

Monthly Weather Report

OF THE METEOROLOGICAL OFFICE

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

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December, 1950 - Exceptionally cold: considerable snowfall.

The weather of the month was distinguished by extremely low mean temperature and frequent and, at times, heavy snowfall.

On the 1st a secondary depression moved east over Scotland, while a trough of low pressure moved quickly east over England. In the rear of these disturbances cold air of arctic origin covered the British Isles. The cold air, accompanied by wintry showers, reached northern districts on the 1st, but mild weather with rain prevailed on that day in the south. On the following days small secondary disturbances moving south in the very unstable northerly air stream caused widespread snow, heavy in some northern districts, and keen frost.

On the 6th a depression, which had developed over Iceland, moved south-east to the North Sea; the arctic air was cut off, temperature began to rise and rain occurred in most places. On the 7th a deep depression west of Iceland moved north-east and, on the 8th and 9th, a secondary depression approached the west of Ireland and turned north-north-east. The weather continued comparatively mild, and rain fell generally on the 9th and 10th.

Subsequently the depressions centred east and north-east of Iceland moved away east and another burst of arctic air flooded the country. Depressions developed to the north-west of the British Isles in the unstable northerly current and moved south-east. One depression centred south of Iceland early on the 14th moved to south-west England, thence along the English Channel and then turned north-east to the North Sea; heavy snow fell during this period and it was very cold.

Subsequently, on the 20th, pressure became high over Scandinavia and cold south-easterly winds prevailed in the British Isles. By the 23rd a ridge of high pressure extended south-east over the country from an anticyclone over Greenland and light northerly or north-easterly winds, with local slight sleet or snow, prevailed until the 26th, when an anticyclone to the north of Scotland moved to Scandinavia and winds veered to east. Thereafter this system moved rather quickly south-west to Scotland and then south; weather continued cold, with slight precipitation.

On the 29th and 30th a depression north-westward of Ireland moved slowly south-east over Ireland and thence to the Irish Sea, and on the 30th and 31st a trough of low pressure moved east over England. Snow fell rather widely and was heavy locally in northern England and parts of Wales on the 30th. Precipitation was heavy in Northern Ireland on the night of the 31st.

Pressure and Wind.—Mean pressure was above the average in the north, particularly the north-west, and below the average in the south; at 9h. the deviation from the average ranged from +3.2 mb. at Stornoway to -3.8 mb. at Lympne and Tunbridge Wells. Thus the highest mean pressure was situated south-west of Ireland and the lowest off north-east Scotland. Winds from some northerly point were frequent in the west and north. The total run of the wind was appreciably below the average on the whole. Local gales occurred at times at exposed stations, mainly on the 1st-4th, 9th-15th, 17th and 19th-22nd. Among the highest gusts registered in knots were 56 at Bidston and Holyhead on the 1st, 63 at Stornoway on the 3rd, and 61 at Scilly and 58 at the Lizard on the 14th.

Temperature.—Mean temperature was exceptionally low; the deviation from the average for the period 1906-35 was -5.6°F. in England and Wales, -5.5°F. in Scotland and -5.8°F. in Northern Ireland. As far as can be estimated at present it was the coldest December over the British Isles as a whole since 1890; in Scotland it was probably the coldest since 1886. Locally in south and west England, however, December 1933 was slightly colder. It was mild over much of England and Wales on the 1st, and a mild spell occurred from the 7th to 10th. At a number of places temperature remained at 32°F. or below continuously from the 13th to 15th inclusive. At high level stations there were several such cold spells; for example, at Bwlchgwyn, Denbighshire (1267 ft.) temperature remained at 32°F. or below from the 12th to 15th, 21st to 24th and 26th to 29th inclusive.

Extreme temperatures in the screen included:—(England and Wales) 55°F. at Paignton on the 1st, Torquay on the 1st and 9th and Swansea and Dawlish on the 9th, 6°F. at Droitwich on the 6th; (Scotland) 53°F. at Fort William on the 9th, -1°F. at Dalwhinnie on the 15th; (Northern Ireland) 51°F. at Castlerock on the 9th and Ballykelly on the 9th and 10th, 13°F. at Aldergrove on the 15th.

Precipitation.—The general precipitation expressed as a percentage of the average for the period 1881-1915 was 76 over England and Wales, 60 over Scotland and 97 over Northern Ireland. In Scotland more than the average rainfall occurred in some coastal districts in the north but less than half the average was registered in central and south-west districts. In England and Wales more than the average occurred in some eastern coastal areas, in Cheshire and at a few rather isolated places elsewhere. More than 150 per cent. of the average was registered in a coastal area in north-east England and 192 per cent. was recorded at Scarborough. On the other hand less than 50 per cent. was received in many inland areas scattered over England and Wales. In Northern Ireland more than the average occurred in County Londonderry and West Antrim; percentages of the average at individual stations ranged from 72 at Newtownbutler, County Fermanagh to 132 at Garvagh, County Londonderry.

Among the heaviest falls in 24 hours were:—

4th 1.99 in. at Glenlivet, Banffshire.

31st 2.30 in. at Sallagh Springs, Antrim, and 2.01 in. at Donaghadee, Down.

Thunderstorms occurred locally on the 1st-4th, 7th, 12th, 14th-17th and 30th.

Snow fell very frequently; for example, on 22 days at Ushaw, 20 at Bwlchgwyn, 19 at Princetown and Glenlivet. The falls were heavy locally at times, particularly during the first four days, from the 13th to 17th and on the 30th. Snow lay more than 6 in. deep at many places at times during the first two of these periods, and was 20 in. deep at Dalwhinnie on the 3rd, 10 in. at Cockle Park on the 4th, 11 in. at Bwlchgwyn and 10 in. at Houghall on the 5th, 10 in. or more at Scarborough, Bournemouth, Weymouth, Poole and a number of places in the Isle of Wight on the 15th and 14 in. at Scarborough and Lowestoft on the 16th. At 17h. on the 30th snow was 9 in. deep at Southport and, on the morning of the 31st, 9 in. at Buxton. At Whipsnade there were drifts up to 5 ft. on the 18th and 19th, and at Bwlchgwyn drifts up to 4 ft. on the 17th. Drifting and ice-bound roads caused dislocation of transport services in some areas. It was reported that the Caledonian and Forth-Clyde canals were frozen in places and at Malham Tarn all the surface of the tarn was frozen from the 13th to the 31st.

Sunshine.—The duration of bright sunshine expressed as a percentage of the average for the period 1906-35 was 102 in England and Wales, 120 in Scotland and 88 in Northern Ireland. In Scotland the month was generally much sunnier than usual except in the Moray Firth region; at Oban there have been only two sunnier Decembers in the past 40 years. In England and Wales percentages of the average were very variable; in east England, the Thames Estuary, Kent, Surrey, East Sussex, Cornwall, North Devon and North Wales, it was generally duller than usual, but in an area extending roughly from Totnes to the Isle of Wight and stretching north to Ross-on-Wye, sunshine appreciably exceeded the average, the mean daily duration being somewhat more than 2.0 hours at many places. At Greenwich it was the dullest December since 1897.

Fog.—Fog occurred rather frequently in some parts, mainly on the 2nd-4th, 8th, 9th, 12th-14th, 18th-21st, 24th-27th and 29th-31st.

Miscellaneous Phenomena.—The aurora was observed in Scotland on eight nights. Solar halos were noted at Oxford on nine days. Ball lightning was observed at Trefnant, Denbighshire, on the 15th.