

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

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

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DECEMBER, 1932.—Very mild after the 12th; mainly dry England and northern Scotland.

The weather of the month was extremely mild after the 12th and dry over most of England, but wet in Ireland, Cumberland, and most of Scotland south of latitude 57°. In many places it was also sunny.

At first a depression centred west of Iceland moved east-south-east to the North Sea, while secondary troughs of low pressure passed eastward across the British Isles. Rain fell at times and was heavy in Scotland on the 1st and 2nd. Sleet or snow was reported in Scotland and north-east England around the 2nd and 3rd, and thunderstorms occurred locally in Scotland, north-east Ireland and north-west England around the 3rd. The 4th was a beautiful day in England, several places in the south enjoying 7 hours or more sunshine.

A small anticyclone, situated south-east of Iceland on the 5th, moved south-south-east and increased in intensity, and cold anticyclonic conditions were maintained over most of the British Isles until the 11th or 12th, though an easterly gale was blowing almost continuously in the western English Channel from the morning of the 6th to the night of the 11th. Snow or sleet in small amounts fell daily during this period in the south-east, and on the 11th sleet was reported in the south-west and at the Scilly Isles.

Subsequently weather became unsettled and very mild, with pressure high for the most part over central and south-east Europe and depressions moving north or north-east off our west or north-west seaboard. Very disturbed conditions, with heavy rain and strong southerly winds or gales at times prevailed in the west and north from the 15th–22nd. Meanwhile, over a large part of England (notably the east and south-east) very little rain fell and much sunshine was enjoyed locally, particularly between the 18th and 22nd. A short period of anticyclonic weather occurred around the 25th, but unsettled conditions were subsequently renewed. A very intense depression, centred on the Atlantic west of Ireland and moving north-east, caused gales in western and northern districts on the 31st; a gust of 96 m.p.h. was recorded at Valentia, in south-west Ireland.

Pressure and Wind.—Pressure was high from the 6th to the 11th and again for a short time around the 25th. During the mainly unsettled period from the 12th to the 31st the centres of depressions kept to the west or north-west of the British Isles and no deep disturbance passed directly over the country. Hence, it is not surprising that pressure was everywhere above the normal, the excess varying from 7.3 mb. at Yarmouth, Norfolk, to 1.1 mb. at Valentia, in south-west Ireland. This distribution increased the mean gradient for southerly winds. A notable spell of easterly gales was experienced in the western English Channel between the 6th and the 11th; at Pendennis Castle, Falmouth, the autographic records show an almost continuous mean hourly velocity of more than 38 m.p.h. from 9h. on the 6th to 1h. on the 12th. Widespread southerly or south-westerly gales occurred in the west and north around the 17th, 23rd and 31st. Gusts of 94 m.p.h., 87 m.p.h., 79 m.p.h., and 74 m.p.h. were registered at Lerwick, Butt of Lewis, Edinburgh and Paisley, respectively, on the 17th, 76 m.p.h. at Kirkwall on the 2nd and 83 m.p.h. at Lerwick on the 18th and 24th. On the 31st, a gust of 96 m.p.h. was noted at Valentia Observatory; this is a record speed in a gust at that station.

Temperature.—One of the most striking features of the month was the extreme mildness experienced after the 12th, particularly from about the 16th to the 22nd. On the 16th, 60° F. was reached at Llandudno and at Cupar, on the 17th, 61° F. at Dublin and 60° F. at Hazelhatch, Rathfarnham and Llandudno, and on the 22nd, 60° F. at Bromley. The nights were also warm, some notable night minima being 54° F. at Tynemouth and 53° F. at Liverpool and Valentia on the 18th. A cold spell occurred during the anticyclonic period from the 6th to the 11th, and it was also cold in England on the 26th. Temperature in the screen fell to 14° F. at Dalwhinnie, 18° F. at Renfrew and

19° F. at Newport (Shropshire) on the 7th and to 12° F. at Dalwhinnie and 19° F. at Fort Augustus on the 8th. Some low grass minima were 8° F. at Dalwhinnie on the 8th, 11th and 31st, 9° F. at Dalwhinnie and 11° F. at Renfrew on the 7th, and 12° F. at Glenbranter on the 5th. Day temperatures were also low at this time, maxima of 25° F. at Renfrew on the 6th and 26° F. at Dalwhinnie and 30° F. at Fort William on the 8th being worthy of note.

The extremes for the month were:—(England and Wales) 60° F. at Llandudno on the 16th and 17th and at Bromley on the 22nd, 19° F. at Newport (Shropshire) on the 7th. (Scotland) 60° F. at Cupar, Fife-shire, on the 16th, 12° F. at Dalwhinnie on the 8th. (Ireland) 61° F. at Dublin City and Trinity College, Dublin, on the 17th, 27° F. at Aldergrove on the 31st.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the normal for the period 1881–1915 was 81; the values for the constituent countries were:—England and Wales 47, Scotland 112, Ireland 138.

Except in Cumberland, rainfall in England was markedly deficient, particularly in the east and south-east, less than 20 per cent. of the normal being recorded in Kent, Essex, and parts of Sussex and Berkshire. At Kew Observatory the total was only 12 mm.; over a long series of observations since 1856, this is the smallest December total, with three exceptions, namely, 9 mm. in 1857, 10 mm. in 1873, and 6 mm. in 1926. At Eastbourne it was the driest December for the period 1888–1932. Rainfall totals were also below the normal in Scotland, north of latitude 57°, and at a few places in the extreme south-east. In strong contrast is the excess in Ireland, the Lake District and in Scotland, south of latitude 57°. In parts of the Lothians and in Dumfriesshire, more than twice the normal rainfall was recorded, and at Eskdalemuir it was the wettest December since records were begun in 1910. The period 15th–22nd was excessively wet in Ireland, the Lake District and Central and Southern Scotland, and the prolonged and heavy rainfall resulted in severe floods. Some large falls in 24 hours during this spell were:—

15th.	Mallarany (co. Mayo) 45 mm.
16th.	Borrowdale 131 mm., Watendlath 121 mm., Ambleside 86 mm., Keswick 73 mm., Killarney 64 mm., Eskdalemuir 61 mm., Greenock 58 mm., Glenbranter 54 mm.
17th.	Borrowdale 103 mm., Watendlath 83 mm., Eskdalemuir 65 mm., Ambleside 59 mm., Dalwhinnie 43 mm.
18th.	Borrowdale 38 mm., Eskdalemuir 32 mm.
19th.	Turnberry 51 mm., Donaghadee 45 mm., Waterford 43 mm., Roches Point 43 mm., Ballinacura 41 mm., Thorntonhall 40 mm., Eskdalemuir 38 mm.
22nd.	Carrick-on-Suir 39 mm., Cork 38 mm., Newcastle (co. Wicklow) 32 mm.

Thunderstorms were reported in north-east Ireland and north-west England on the 3rd and locally in Scotland between the 2nd and 4th, and on the 15th. No heavy falls of snow were reported.

Sunshine.—The last month of a dull year was on the whole sunny. In the east and north of Scotland and in south-west England slightly less than the normal sunshine was recorded; elsewhere, there was an excess and in some districts a decided excess, as is shown in Table I.

Fog.—Fog occurred fairly frequently in England and southern Scotland. It was widespread and thick locally in England on the 13th, 25th and 26th, while thick fog was reported locally in north-east Ireland and southern Scotland on the 30th, and in eastern districts of England and southern Scotland on the 31st.

Miscellaneous Phenomena.—Aurora was observed in Scotland on seven occasions and a lunar rainbow was seen at Eskdalemuir on the 4th. Solar haloes were observed at Oxford on 10 days.