

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

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

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Annual Summary and Introduction,
10s. post free.**OCTOBER 1930. Mild. Wet in Scotland, Ireland and the west of England and Wales,
dry and sunny in Eastern England.**

October was mild in all districts and especially so during the week commencing October 12th. There was a pronounced excess of precipitation in Scotland, Ireland and the western districts of England and Wales but in the east of England the month was both sunny and dry.

The anticyclone which by the end of September was situated to the north-west of Scotland, moved south eastwards across the British Isles during the first few days of October. The weather was generally cloudy and except in Ireland and the southwest mainly dry. In the east and southeast of England bright periods occurred on the 2nd and 3rd (8.3 hr. sunshine at Manston on the 2nd and 9.5 hr. at Margate and 9.1 hr. at Gorleston on the 3rd). Rain began in the south of Ireland and the southwest of England on the 2nd, and during the night of the 3rd to 4th and on the 4th moderately heavy falls were reported from many parts of the British Isles. The rain marked the commencement of a period of unsettled weather which continued almost unbroken to the end of the month. There were, however, bright periods especially on the 6th and 9th; 10.2 hr. bright sunshine was recorded at Cardiff on the 6th, and 10.1 hr. at Durham and 10.0 hr. at Harrogate on the 9th. Precipitation was heaviest and most general on the 6th to 7th, and in exposed places in the southwest and west gales were reported on the 6th and 8th. In the east and southeast the 8th was generally the windiest day; gale force was attained and the wind in a gust exceeded 60 miles per hour in a few places, e.g. at Lympne and Calshot. Snow was reported for the first time this autumn on the hills round Inverness and Fort Augustus on the 9th. Severe ground frost occurred locally in Scotland and Ireland during the night of the 8th to 9th and more widely during the night of the 9th to 10th; 21° F. was recorded by the terrestrial radiation thermometer at Renfrew on the morning of the 9th and 22° F. at South Farnborough on the morning of the 10th.

Subsequently an anticyclone over the Atlantic moved eastwards to central Europe and from the 10th to the 13th the greater part of England came under its influence. Sunshine records were generally good during this period in England especially on the 12th when 9.9 hr. occurred at Ross-on-Wye. Meanwhile unsettled conditions with rain at times continued to prevail in Scotland and Ireland.

On the 14th the deep depression centred to the south of Iceland extended eastwards. With a steep gradient for southerly winds, air of tropical origin spread northwards over the British Isles and from the 15th to the 17th the temperature was unusually high for the time of year; maximum temperatures exceeded 65° F. in most parts of England, reaching 70° F. in London (Greenwich) on all three days while night minimum temperatures on the 15th or 16th did not fall below 60° F. at places as far apart as Manchester, Ross-on-Wye and Margate. Rain occurred in most places during this period, moderately heavy falls being reported locally on the 15th and 17th (40 mm. at Eskdalemuir and 55 mm. at Carmarthen on the 15th, and 38 mm. at Foffanny (Co. Down) on the 17th).

On the 20th a general change of conditions occurred, and during the next six days cool, squally, northwest winds with occasionally local thunder and hail, and gales on the 24th and 25th were experienced. The weather was cold and sunny in the east, but in the west the conditions were cold and unsettled, moderate rain alternating with sunny periods; Dumfries had 8.7 hr. bright sunshine on the 25th, Rothamsted and Clacton 8.9 hr. on the 26th. The coldest days were from the 24th to 27th, temperature not rising above 42° F. on the 24th, and 45° F. on the 25th at Fort Augustus, and 41° F. at Eskdalemuir, and 44° F. at Dumfries on the 27th, while the minimum temperature on the grass fell to 18° F. at Burnley and 20° F. at Greenwich on the 27th. Snow and sleet were again reported on the hills in Scotland.

A new depression approaching from the Atlantic brought a renewal of mild weather on the 28th, giving cloudy conditions with rain in the north and west, but only a little drizzle in the south. On the 30th and 31st cold air again reached Scotland, but the weather continued mild in England.

Pressure and Winds.—Cyclonic conditions prevailed throughout the greater part of the month and in all districts monthly means of pressure were below the normal, deviations from the normal pressure at 7h. varying from -0.3 mb. at Scilly to -9.5 mb. at Lerwick. The prevailing winds were between south and west. Strong winds occurred in many places from the 4th to 6th and in some coastal districts in the west, gale force was reported. Associated with a deep depression which crossed the British Isles on the 8th (Track G) gales occurred in exposed places in the west and in most places in eastern England. The highest velocities in a gust were recorded on that date; 62 miles per hour were recorded at Southport and Calshot and 61 miles per hour at Lympne. Further gales occurred in coastal districts in the north and west between the 17th and 19th, and on the 24th and 25th, the wind momentarily attaining a velocity of 69 miles per hour at Pendennis Castle on the 17th, and at the Butt of Lewis on the 18th, and 67 miles per hour at Lerwick on the 18th.

