

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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DECEMBER, 1934.—Exceptionally mild; very wet except in North-west Scotland; pressure unusually low; little sunshine.

This was, for many places in the south of England, the wettest December on record, the excess of rainfall compared with the average being greatest in the counties of Devon, Dorset, Hampshire, and Sussex. The abnormal warmth was more general, and was unprecedented for December for sixty years or more at many places in England and Scotland. The constant presence of depressions over or near to the British Isles was responsible for the high rainfall and for the low mean pressure, but the warmth and scanty sunshine were due mainly to the scarcity of winds drawn directly from the Continent or from high latitudes.

On the morning of the 1st a spell of mainly fair, quiet weather with high barometric pressure was being replaced by stormy and wet weather in the west. A system of depressions quickly enveloped the north-west of Europe and cyclonic conditions continued over the British Isles without a break until the last two days of the month, when an anticyclone centred over Spain began to expand northwards. It was only on the first and last days of the month that pressure was generally above the normal over the British Isles.

The deepest of the depressions that at one time or another were centred over the British Isles, was one which reached Ireland early on the 15th. Pressure fell a little below 960 millibars in Central Ireland, and the depression in question was apparently then the deepest system anywhere in the northern hemisphere. It filled up with extraordinary rapidity while still covering the British Isles. A break in the general predominance of southerly to south-westerly winds occurred from the 23rd to the 25th, when winds from between south-east and east gained the upper hand, pressure being high around Scandinavia and Finland and low in mid-Atlantic, but these conditions only brought temperature down to about the December normal in the North and East, and only for two or three days.

Pressure and Wind.—Pressure was everywhere much below the normal for December, the deviation at 7h varying from -16.5 mb at Valentia to -3.0 mb at Lerwick.

The meteorologist in charge of the Fernley Observatory, Southport, writes that this was the month of lowest mean pressure at Southport in records extending back 64 years. Strong winds and gales were most frequent in the West. At Pendennis Castle (Cornwall) there were 54 hours with a wind speed of more than 38 mi/hr, a figure rather greater than that for any of the Scottish stations, although the Bell Rock had 52 and the Butt of Lewis 47 hours. The gale of the 9th gave the highest hourly wind speed at most English stations (58 mi/hr. at Pendennis), those of the 26th and 28th the highest in Scotland (57 mi/hr. at Butt of Lewis on the 26th). The gale of the 26th in Scotland was particularly widespread and severe; it affected shipping and caused structural damage inland. The highest gusts occurred on the 9th—83 mi/hr. at Pendennis and 90 mi/hr. at the Lizard.

Temperature.—The warmth of this month was phenomenal in all parts of the country. In the north-east of Scotland, the mean temperature at Wick (45.3) was only 0.6° less than the normal for May, and in most places throughout the British Isles lay either between the normals for April and May or was about equal to the normal for April.

In the parts of England that are normally the coldest in winter, notably in Yorkshire and Lincolnshire, temperature equalled or even exceeded what is normally experienced in December on the relatively very mild south-western coasts of England and Ireland and was only about a degree below the December normal for the Scilly Isles.

In London (Greenwich) the mean temperature of 46.9 was 0.4° below the normal for April and has been slightly exceeded only once since 1841 and that was in 1852 when the mean was 47.2° . The observer at Totland Bay, Isle of Wight, stated that the month there was 1.8° warmer than the previous warmest December in the preceding 49 years. In Scotland, Deerness, Aberdeen and Glasgow have had no warmer December since 1871 at least, and at Southport

none in at least the last 64 years. Birds of several species were reported to be nesting and even laying their eggs late in the month.

Temperature reached 57° or over locally in most districts within the first ten days of the month. The absence of cold nights was very striking; cases where temperature never fell within ten degrees of the freezing point were not uncommon on the south-western coasts of England and Wales. The extremes for the month were:—(England and Wales) 59° at Shrewsbury on the 3rd, at Darwen on the 8th and at Aber on the 8th and 9th, 25° at Rickmansworth on the 21st; (Scotland) 57° at Achnashellach on the 8th and at Nairn on the 9th, 25° at Kettins on the 6th, and at Balmoral on the 21st and 22nd; (Ireland) 59° at Rathfarnham and Foynes on the 1st, 28° at Glasnevin on the 14th, and at Markree Castle on the 17th.

Precipitation.—The general precipitation expressed as a percentage of the normal for the period 1881–1915 was 170, the values for the constituent countries being: England and Wales 190, Scotland 122 and Ireland 164. It was about three times the normal in parts of Devon, Hampshire and Sussex; at least twice the normal over most of South Wales and southern England and also apparently over the central and eastern parts of the Irish Sea and at a few places in southern Ireland and the middle of Yorkshire. There was a deficiency in the north and north-west of Scotland and in the extreme north of Ireland. The large amount of rain recorded in the month was not due so much to exceptional falls on individual days as to the extraordinary persistence of wet weather. It was a common experience in the south-west of England to have measurable rain on every day of the month. There was a very notable wet spell from the 1st to the 7th in the South, which was nowhere more remarkable than in South Devon. At Brent Moor 11.16 inches fell in that week, the total for the month there was 27.46 inches and at Holne, on the southern border of Dartmoor, 25.03 inches. Few places even in the normally wettest regions of the north-west had so much; at Seathwaite the total was 21.50 inches and at L. Llydaw, Snowdon, 30.80 inches. The observer at Holne states that the 25.03 inches measured there is a record for any month for 59 years, and the observer at Douglas, Isle of Man, quotes the total of 11.31 inches there as a record for 56 years, the previous largest having been 10.35 inches in November 1890. Amongst the largest falls in a single day were 3.74 inches at Maesteg (Glamorgan) on the 1st and 3.26 inches at Fofanny (Co. Down) on the 25th.

Sunshine.—A pronounced deficiency of sunshine was all but universal at individual stations. As can be seen from Table 1 the district deficiency was much the greatest in Scotland, W., where the figure was only just over a third of the normal; even in Ireland, S., it was only 79 per cent. of the normal. This was the third successive month in which the average duration of sunshine for districts 1–10 was below the normal, the successive monthly percentages being 82, 71 and 60—a noteworthy run of dull weather. For both England, E. and S.E. the mean percentage for these three months was as low as 63.

Fog.—Fog did not, as a rule, occur very frequently except in some of the inland districts of western Scotland and northern England, but was persistent all day in many parts of England, especially in the south and east, on the 10th, 21st and 23rd.

Miscellaneous Phenomena.—There was an unusually fine display of the aurora borealis on the evening of the 29th, which was seen in the Midlands and west of England and in the north of Ireland between 6 p.m. and 11 p.m.

A solar halo was seen at Oxford on 12 days, and a lunar halo on four of these and on the 27th.

Thunder and lightning was observed in association with a line squall over nearly the whole of south-east England on the night of the 27th–28th. The squall passed out into the North Sea at about 1 a.m. on the 28th having crossed London some two hours earlier. It was accompanied locally by heavy hail.