

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. 47. No. 8.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

Price 9d. net, Post free, 10d.
Annual Subscription, including
Annual Summary and Introduction,
10s. post free.

**August, 1930. Unsettled and wet. Hot spell Central and Eastern England, 27th to 29th.
Widespread severe thunderstorms, 28th to 30th.**

Apart from a brief spell of brilliant warm weather during the last week of the month, August was unsettled, wet and mostly cool. Sunshine aggregates exceeded the normal in the eastern half of England and were below the normal elsewhere, the deficiency being most pronounced in Ireland.

During the first week heavy local rains or thunderstorms due to a complex depression over the British Isles were of almost daily occurrence. Heavy falls occurred widely on the 3rd (54 mm. at Margate), 5th and 6th (66 mm. at Chewton Mendip, Somerset, and at Weston-super-Mare on the 6th). Maximum temperatures were generally below the normal, although on the 10th and 11th maximum temperatures exceeding 70°F. were recorded in the southeast of England. On the 14th strong squally wind and local gales occurred in the rear of a deep depression which passed eastwards to the north of Scotland, the wind in a gust attaining a speed of 62 mi/h. at Liverpool.

Subsequently a temporary improvement associated with an anticyclone off our southwest coasts took place and brilliant sunshine was recorded in several districts on the 16th (14.3 hr. at Harrogate and 13.9 hr. at Ross-on-Wye). On the 17th rain fell in Ireland and unsettled conditions spread eastwards. Heavy falls occurred in parts of Ireland and Scotland on the 18th and 19th and widely from the 20th to 23rd with local gales on the 21st. On the 25th a depression rapidly approached western Ireland but was subsequently deflected northwards; much rain fell in Ireland and western Scotland on the 25th and during the night of the 25th and 26th. Meanwhile an anticyclone had become centred over Germany and the southerly winds on its western side brought warm air from France, in consequence of which the temperature rose rapidly to over 80°F. in the south of England on the 26th, the rise in temperature extending to Scotland on the 27th. In many parts of central and eastern England maximum temperatures of 90°F. and over were recorded during the period 27th to 29th. Such a hot spell has not been experienced during the last week in August since 1906. Thunderstorms accompanied locally by heavy hail commenced in the west on the night of August 26th-27th. On the 28th and 29th severe storms occurred in Scotland and the northern districts of England and over a much wider area during the night of the 29th to 30th. The hot spell was terminated by the development of an anticyclone to the south of Iceland, in association with which cool northerly winds spread southwards over the British Isles; on the 31st the maximum temperature was 63°F. at Cranwell and 74°F. at Camden Square (Andover) compared with 90°F. at Cranwell and 93°F. at Camden Square on the 29th.

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, the deviations from normal of the mean pressure at 7 hr. ranging from 4.0 mb. at Donaghadee to 2.2 mb. at St. Mary's, Scilly. Winds were mostly southwesterly to westerly and strong about the 2nd, 14th and between the 18th and 21st. Gales occurred in coastal districts on the 14th, 18th, 19th, 21st and 22nd. Gusts of 60 miles per hour or over were recorded at Fleetwood and Liverpool on the 14th, at Holyhead on the 18th and at Kirkwall (Orkney) and Lympne on the 21st.

Temperature.—In most parts of the country mainly cool weather was experienced up to the 25th, the temperature failing to rise to 70°F. except at the beginning of the month or about the 10th and 17th when maxima of 70°F. and slightly above were recorded in parts of England. In striking contrast was the sudden spell of hot weather which set in after the 25th. A remarkable feature was the suddenness of the change, the temperature at Richmond (Kew Observatory) rising to 88°F. on the 27th as compared with a maximum temperature of 68°F. on the 24th, while at Eskdalemuir the maximum temperature on the 27th, 83°F. (the highest recorded there since observations were begun in 1910) was 19°F. higher than the maximum on the 26th. The maximum temperature of 87°F. recorded at Ruthwell on the 27th was the highest temperature recorded in Scotland since 88°F. was recorded at Colmonell in August, 1911. In Scotland the hot spell was of brief duration, but in the eastern half of England it continued until the 30th, when cool northerly winds spread southwards. For three consecutive days, 27th to 29th, 90°F. was recorded at Cranwell, 91°F. at Cardington and 90°F. and over in London. At Ross-on-Wye the maximum temperature recorded on the 27th, viz., 88°F. and the minimum on the 29th, 64°F., were the highest recorded there in August since 1911. At Norwich the night of the 30th (minimum temperature 66°F.) was the warmest night experienced there since July 23rd, 1921. The minimum temperature of 67°F. at Richmond (Kew Observatory) on the 30th is a record for the last few days in August. The extremes of temperature were:—England and Wales 94°F. in London (Camden Square) on the 29th, and 37°F. at Rickmansworth on the 20th. Scotland

87°F. at Ruthwell on the 27th and 35°F. at Balmoral on the 25th. Ireland 81°F. at Newcastle, Wicklow, on the 27th, and 38°F. at Markree Castle on the 31st.

