

Monthly Weather Report

OF THE METEOROLOGICAL OFFICE

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DECEMBER, 1946.—Unsettled apart from a dry, cold spell from the 15th-21st.

The month was remarkable for a dry, very cold spell from the 15th-21st. Mean temperature for the month was below the average and the duration of bright sunshine exceeded the average.

The weather of the first twelve days was unsettled, conditions being determined by the passage over or near the British Isles of Atlantic depressions and associated troughs of low pressure. On the 1st and 2nd a secondary depression in mid-Atlantic moved rapidly across the north of Scotland to south Norway. This was followed on the 3rd by another small depression which moved south-east across England. Rather mild conditions prevailed with rain at times, accompanied by strong winds and local gales. On the 4th and 5th a wedge of high pressure moved eastward across the country; considerable sunshine occurred on the 4th and screen frost was registered in most areas on the 5th. From the 5th-7th further troughs of low pressure moved east or north-east giving more rain, though considerable bright periods associated with an intervening wedge were enjoyed on the 6th. On the 8th and 9th a depression off the mouth of the English Channel moved east-north-east to Holland; rain fell generally and was heavy in southern England on the 8th; widespread gales also occurred in southern England on that day. A vigorous trough associated with a depression south-west of Iceland moved north-east across the British Isles between the 10th and 12th giving heavy rain locally; widespread strong winds and local gales prevailed on the 11th.

By the 12th an intense anticyclone was situated over north Russia and subsequently an associated ridge of high pressure developed over the British Isles. Meanwhile the main centre moved to southern Scandinavia, pressure rising to 1060 mb. in this region on the 15th. A very cold spell prevailed over the British Isles from 15th-21st, particularly in south and east England. On the 19th a very shallow depression moving west from Denmark caused appreciable snowfall in the south-eastern part of England, while slight snow fell as far west as St. Eval. By the 20th a belt of high pressure extended across Ireland and Denmark to central Europe but it had decreased considerably in intensity and was moving south.

Thereafter an unsettled type of weather again set in and persisted until the end of the month. On the 21st an almost stationary depression was situated over Iceland and a small disturbance off our north-west coasts moved north-east. Some rain fell in the west and north but little or no precipitation occurred in the south where light winds and cold, foggy weather prevailed and temperature remained below freezing point throughout the day in some places. On the 22nd a deepening depression off north-west Scotland moved north-east and a milder south-westerly air current spread over the country. Unsettled conditions continued with troughs of low pressure, associated with depressions in the far north, moving across the country. Rain fell frequently but fair periods and frosty mornings occurred during the passage of wedges of high pressure between the troughs.

Pressure and Wind.—Mean pressure exceeded the average by about 2.5 mb. to 4.5 mb., the excess being greatest in the north-east. Local gales occurred frequently in exposed places in Scotland and south-west England, particularly during the first sixteen and the

last seven days. Among the highest speeds registered in gusts were 70 m.p.h. at Holyhead on the 1st, 70 m.p.h. at Tiree and 76 m.p.h. at Prestwick on the 2nd, 77 m.p.h. at Bell Rock on the 11th and 81 m.p.h. at Scilly on the 26th.

Temperature.—Mean temperature was appreciably below the average, the deviation for the districts ranging from -1.0°F . in Scotland, N. to -3.7°F . in England, SE. In the week ending the 21st the deviation from the average was as much as -10.1°F . in England, SE., -8.9°F . in England, SW. and -8.8°F . in England, E., but in Scotland, N. it was only -2.2°F . Low screen minima were registered at times outside this period. The extremes for the month were:—(England and Wales) 55°F . at Sidmouth and Teignmouth on the 1st., Falmouth on the 10th, Weymouth, Seaton, Sidmouth and Teignmouth on the 11th and Llandudno on the 24th; 8°F . at Woburn and South Farnborough on the 21st; (Scotland) 54°F . at Arbroath on the 25th and Cape Wrath on the 29th., 15°F . at Braemar on the 14th; (Northern Ireland) 50°F . at Castle Archdale on the 1st, Bishop's Court on the 14th and 22nd, Castle Rock on the 13th, 25th and 29th, Hillsborough on the 25th and Armagh on the 25th and 29th; 18°F . at Garvagh on the 20th.

Precipitation.—The general precipitation expressed as a percentage of the average for the period 1881-1915 was 101 over England and Wales, 89 over Scotland and 113 over North Ireland. More than the average occurred over Northern Ireland, much of Wales and north-west England, a coastal strip in south-west Scotland, an area in east Scotland from Perth to Kincardine, a coastal belt from Tynemouth to Flamborough Head, East Anglia, at most places on the south coast of England from Bude to Worthing and in small scattered areas in the Midlands. More than 125 per cent. occurred in small areas in East Anglia, North Wales, Northern Ireland and Angus. Less than 50 per cent. of the average was received in the Moray Firth district.

Among the heavier falls in the 24 hours were:—

- 1st 2.04 in. at Glenquoich (Inverness-shire).
- 22nd 2.80 in. at Borrowdale and 2.17 in. at Troutbeck (Cumberland).
- 24th 2.19 in. at Kingairloch (Argyllshire).

Thunderstorms occurred locally at times, for example on the 1st-3rd, 5th-7th, 9th, 25th-27th and 31st.

Snow or sleet showers occurred fairly frequently; in Scotland snow, sleet and hail showers were frequent in the first fortnight and during the closing week. In the second week traffic was interrupted on the Perth, Braemar and Strathdon-Tomintoul roads owing to ice and snow. Appreciable snow fell in the south-east districts of England on the 19th.

Sunshine.—Generally speaking the duration of bright sunshine was well in excess of the average, the percentage of the average being 149 over England and Wales, 129 over Scotland and 123 over Northern Ireland (See Table I). There were, however, considerable variations at individual stations.

Miscellaneous Phenomena.—Aurora was observed in Scotland on nine nights. Solar halos were noted at Oxford on 10 days.