

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: YORK HOUSE, KINGSWAY, LONDON W.C.2; 120 GEORGE STREET, EDINBURGH 2; 39-41 KING STREET, MANCHESTER 2; 1 ST. ANDREW'S CRESCENT, CARDIFF; 80 CHICHESTER STREET, BELFAST; or through any bookseller.

VOL. 60. No. 1.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE

Price 1s. 0d. net, Post-free 1s. 1d.

Annual Subscription, including Annual Summary and Introduction, 15s. 0d. post-free.

JANUARY, 1943.—Unsettled; notably wet except in the north of Scotland.

The weather of the month was distinguished by excessive rainfall except in the north of Scotland where there was a deficiency. The first ten days were cold and the remainder of the month mainly mild.

The month opened with pressure low eastward of the British Isles and high to the south-west. On the 1st a depression west of Scotland moved south-south-east across Ireland causing general precipitation; in its rear, cold north-westerly winds prevailed, with wintry showers. On the 4th a ridge of high pressure moved east over Britain and a shallow depression west of Ireland moved south-east; this was followed on the 5th and 6th by a second disturbance also moving south-east. Weather was unsettled and cold, with occasional precipitation, in the form of sleet or snow in many places. On the 7th a depression over the English Channel moved away eastward, while a ridge of high pressure associated with an anticyclone in the far north spread south-east over Britain; very slight precipitation occurred in many places and somewhat heavier falls were recorded locally in east England and west Ireland. On the 9th and 10th troughs of low pressure moved eastward across the country and were associated with appreciable rainfall, while temperature continued low.

Subsequently a change to milder conditions set in and these conditions persisted on the whole during the remainder of the month. On the 11th and 12th a depression over north-west Ireland moved slowly north, while a vigorous depression moved rapidly east-north-east from a position north of the Azores. There were widespread gales and general rain. This was followed by another active depression, centred well to the north of the Azores on the morning of the 13th, which moved rapidly east-north-east along the English Channel, causing heavy rain in the southern districts of England. A wedge of high pressure moving east was associated with a short fair interval on the 15th, but further rain fell in the west on the night of the 15th-16th. Thereafter conditions were very disturbed on the eastern North Atlantic and secondary depressions and troughs associated with the Atlantic depressions controlled the weather over the British Isles. Rain occurred frequently and temperature was mostly high. A good deal of fog developed at times between the 16th and 24th. Gales were frequent at exposed stations in the west and north from the 24th-31st. On the 30th a vigorous trough moving east over the British Isles was associated with heavy rain and widespread thunderstorms and on the 31st an intense secondary depression moved east-north-east across England to the southern North Sea and caused widespread gales, severe locally, and further heavy rain.

Pressure and Wind.—Mean pressure was substantially below the average, the deviation at 7 h. ranging from -4.7 mb. at Sumburgh, Shetlands, to -11.9 mb. at St. Mary's, Scilly. South-easterly to south-westerly winds were more prevalent than usual. Gales were reported fairly frequently at exposed stations, chiefly in the west and north and mainly on the 1st, 9th-13th, 17th and 24th-31st. The gale of the 30th-31st was widespread and severe in England and Wales and caused extensive damage. Mean hourly velocities of 60 m.p.h. and 57 m.p.h. were registered at Plymouth and Shoeburyness respectively on the 31st and gusts of 80 m.p.h. and 76 m.p.h. at the Lizard and St. Ann's Head on the 30th, and 78 m.p.h., 75 m.p.h., and 74 m.p.h. at Larkhill, Lympne, and Boscombe Down respectively, on the 31st. The latter values are comparatively high for inland stations in south-east England; at Boscombe Down, 74 m.p.h. is the highest speed registered in a gust in a 10-year record.

Temperature.—Mean temperature was generally about equal to, or a little below the average in Scotland and north-east England and rather above the average elsewhere, particularly in south-west England. The deviation from the average for the districts ranged

from -0.4°F. in Scotland, E. to $+2.5^{\circ}\text{F.}$ in England, S.W. The first ten days were generally cold and the remainder of the month was mild, particularly the last fortnight. Screen minima of 20°F. or below were registered at numerous stations in Britain on the 4th, 5th, 8th and 9th and day temperatures also were often low during the cold spell. In England and Wales day temperature reached or somewhat exceeded 55°F. on numerous occasions from the 19th-30th.

The extremes for the month were:—(England and Wales) 57°F. at Aber on the 20th, Maldon on the 22nd, Bingley and Llandudno on the 28th and Barnstaple on the 29th and 30th, 13°F. at Buxton on the 8th; (Scotland) 55°F. at Cupar on the 29th, 7°F. at Braemar on the 5th; (Northern Ireland) 53°F. at Garvagh on the 20th, Castlerock on the 20th and 27th and Armagh on the 20th, 27th and 29th, 26°F. at Aldergrove on the 4th.

Precipitation.—The general precipitation expressed as a percentage of the average for the period 1881-1915 was 209 over England and Wales, 120 over Scotland and 152 over Northern Ireland. In England and Wales it was the third wettest January on record, that is since before 1868; in 1939 the percentage of the average was 219 and in 1928, 213. At a few isolated stations the total fall approximated to three times the average; for example at Abergavenny, Monmouth, and at Croydon. In Scotland, broadly speaking, less than the average occurred north and west of a line drawn from Banff to Loch Linnhe and more than 150 per cent. over much of the east and south-east and extreme south-west; more than 200 per cent. was received at one or two stations near the Firth of Tay. The driest area was the Moray Firth, where Nairn had only 46 per cent. In Northern Ireland the excess was greatest in County Down and percentages at individual stations ranged from 121 at Omagh (Tyrone) to 210 at Seaford (Down). The heavy rainfall of the closing days caused considerable flooding in some areas.

Measurable rain fell very frequently; it was reported on 30 days at Princetown, Falmouth and Fowey and on 31 days at Baltasound, Shetlands.

Among the heaviest falls in 24 hours were:—

11th. 2.57 in. at Fofanny Reservoir (Mourne Mountains).

28th. 3.68 in. at Borrowdale.

30th. 2.63 in. at St. Harmon's (Radnor).

Local thunderstorms occurred frequently for the season; for example, on the 1st, 2nd, 4th, 20th, 21st, 23rd and 25th-31st. They were widespread on the 29th-30th, and in the west and north of Scotland on the 25th and 26th.

Snow or sleet was reported from the 1st-10th and on the 31st; in Scotland and the north of England it fell locally at times outside these periods. At Bellingham there was a fall of 5 inches on the 2nd and it lay to a depth of 4 inches from the 3rd-10th; at Harrogate it was 4 inches deep on the 10th. In Scotland, West Linton had 4 inches on the 2nd and Inverness 3 inches on the 5th; about 7 inches fell on the Ochil Hills on the 31st.

Sunshine.—Sunshine was variable but below the average over Great Britain as a whole. The deficiency was almost general in the western districts of England and also in Scotland, except in the extreme north-west and in the neighbourhood of the Moray Firth, where totals were excessive. In Northern Ireland the month was much sunnier than usual.

Fog.—Fog developed fairly frequently mainly from the 4th-11th, 14th, 16th and 19th-24th. It was thick at times and persistent locally at times.

Miscellaneous Phenomena.—The aurora was seen from some northern stations in Scotland on 12 nights. Solar halos were noted at Oxford on 14 days.