

## MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

SUMMARY OF OBSERVATIONS COMPILED FROM RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, AND AT GIBRALTAR AND MALTA, WITH A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANIZATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE. To be purchased through any Bookseller or directly from H.M. STATIONERY OFFICE at the following addresses:—IMPERIAL HOUSE, KINGSWAY, LONDON, W.C.2, and 28, ABINGDON STREET, LONDON, S.W.1; 37, PETER STREET, MANCHESTER; 1, ST. ANDREW'S CRESCENT, CARDIFF; 23 FORTH STREET, EDINBURGH; or from E. PONSONBY, LTD., 118, GRAFTON STREET, DUBLIN

FORTY-THIRD YEAR.

Vol. XXXV. (New Series)

No. IX.

SEPTEMBER, 1918.

[Price 6d., Post free, 7d]

## Abnormally Wet and Very Cold.

The outstanding feature of the month's weather was the unprecedented rainfall which was experienced in all parts of the British Isles. In numerous places, especially in the West Riding of Yorkshire and in Lancashire, even where the records extend over a period of more than fifty years, the rainfall totals were the greatest ever measured, not only in September, but in any calendar month whatever. At many stations, moreover, rain was measured on every day of the month. In addition the temperature was much below the normal, the low temperatures recorded on the 29th and 30th at many of the stations being lower than any previously recorded in September. Sunshine was very variable, but owing to the effect of one or two very sunny days the daily means did not differ greatly from the normal. A cyclonic type of weather persisted throughout the month, the mean monthly air pressure being unprecedentedly low, and winds from the South-West and West predominated, the general character of the month being in marked contrast with the quiet anticyclonic conditions commonly associated with September. Very generally the weather of the month appears to have been unfavourable for agricultural and other out door operations, the Reports of the Food Production Department up to September 21st indicating that there had been much interruption to the harvest. Further reports of sprouting and shedding were received, and the condition of the crops in the northern counties and in Wales caused some anxiety.

The following notes supplied by observers illustrate the general character of the month:—*Allans Green, Northumberland*.—If the weather had been warm and close with no wind the corn would have been spoilt beyond all hope. Fortunately, however, there has been a high wind with a low temperature, so that it has always been possible to load a bit of corn now and then. *Ipswich, Suffolk*.—Much the wettest September during 18 years, and practically the coldest, except 1912. 282a is the lowest maximum I have recorded in September. Sunshine, however, was not much below the normal. *Weston Turville, Bucks*.—A very unsettled month, gravely interfering with the completion of the harvest. *Tenbury, Worcester*.—The wettest September on record here, the nearest approach to it being in 1896. The temperature has been uniformly low right through the month, the conditions being bad for the latter part of the harvest, "growing out" having badly developed in many cases. *Bromyard, Hereford*.—Abnormally wet month. Late corn harvest damaged. *Leyland, Lancs*.—The wettest month experienced here, the rainfall being 426% of the normal. The corn in these parts is practically ruined. *Llundrindod Wells, Radnor*.—The wettest September on record in this locality coincided with the most extensive and bountiful grain crops, and played deplorable havoc with the latter. *Dublin (City)*.—A very unsettled and changeable month. Air pressure was low and unsteady, with strong, squally winds from points between South-West and North-West, and rain was frequent, the latter being much above the normal. The temperature was 1.7a below normal. *Carrigoran, Co. Clare*.—The month has been unusually wet, cold, and unseasonable. The lack of sunshine and dry days has caused very wide-spread loss to the agricultural community, and much damage was done to the hay and corn. *Hurdlestown, Co. Clare*.—The wettest September on record; the total rainfall (206 mm.) was 130 mm. above normal, and the rain-days 10 above. This total has been exceeded in the past 33 years by only two previous months, namely August, 1891 (214 mm.) and August, 1917 (229 mm.). Hay and corn have been greatly damaged. Great floods also caused much loss and damage on mountain roads, and most of the low-lying lands are under water. *Fethard, Waterford*.—The rainfall beat all previous records. Between 21 hr. on the 3rd and 9 hr. on the 4th 58 mm. fell, and between 5 hr. and 9 hr. on the 15th 30 mm. fell, resulting in extraordinary flooding and damage to roads. Much injury was done to the harvest and much grain sprouted in the stooks.

**Air Pressure.**—Throughout the month depressions passed across the British Isles or their immediate neighbourhood in rapid succession, the air pressure during the whole period continuing low and unsteady. Of the depressions which crossed the British Isles the most important were those marked B, C, D, E, and J on Map 2 on p. 99, D being associated with the heavy rain which was measured so very generally on the 15th, and J with the great fall in temperature which occurred on the 29th. As shown by Map on p. 1 99, the monthly mean was much below the normal, and the gradient much steeper than usual, the pressure ranging from 999.5 mb. at Lerwick to 1011.0 mb. at Jersey. At many stations the mean pressure was the lowest ever recorded in September; at some of the Scottish stations it was the lowest recorded during the past sixty years, and has been approached only in 1866 and 1869. Of the telegraphic reporting stations the greatest departure from the normal was 12.6 mb. at Leith and the smallest 6.0 mb. at Jersey. The lowest of the individual readings was 971 mb. at Castlebay on the 22nd, and the highest 1025 mb. at Blacksod Point and Scilly on the 30th. Owing to many of the depressions being comparatively shallow, the accompanying gales, although fairly numerous, were not very violent. The highest gusts recorded by the anemometers were 31 m/s at Quilty on the 23rd, 30 m/s at Scilly on the 10th, 28 m/s at Pendennis Castle on the 9th and at Southport on the 19th.

