

## MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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## SEPTEMBER, 1942.—Mainly unsettled; very wet in Scotland and Ireland.

The unsettled weather experienced during August persisted, apart from temporary breaks, throughout September. Rainfall was excessive, particularly in Scotland and Ireland, but over a large central area of England there was a deficiency.

On the 1st a trough of low pressure, associated with a depression moving north over Iceland, passed eastward over the British Isles giving rain or showers and local thunderstorms. On the 2nd and 3rd a small secondary depression moved north-north-east along our west and north-west seaboard; further rain occurred, which was heavy in parts of Scotland. During the following days a depression moved first east-north-east and then north from a position south-east of Greenland; heavy rain caused serious local flooding in the west and north on the 4th-5th and more general rain occurred on the 5th. On the 7th and 8th pressure was high southward of the British Isles, while troughs of low pressure moved across the country; rain fell in the northern half of the British Isles on the 7th and in the west and north on the 8th; the latter day was warm and sunny over much of England and east Scotland.

The period 9th-13th was mainly anticyclonic; a high pressure system moved eastward over England on the 9th and 10th and another over Scotland on the 11th and 12th. Fair weather prevailed over most of the country, though troughs of low pressure associated with depressions moving east across Iceland caused some rain in north Scotland and extreme north Ireland on the 10th and slight rain in north Scotland and locally in Ireland on the 11th. Some warm days were experienced during this spell.

Unsettled conditions were renewed when a deep depression south of Iceland moved eastward: gales were recorded at some exposed stations in the northern half of the country between the 14th and 16th. On the 18th a shallow depression passed east over the north of Scotland giving more rain chiefly in the north and west, and from the 19th-21st another disturbance moved first east to St. George's Channel and then north-north-east over Scotland. Weather was very unsettled and rain heavy at times, particularly on the 20th. Subsequently a deep depression moved south-east from the west of Iceland to the north-west of Scotland and thence over the British Isles causing a continuance of unsettled, showery weather, with local thunderstorms and sunny periods. A shallow depression moved southward over Britain on the 25th; showers and local thunderstorms occurred, with sleet in some places and snow on high ground. A short, temporary break in the unsettled weather occurred in many parts on the 26th and 27th with the passage of a wedge over the British Isles but unsettled conditions were quickly renewed and persisted until the end of the month.

**Pressure and Wind.**—Mean pressure was below the average generally, the deficiency being greatest in the north and least in the south; at 7 h. the deviation ranged from  $-2.3$  mb. at Lympne to  $-7.6$  mb. at Sumburgh (Shetlands). The pressure gradient, associated with south-westerly winds, was thus considerably increased and winds from between south and west predominated. Local gales were reported at exposed stations at times, chiefly from the 3rd-5th, 10th, 14th-16th, 23rd, 24th and 29th. Among the highest speeds recorded in gusts were 67 m.p.h. at Lerwick on the 10th, 64 m.p.h. at Stornoway on the 4th, and 62 m.p.h. at Kirkwall on the 9th, Tiree on the 15th and St. Ann's Head on the 29th.

**Temperature.**—On the whole mean temperature was not very different from the average in Scotland and Northern Ireland but somewhat exceeded the average in England and Wales. The first three weeks were mainly mild, the warmest spells being the 1st-3rd and 8th-12th; the latter period provided some really warm days,  $75^{\circ}\text{F}$ . being registered in eastern Scotland on the 8th and temperatures approaching  $80^{\circ}\text{F}$ . at numerous places in England on the 11th and 12th. The last week was cool and minima of  $32^{\circ}\text{F}$ . or below were recorded at many places on the 26th and 27th. Low day temperatures were also experienced towards the end of the month,

notably on the 25th, when maxima below  $50^{\circ}\text{F}$ . were widely registered in the north and west.

The extremes for the month were:—(England and Wales)  $81^{\circ}\text{F}$ . at Norwich and Tunbridge Wells on the 11th,  $28^{\circ}\text{F}$ . at Castleton on the 27th; (Scotland)  $75^{\circ}\text{F}$ . at Aberdeen, Craibstone and Stonehaven on the 8th,  $20^{\circ}\text{F}$ . at Dalwhinnie on the 26th; (Northern Ireland)  $68^{\circ}\text{F}$ . at Castlerock on the 8th and at Castlerock and Armagh on the 10th,  $28^{\circ}\text{F}$ . at Aldergrove on the 26th.

**Precipitation.**—The general precipitation expressed as a percentage of the average for the period 1881-1915 was 108 over England and Wales, 155 over Scotland and 192 over Northern Ireland. In Scotland the excess was general apart from two small areas, one in north-east Aberdeenshire and the other on the coast of East Lothian, where totals just failed to reach the average. More than twice the average occurred over a fairly large area in Argyll and in the neighbourhood of Tain, Ross-shire. In England and Wales the distribution was very variable; less than the average occurred over a large central area as well as at a few stations on the coast. Within the central area several stations had less than 50 per cent. Elsewhere values generally exceeded the average, more than 150 per cent. being received locally in west and south Wales, the Lake District, a small area extending from north Cornwall to Plymouth and at a station in County Durham. Locally in the Lake District and at Bude twice the average occurred. In Northern Ireland the excess was general and noteworthy; percentages of the average ranged from 164 at Ballymena to 204 at Newtownbutler and 240 at Londonderry.

Heavy rainfall on the 4th-5th caused serious flooding in the Lake District of England and in the neighbourhood of the River Esk.

Among the heaviest falls in 24 hours were:—

- 2nd. 2.31 in. at Lochearnhead (Perthshire).
- 4th. 5.08 in. at Borrowdale (Cumberland), 4.07 in. at Watendlath Farm (Cumberland) and 4.26 in. at Conaglen, in Ardgour.
- 5th. 2.29 in. at Eskdalemuir and 2.46 in. near Blaenau Festiniog (Merioneth).
- 20th. 2.92 in. at Tain (Ross-shire) and 2.10 in. at Creggan reservoir, Londonderry and at Sion Mills (Tyrone).
- 27th. 2.95 in. at Kingairloch (Argyll) and 2.13 in. at Fofanny reservoir, Mourne Mountains.

Rainfall was frequent as well as excessive in the west of Scotland and in Northern Ireland, many stations reporting measurable rain on 24 days or more; Baltasound had as many as 29 such days and Portree (Skye) and Conaglen (Ardgour) 28.

Local thunderstorms occurred on the 1st, 3rd, 14th, 17th, 23rd-27th, 29th and 30th.

Snow was widely reported on high ground in Scotland on the 24th and 25th; it was reported on the 25th also on high ground in Northern Ireland and locally in South Wales. On the 25th sleet was reported at a few stations, and snow fell at sea level at Dunvegan, Skye.

**Sunshine.**—Sunshine was variable; in Scotland it exceeded the average in the east and south-west but was below the average up the Great Glen and in the west and north. In England and Wales sunshine was deficient in the south and east as well as in parts of the Midlands, but it was excessive on the whole in the north, particularly the north-east. In Northern Ireland, sunshine was somewhat below the average generally.

**Fog.**—Fog (mainly morning or evening) occurred locally at times, chiefly from the 8th-13th and 27th-29th.

**Miscellaneous Phenomena.**—The aurora was observed from northern stations in Scotland on 12 nights; solar halos were noted at Oxford on 11 days. A large meteor, with a long tail, was seen at Oakmoor, N. Staffs. on the 22nd. During a heavy shower at Bala on the 23rd, small lumps of ice were seen.