

Monthly Weather Report

OF THE METEOROLOGICAL OFFICE

Summary of observations compiled from returns of official stations and voluntary observers

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January 1963 — *Dry and exceptionally cold*

Weather throughout the month was dominated by anticyclones. These were mainly to the north and north-west of the British Isles but on the 12th-15th and 23rd-29th high pressure extended southward covering much of the country. Cyclonic activity to the south-west was a complicating feature of the first ten days, the 19th and the 30th.

The very cold weather with winds from an easterly point, and with temperatures near or below freezing, which set in on 22nd/23rd December, continued over most of the country throughout the month, apart from a short spell of less cold weather around the 14th and another from the 25th to the 29th.

During the first four days a strong easterly airstream covered the British Isles and a trough of low pressure moved slowly northward from France to southern England. Scattered snow showers and periods of freezing rain on the 1st and 2nd were followed by a wide belt of snow moving northward over most of England and Wales during the next two days. Heavy snowfalls in the south and south-west on the evening of the 3rd were piled by strong to gale force winds into drifts, some 15 ft deep, which blocked road and rail traffic isolating many towns and villages, some for the second time during a week. The trough became slow moving over southern England on the 5th and 6th, but, with rising pressure, further falls of snow were mainly slight.

On the 7th-12th a ridge of high pressure extended from Iceland across the northern part of the British Isles and the North Sea to the Baltic. