

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

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

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DECEMBER, 1925: COLD, BECOMING MILD ON 26th.

General.—The cold spell which began at the beginning of the second week of November, continued generally during the first week of December and was followed by a rapid rise in temperature which, however, lasted only a few days. A renewal of the cold weather, which was interrupted only about the 17th, followed and lasted until the 26th, when mild, rainy weather set in and continued until the end of the month.

Cold northerly winds followed on the 4th by cold south-easterly to southerly winds of continental origin with many bright periods, and severe frosts prevailed over the British Isles during the first week of the month. At Rhayader and Eskdalemuir, minimum temperatures in the screen of 13°F. and 12°F. were recorded on the 4th and 6th respectively, and grass minima fell to 7°F. at Rhayader on the 3rd and 4th and to 6°F. at Cranwell on the 6th. Fog occurred in many places, notably on the 4th, when it persisted throughout the day in London. Snow, sleet and hail fell generally, and "snow-lying" to a depth of 4 to 5 in. was recorded at Balmoral on the 6th and 7th, and at Norwich on the 8th. On the 5th a deep depression was situated north of the Azores and extended its influence slowly east and north. Southerly winds spread over the British Isles and the temperature rose quickly. The thaw caused extensive floods in north-east Yorkshire. After the 8th, the centre of this deep depression moved east across the north of Scotland, and pressure became high on the Atlantic, re-establishing northerly winds and wintry weather over the British Isles. Snow and sleet occurred in most parts and in a few places the temperature did not rise above freezing point on the 13th, 14th and 15th. Ground frosts occurred at most stations, the frost of the night ending on the morning of the 16th, being particularly severe in the eastern districts of England: at Gledston the screen minimum thermometer registered 11°F.; at Norwich 16°F. was recorded in the screen and 12°F. on the grass; at Cambridge 18°F. in the screen and 15°F. on the grass, and at Tunbridge Wells 19°F. in the screen and 10°F. on the grass.

By the 17th the winds became westerly and milder weather was experienced generally. This, however, only lasted a short while, as a low pressure area centred off our south-west coasts on the 19th gradually moved along the English Channel and North Sea to Scandinavia, giving easterly winds backing to north-west, with cold weather from that day until the 25th. Rain and snow occurred generally, the depth of snow reported at Lairg, in Sutherland, being 18 in. On the 20th a screen minimum of 2°F. was registered at Braemar, and on the 25th the maximum at Eskdalemuir was only 19°F. With the approach of a depression from the Atlantic the winds became westerly on the 26th, and there was a rapid rise of temperature. Mild, rainy weather continued until the end of the month with gales and high winds from the 29th to the 31st.

The general character of the month is illustrated by the following remarks taken from Observers' notes:—Southport.—The month was very sunny and decidedly drier than usual; northerly winds were in excess and southerly ones in defect. Huddersfield.—Snowy and very wet. Copdock.—The month was divided into two well marked periods presenting very different types of weather—the first cold, dry and very sunny, the second from the 17th onwards equally mild, equally wet, and equally dull—in spite of this, the total sunshine—over 67 hours—has only been exceeded with 70 hours in 1917, and of this total over 50 hours occurred in the first 14 days, a unique record for December. The cold weather with which November ended continued until skating became pretty general within the first three or four days of December, an experience again which is unique certainly within living memory in this part of the world. Totland Bay (I. of Wight).—The total sunshine for the month, *viz.*, 79.6 hours, was the largest December total during the 24 years I have registered sunshine at Totland Bay. Torquay.—For the most part the weather was of a wintry type with an unusual number of keen frosts. Squalls of sleet occurred towards the end of the month followed by heavy rain and gales.

Pressure and Winds.—The mean pressure was everywhere below normal. The deviation of monthly means of pressure at fixed hours varied from 2.8 mb. at Stornoway and Malin Head to 5.9 mb. at Southport. The isobars of mean pressure trended from west-south-west to east-north-east over Ireland, and from west to east over Scotland, and the greater part of England and Wales, the prevailing winds being between south-west and west. In the north-east of England the isobars were deflected south-eastwards. High winds

and gales associated with a deep depression over the English Channel occurred on the south and east coasts (Track M) of England on the 22nd and 23rd and widely between the 29th and 31st. During a gale from between the south-west and west on the 30th the wind attained a mean hourly speed of over 50 mi/hr. at anemometer stations in Ireland and the north-west of England; at Southport the highest hourly wind on the 30th was 61 mi/hr., while a speed of 88 mi/hr. was recorded in a gust. Gusts of 80 mi/hr. and above were recorded at Holyhead, Cahirciveen and Quilty on the same date.

Temperature.—The cold spell which lasted with little intermission until the 26th was again a noteworthy feature of the weather of the month. In all Districts the mean temperature was below normal, the deficiencies ranging from 3.7°F. in Scotland N. and W. (mean temperatures 34.2°F. and 36.9°F.) to 1.1°F. in Ireland N. and the Channel Isles (mean temperatures 40.3°F. and 45.2°F.). The month was not as cold as last month; the mean deficiency for Districts 1-10 was 2.5°F. as compared with 3.8°F. in November.

In Scotland the month was the coldest December since 1892 and the November-December period the coldest since 1878. The highest temperature for the month at most stations occurred on the 29th in the warm south-westerly current of a depression off the north-west of the British Isles. Ground frosts were numerous and at stations in Scotland and the north of England exceeded 20 in number. A grass minimum temperature of -2°F. was recorded at Braemar on the 20th.

The extreme temperatures for the month were:—(England and Wales) 62°F. at Porton on the 30th, 9°F. at Garforth on the 6th and at Bungay (Flixton) on the 16th; (Scotland) 55°F. at Achnashellach and Onich on the 8th, 2°F. at Braemar on the 20th; (Ireland) 58°F. at Dublin on the 29th, 16°F. at Dublin, Markree and Newtownforbes on the 23rd.

Precipitation.—In Scotland precipitation was below the normal in many areas, and at Aberdeen and Greenock and in the Loch Katrine area little more than half the normal, but in some northern areas and in parts of Aberdeenshire, Perthshire and south-east Scotland there was an excess. In England and Wales precipitation above the normal was confined mainly to north-eastern and southern areas. Although the number of days of precipitation at stations in Western Districts was on the average about 20 the monthly aggregates were below normal. In Ireland precipitation was below normal everywhere excepting in some northern areas; at Birr the total for the month amounted to little more than half the normal.

Amongst the largest rainfall measurements were:—86 mm. (3.40 in.) at Llyn Fawr (Glamorgan) on the 28th, 70 mm. (2.77 in.) at Holme (Devon) on the 29th and 50 mm. (1.97 in.) at Leadhills on the 7th.

"Snow lying" was observed on several mornings at stations in Scotland and the north of England. Thunderstorms occurred at some stations on one or two occasions.

Sunshine.—The mean daily duration of sunshine was above normal in all districts except in Scotland N. and Ireland S. The deviations from normal ranged from +0.70 hours in England S.E. to -0.02 hours in Ireland S. Most of the sunshine was recorded during the first half of the month, the week ending December 5th being the sunniest week of the month.

Fog.—At most stations in England and Wales fog was reported. Amongst the largest numbers of days of fog were 20 at Coventry and Kensington (London), 17 at Newport (Mon.), 14 at Lincoln and 12 at Buxton, Hull and Swinton. In Scotland fog occurred with greatest frequency in the Valleys of the Clyde and Forth.

Miscellaneous Phenomena.—Solar and lunar halos were observed at several stations on various dates. Aurora was observed at Baltasound, Shetland, on the 18th and in Orkney on the 4th, 17th and 19th. At Lerwick the only aurora observed during the month was a glow visible through a break in the clouds on the 15th. The Zodiacal Light was seen at Oxford on the 9th, 10th and 11th. Observations were made at the latter station of a parhelion on the 17th and 23rd and of a sun pillar at 15h. 30m. on the 24th. A lunar rainbow was observed at Armagh on the 27th.