Precipitation.—The general precipitation for the British Isles expressed as a percentage of the normal for the period 1881-1915 was 142; the values for the constituent countries were:—England and Wales 124, Scotland 167, Ireland 153. The value for Scotland is the highest on record since comparable statistics became available in 1881.

In several districts in the Midlands and east of England monthly totals of precipitation were below the normal. In the east of England the greater part of the rainfall occurred during the first two weeks, heavy falls being recorded on the 3rd and 7th. In most other parts of England there was a marked excess of precipitation, more than one and a-half times the normal being recorded in several districts in the north and south, e.g., Cockle Park (Northumberland) had 184 per cent. of the normal total for August, Ushaw College (Durham) 183 per cent., Brighton, 176 per cent. and Southampton 176 per cent. At Teignmouth the month was the wettest August since 1917. The heaviest falls were recorded generally on the 3rd, between the 20th and 22nd and on the 29th; amongst the largest amount recorded were 54 mm. at Margate on the 3rd, 63 mm. at Princetown and 62 mm. at Redruth on the 20th and 48 mm. in London (East Ham) on the 29th.

In Scotland precipitation was everywhere above the normal, the excess being over 200 per cent. in some eastern coastal districts. At Aberdeen and Arbroath it was the wettest August since 1877 and at Nairn since 1874. Over an inch of rain was recorded on five separate occasions at Ardgour, and on four at Glencoe, Achara (Dunrobin), and Glenquoich. There were some very large daily falls, notably 97 mm. at Threave (Kirkcudbright) on the 20th and 80 mm. at Inveraray on the 25th, the latter falling in a period of 12 hours. An observer at Todshawhaugh, Roxburgh, reported that torrential rain on the 2nd caused a great deal of damage, several bridges as well as walls and crops being washed away. In many places there were only one or two dry days during the month, but at Ardnadam and Ben Alder Lodge some rain was measured every day.

In Ireland there was a pronounced excess of precipitation everywhere. Heavy falls were recorded on the 2nd, between the 17th and 20th and on the 25th.

Thunderstorms occurred locally mostly in the central and eastern districts of Great Britain on the 2nd, 3rd and between the 5th and 7th. Severe thunderstorms accompanied locally by heavy hail occurred in Scotland and the north of England on the 28th and 29th and over a much greater area during the night of the 29th-30th. The following remarks are based on notes supplied by observers. At Leuchars during a severe storm on the 20th when lightning was observed from 19.45 to 23.30 G.M.T., 29.7 mm. of rain and hail were recorded between 21.36 and 22.00 G.M.T. At Aberdeen the storm lasted five hours. During a violent storm which burst over Peebles on the morning of the 29th hailstorms were responsible for considerable damage to greenhouses and fruit trees, as many as 1,200 panes of glass being reported to have been broken in one hotel alone. About three miles to the northeast of Peebles hailstones about 1½ in. in diameter fell for about 10 minutes accompanied by a deluge of rain and incessant thunder and lightning. Torrential rain and hailstones of unusual size fell during a storm at Dunbar (East Lothian) in the late evening of the 28th; the largest hailstones were oval in shape, 1.2 in. longer axis, 1 in. smaller axis and side elevation oval about 0.6 in. A second storm in the early morning of the 29th was accompanied by 19 mm. rain in 20 minutes. During a storm on the night of the 29th to 30th an observer in the southwest of London states that between 23.30 and 24.00 G.M.T. thunder and lightning were almost incessant with a maximum rate of flash discharge of 63 per minute at 23.30 G.M.T.

Sunshine.—Sunshine aggregates for the month were above the normal in the eastern half of England and below elsewhere. Representative totals for districts expressed as a percentage of the normal varied from 118 per cent. in England S.E. to 77 per cent. in Ireland N. There was on the whole an increase in the sunshine recorded from northwest to southeast; at Markree Castle (Sligo) the mean daily duration of sunshine amounted to 3.09 hr. and at Margate (Kent) to 7.92 hr. More than 10 hours' sunshine were obtained in various districts on the 3rd, 14th, 16th, 17th, 19th, 22nd, 24th and on most days during the last week.

Fog.—Fog occurred mainly in coastal districts on the 9th and 10th and during the last three days of the month.

Miscellaneous Phenomena.—Solar halos were observed at Oxford on 17 days.