**Temperature.**—In all districts the mean monthly temperature was below the normal, the defect varying from 2.7a in Scotland North to 0.6a in England East and the English Channel. Of the individual readings the highest was 297a at Manchester (City) on the 7th, and the lowest 268a at Braemar on the 15th. Owing to the almost complete absence of anticyclonic conditions the range in temperature compared with some previous Septembers was small, and, although fluctuating from day to day, the month's temperature was very uniform. An outstanding feature was the very low maximum recorded on the 29th, the reading at many stations on this day being no higher than 280a. On the 29th also a minimum of 277a was recorded at Totland Bay, being the lowest September value during 32 years. In Scotland it was decidedly the coldest September experienced during the last sixty years, though here and there September 1863 was all but as cold.

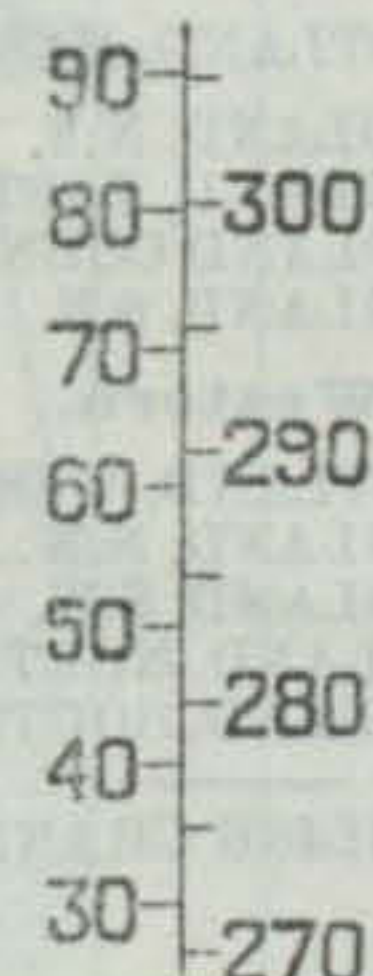
**Precipitation.**—Both on account of the number of rain-days and the largeness of the monthly totals, which were quite unparalleled in many instances, the precipitation figures for the month were very remarkable, the rainfall being much above the normal in all districts. The largest aggregate was 207 mm. in England North West and the smallest 116 mm. in England North East; the excess varying from 137 mm. in the former district to 60 mm. in Scotland North. The frequency with which heavy daily falls occurred was notable, the individual falls of 25 mm. or more in a day being too numerous to mention. Even falls of 50 mm. and above were frequent, some of them being: on the 11th, at Clifton, 58 mm.; 15th, Beddgelert 123 mm., Douglas 119 mm., Wolfelee 62 mm., Alnwick Castle 59 mm., Cockle Park 58 mm., and Newton Rigg 56 mm.; 21st, Beddgelert 69 mm.; 22nd, Kinlochquoich 66 mm.; and 29th, Dorchester 57 mm. At the following stations the duration of the month's rainfall is given in hours: Bolton 179, Huddersfield 173, Hutton 142, Southport 136, Blundellsands 135, Eskdalemuir 120, Lancaster 117, Aberdeen and Valencia Observatory 93, New Malden 75, and Kew Observatory 60. In Scotland most localities had an excess of rain; more than twice the normal at Edinburgh and Glasgow and over considerable areas in the South and South-East. At Eskdalemuir the aggregate for the three days 15th to 17th was as much as 91 mm., of which 48 mm. fell on the 16th. Towards the North amounts were less heavy. By the 21st moderate to heavy rains were again general, and wet weather continued until almost the close of the month. The following notes have been supplied by observers: *Meltham (Yorks.)*.—The month's rainfall (351 mm.) was 131 mm. greater than the wettest September here during 38 years, and 69 mm. greater than the previous wettest month (November, 1888), and was, moreover, more than four times the normal. There were 41½ continuous hours of rain from 6h. 30m. on the 14th to 24 h. on the 15th, yielding 84 mm. *Blundellsands (Lancs.)*.—September 30th was the thirty-second day of rain, the total for the month (186 mm.) being the heaviest recorded in any month since 1875. *Bolton*.—The total rainfall for the month (323 mm.) is quite the largest amount measured in any calendar month whatever since 1831. For even a somewhat similar month one has to go back to July, 1831, for which month the total is given as 305 mm. In December, 1833, the total was 266 mm. *Southport*.—The total rainfall (214 mm.) and the number of rain-days (29) were each greater than in any previous calendar month whatever since the record commenced in 1871. The mean air pressure was the lowest for September in the same interval. Rain-fall duration (136 hours) was more than twice the largest previous September value from 1902. *Ashburton (Devon)*.—The wettest September during 53 years, the total for the month being 277 mm., the previous wettest September having been 224 mm. in 1896. At Copper Mill and Intake in Snowdonia the month's rainfall amounted to 759 mm. and 726 mm. respectively.

**Sunshine.**—As in August most days had some sunshine, so that the monthly totals, notwithstanding the frequent rain, were larger than might have been expected, one or two very sunny days helping to increase the month's average. The sunniest District was England South East (5.60 hr. per day), and the least sunny Scotland North (3.70 hr. per day); the differences from the normal varying from +0.34 hr. in Scotland East to -0.68 hr. in England South West.

**Thunderstorms** were frequent, especially during the first half of the month, and were often accompanied by **Hail**. On the 4th at Salisbury, hailstones as large as marbles fell and stripped foliage from trees.

**Optical Phenomena.**—Solar and Lunar Halos were very frequently seen, the unsettled character of the month's weather being further illustrated by the Solar and Lunar rainbows which were especially conspicuous between the 22nd and 28th. A sun-pillar was seen at Eskdalemuir on the 10th.

**Aurora** was seen at several places in England, Scotland, and Ireland on the 1st, 2nd, 4th, 9th, 17th, 18th, 28th, and 29th.



Temperature Scales.