

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

SUMMARY OF OBSERVATIONS COMPILED FROM RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS.

PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE. To be purchased directly from H.M. STATIONERY OFFICE at the following addresses: ADASTRAL HOUSE, KINGSWAY, LONDON, W.C.2; 120, GEORGE STREET, EDINBURGH; YORK STREET, MANCHESTER; 1, ST. ANDREW'S CRESCENT, CARDIFF; 15, DONEGALL SQUARE WEST, BELFAST; or through any Bookseller.

VOL. 45. No. 12.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

Price 9d. net, Post free, 10d.
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DECEMBER, 1928. Changeable. Sharp frost about 9th and from 14th-16th.

The weather during December was very variable with occasional sharp contrasts in temperature from one day to the next and unusually severe frost on the 9th, 14th, 15th and at the end of the month. Precipitation occurred frequently but most of the monthly totals occurred after the 14th. Rainfall totals were mostly about or below the normal. There were a few exceptionally sunny days, notably the 7th, 8th and 9th.

Anticyclonic conditions prevailed generally during the first few days and the weather was mainly cloudy with light north-westerly to westerly winds and slight precipitation. Temperature was moderate. These conditions continued over most of England and Wales up to the 6th but in Scotland rain fell on the 4th and 5th and the wind increased in force, a gale occurring at Nairn during the night of the 4th-5th. On the 6th a depression passing eastwards across the north of Scotland with a trough extending southwards caused rain in most districts with bright periods in Scotland and the north of England. In the rear of this depression northerly winds and cold bright weather were experienced generally with wintry showers in northern districts. In the north of Scotland there was a marked fall in temperature amounting to about 8° F. at Aberdeen: the day temperature on the 7th, viz. 34° F., was 9° F. lower than that on the 6th. Severe frost both in the screen and on the ground occurred widely on the 7th and 8th. Good sunshine records were obtained on the 7th, 8th and 9th in many districts; more than 7 hours sunshine were recorded on the 7th at stations in the south-east of England and at Richmond (Kew Observatory) the 6th with a sunshine record of 6.6 hours was the sunniest December day since 1881. Rain fell in Scotland and Ireland on the 9th (38 mm. at Blacksod on the 9th) and except in eastern districts, mild cloudy weather with heavy local falls in the south-west and west prevailed generally on the 10th; 50 mm. fell at Pendennis (Cornwall) during the day of the 10th. By the 12th the wind had become easterly and during the next few days temperature was low, severe frost occurring widely on the 14th and 15th. At several inland stations in England the day temperature on the 15th failed to exceed 30° F. Fog occurred widely in England on the 14th and 15th.

On the 16th a trough of low pressure crossed the British Isles and southerly winds veering to the north-west spread over the country; there was a rapid rise in temperature, a maximum temperature of 45° F. at Winchester on the 16th contrasting with 28° F. at the same place on the 15th. Rain fell heavily during the night of the 15-16th in the West (30 mm. at Birr Castle) and widely on the 16th. The 17th was fine with more than 5 hours sunshine in several districts. Apart from widespread rain on the 19th-20th associated with a trough of low pressure, conditions were mainly anticyclonic with cloudy weather and fog in several districts on the 18th, 19th and 21st. Associated with a trough of low pressure off our western coasts mild rainy conditions spread eastwards to all districts on the 22nd. Bright periods associated with the passage of a wedge of high pressure occurred in many English districts on the 23rd but in the north-west strong winds approaching gale force at times were experienced. Heavy rain fell in northern and western districts during the night of the 23rd to 24th and in nearly all districts mild weather with continuous light rain or drizzle was experienced on the 24th. Heavy rain fell locally in Ireland on the 25th but in the south-east of England bright periods were enjoyed. Unsettled weather with strong winds, local gales and occasional heavy precipitation, notably in the east and south of England on the 27th, continued until nearly the end of the month when the northern part of the country and Ireland came under the influence of an anticyclone to the north and west of the British Isles; on the 31st, 5.8 hours sunshine were recorded at Cahirciveen and 5.1 hours at Tieve. In the south-east a depression developed on the 29th; heavy rain fell in the south and east on the 29th followed by snow or sleet and lower temperature on the 30th and 31st.

Pressure and Winds.—Pressure was frequently high during the month. In all districts monthly means of atmospheric pressure were above the normal, the excess above normal ranging from 4 to 7 millibars. Strong winds occurred frequently in western and north-western districts and in exposed places reached gale force on the 6th, 7th, 10th and about the 25th. A gust of 77 mi/hr. was recorded at Sealand early on the morning of the 26th, the highest mean hourly velocity on this occasion being 34 mi/hr. Gusts of 69 mi/hr. were recorded in a north-westerly gale at Tieve on the 6th and in a south south-westerly gale at Edinburgh on the 23rd.

Temperature.—Monthly mean temperatures were in general somewhat above the normal in the north-west of Scotland and about 1° F. to 2° F. below the normal in the central and southern parts of England; elsewhere they were about normal. Temperature was at a fairly high level during the first few days and around about the 25th. In the north of Scotland day temperatures generally reached their highest level during the first few days when temperatures in the neighbourhood of 50° F. were recorded. In most other districts the 25th and 26th were the warmest days of the month. There was a sharp fall in temperature on the 7th and 8th, low temperatures occurring widely around the 9th and again during a spell of easterly winds from the 14th to the 16th. During these periods unusually severe frost occurred over a wide area; amongst the lowest readings recorded were 18° F. in the screen and 13° F. on the grass at Burnley, 24° F. in the screen and 14° F. on the grass at Greenwich (London) on the 9th, 25° F. in the screen and 18° F. on the grass at Sealand, 26° F. in the screen and 17° F. on the grass at Birmingham on the 14th, 21° F. in the screen and 13° F. on the grass at Renfrew, 19° F. in the screen and 12° F. at Winchester, and 21° F. in the screen and 11° F. on the grass at Rhayader on the 15th. There was a rapid fall in temperature after the 26th and during the last few days of the month low readings occurred in many districts (20° F. in the screen at Cardross on the 31st).

The extreme temperatures for the month were:—England and Wales, 58° F. at Ventnor on the 1st and Torquay on the 5th, and 15° F. at Castleton (Yorks) on the 15th. Scotland, 55° F. at Perth on the 1st, and 14° F. at Braemar on the 28th. Ireland, 57° F. at Roches Point on the 2nd, Dublin (Phoenix Park) on the 16th, Dublin (City and Trinity College) on the 16th and at Belfast on the 23rd, and 23° F. at Birr Castle on the 9th.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the normal for the period 1881-1915 was 92: the values for the several countries were: England and Wales 88, Scotland 96, Ireland 96.

In England and Wales precipitation exceeded the normal in the east and south-east and locally in south Wales and south-west England; elsewhere there was a deficiency which was greatest in the north and north-east. Heavy falls occurred frequently during the last week of the month, notably in southern districts on the 27th (62 mm. at Dean Prior and 53 mm. at Princetown and Ashburton). Heavy falls occurred in many districts about the 10th (33 mm. at Ardtornish on the 9th, 40 mm. at Haverfordwest and 33 at St. Anne's Head on the 10th and 30 mm. at Skegness on the 11th).

In Scotland rainfall totals were slightly above the normal in some northern districts and more notably over the Firth of Clyde area but in most districts there was a slight deficiency. The period 22nd to 25th was particularly wet with heavy falls in the north-western and Loch Fyne areas (58 mm. at Glenquoich on the 23rd and 46 mm. at Inveraray on the 22nd).

In Ireland rainfall totals in excess of the normal occurred mostly in southern and eastern districts; in the north-west and west there was in general a deficiency which was most marked in inland districts.

Sunshine.—Sunshine aggregates exceeded the normal in the eastern districts of England and the south and east of Scotland; in the north-west of Scotland, Ireland and in most districts in the west and south-west of England they were below the normal. Representative values for districts expressed as a percentage of the normal ranged from 161 per cent. of the normal in Scotland W. to 84 per cent. in Ireland N. Abundant sunshine was recorded in various districts on the 5th, 7th to 9th, 14th, 17th, 20th, 21st and 29th.

Fog.—Fog occurred fairly frequently during the month mostly on the 4th, 12th, 14th to 15th, 18th to 19th, 21st, 23rd and on the 28th.

Miscellaneous Phenomena.—Aurora was observed in Shetland on the 5th, 6th, 7th, 11th, 12th, 13th and 14th, at Orkney on the 5th and 6th, at Gordon Castle and Stornoway on the 5th and at Aberdeen on the 6th.