Temperature.—Owing to the frequency of mild southerly to westerly winds, monthly mean temperatures were above the normal in all districts, especially in the east and south of England. The highest temperatures occurred about the middle of the month, the week commencing October 12th being remarkably mild. From the 15th to 17th under the influence of air of tropical origin day temperatures exceeded 65° F. in places; in London (Greenwich) the

temperature rose to 70° F. on each of the three days 15th to 17th, while 69° F. was recorded as far north as Achnashellach (Ross and Cromarty) on the 15th. The nights, too, were markedly mild; at Ross-on-Wye the temperature did not fall below 60° F. during the night of the 14th-15th which was the mildest October night at that station since 1921. At Dungeness a minimum temperature of 61° F. was recorded during the night of the 16th to 17th. Low screen minima, in many places about or below freezing point, were reported on the morning of the 10th and 13th in the southeast, widely on the 27th and in Scotland on the 31st.

Severe ground frosts occurred in many places on the morning of the 27th and in the east of Scotland on the 31st; amongst the lowest readings recorded by the terrestrial thermometer were 17° F. at Eskdalemuir and 18° F. at South Farnborough on the 27th and 17° F. at Lechars on the 31st. The extreme temperatures for the month were:—England and Wales, 71° F. at Canterbury on the 17th, and 23° F. at Rickmansworth on the 27th. Scotland, 69° F., Achnashellach on the 15th, and 24° F. at Braemar on the 31st. Ireland, 67° F. at Dublin (Trinity College) on the 14th, and 33° F. at Ballinacurra on the 10th, and at Lisburn and Dublin (Phoenix Park) on the 31st.

Precipitation.—October, 1930, was wet in the western districts of Great Britain and in Ireland, and dry in the east of England. Over the British Isles as a whole, the general precipitation expressed as a percentage of the normal for the period 1881-1915 was 119; the values for the constituent countries were:—England and Wales 87, Scotland 149, Ireland 162. For the fourth consecutive month the general precipitation over Ireland has exceeded the normal.

In England, most places east of longitude 2° W. had less than threequarters of the normal precipitation. In the east of England monthly totals were less than half the normal and less than one-third the normal locally in Norfolk. At Copdock (Suffolk) the month was the driest October with the exception of October, 1920, since records were commenced there in 1901. In the western districts, on the other hand, there was a well defined excess, more than one and a half times the normal being recorded in the northwest of England and locally in Wales; Stonyhurst had more than one and three-quarter times the normal and Borrowdale, Seathwaite (Cumberland) almost twice the normal.

In Scotland with the exception of small areas in the Dee and Don Valleys, the Tay estuary and parts of districts adjoining the Firth of Forth, rainfall was generally well above the normal, the greatest excess occurring in the western part of the country lying between the Solway Firth and the Caledonian Canal; in the west there were several places with only one dry day and at many only two such days. While total falls of 250 mm. and upwards were frequent in the west, there were several in the east with less than 50 mm.; Belhaven had only 31 mm. and Smeaton 37 mm. The largest daily falls were 66 mm. at Ardgour on 18th, and 56 mm. at Kinlochquoich on 30th. There were 8 days with over 25 mm. at New Cummock, 6 at Glencroe and 5 at Glen Etive, Kinlochquoich, Gruline, Nuthill, Ardgour and Glenhurich.

In Ireland monthly totals of precipitation were everywhere above the normal and over the country as a whole the month was, with the exception of October, 1928, the wettest October since 1916, when the general precipitation exceeded twice the normal. Armagh and Mullingar had almost twice the normal and Nenagh and Londonderry just over twice the normal.

Snow was reported for the first time this autumn on the hills around Inverness and Fort Augustus on the 9th, whilst from the 20th onwards the reports of snow or sleet from places in the north were more frequent. The falls, however, were as a rule slight.

Thunder occurred occasionally; in the east of England it was reported locally on from one to three days.

Sunshine.—October, 1930, was on the whole a sunny month in the eastern and southeastern districts of Great Britain, but in Ireland and the west of Scotland there was a well-defined deficiency of bright sunshine. In the southeast of England the mean daily duration of bright sunshine ranged from 4.5 to 5 hr. and was generally less than 2.5 hr. in Ireland and the west of Scotland. Representative totals for Districts expressed as a percentage of the normal ranged from 133 per cent. in England E. to 75 per cent. in Ireland N. There were frequent bright intervals during the period October 6th to 26th. Notable daily records included 9.4 hr. at Holyhead on the 1st, 9.1 hr. at Gorleston on the 3rd, 10.0 hr. at Inchkeith and 9.2 hr. at Lechars and Leafield on the 6th, more than 9 hr. at several places on the 9th (10.0 hr. at Harrogate), 9.7 hr. at Falmouth on the 11th, at Ross-on-Wye on the 12th, and at Guernsey on the 16th, 9.1 hr. at Scilly on 18th, 9.0 hr. at Calshot on the 25th, and 9.3 hr. at Felixstowe on the 26th.

Fog.—Fog was most widely reported about the 4th, 19th and from the 27th to 29th.

Miscellaneous Phenomena.—Aurora was observed in Scotland on the 13th, 14th, 15th, 17th, 18th, 20th, 26th and 27th. The displays on the 17th, 18th and 26th being most widely observed. The aurora of the 17th was seen as far south as Market Harborough and Norwich. A solar halo of 46° was observed at Bude on the afternoon of October 22nd. A solar halo with contact arc at times was observed at Oxford on the morning of the 5th.