under the heading 'Forecast') -

Generally fine. Warmer in the south, hot inland, South-east to north-east winds, freshening tomorrow.

2. The Herald, Thursday evening, 12 January 1939 -

Although today was mild in Victoria, the Weather Bureau forecasts "hot with rising northerly winds" for the next two days.

According to the Commonwealth Meteorologist (Mr. Watt) the only hope of a cool change lies in a depression moving slowly over Western Australia.

3. The Sun News-Pictorial, Friday morning 13 January, 1939 (under the heading "Today's Forecast") -

City. Fine and hot, becoming cloudy and sultry late in the day, freshening east to north winds.

General. Generally fine and hot but becoming cloudy, sultry, and unsettled from the west later; freshening east to north winds, tending north-west in western parts during the day.

Incidentally, three other Australian capital cities registered their extreme maximum temperatures during the January 1939 hot spell - Canberra (Acton) with 42.8°C on 11 January, Adelaide with 47.6°C on 12 January, and Sydney with 45.3°C on 14 January.

Table 1.
Hourly temperatures at Melbourne on 13 January 1939

Time (local mean time)	Temperature (°C)	Time (local mean time)	Temperature (°C)
Midnight	17.9	12.30p.m.	45.6 (Max)
1a.m.	17.9	1p.m.	44.8
2a.m.	17.1	2p.m.	45.3
3a.m.	17.1	3p.m.	45.0
4a.m.	16.9 (Min.)	4p.m.	32.9
5a.m.	17.3	5p.m.	32.2
6a.m.	17.7	6p.m.	31.9
7a.m.	19.1	7p.m.	31.4
8a.m.	25.7	8p.m.	31.3
9a.m.	36.0	9p.m.	30.4
10a.m.	38.1	10p.m.	32.6
11a.m.	42.1	11p.m.	31.8
Noon	44.9	Midnight	29.9

Table 2

Daily maximum temperatures at Melbourne during the hot spell of January 1939.

Date	Maximum Temperature (°C)	Date	Maximum Temperature (°C)
6 Jan.	23.9	11 Jan.	33.5 (at 1 a.m.; day-time max. 24.5)
7 Jan.	27.3	12 Jan.	25.6
8 Jan.	43.1	13 Jan.	45.6 (breaking record set 3 days before)
9 Jan.	24.4	14 Jan.	29.9 (at 12.01 a.m. daytime max. 24.4)
10 Jan.	44.7 (all-time record high)		

Table 3

Daily maximum temperatures at Wangaratta during the hot spell of January 1939

Date	Maximum Temperature (°C)	Date	Maximum Temperature (°C)
6 Jan.	39.2	11 Jan.	45.1
7 Jan.	42.5	12 Jan.	41.8
8 Jan.	44.4	13 Jan.	46.0
9 Jan.	40.4	14 Jan.	40.9
10 Jan.	45.0		

Air Temperature

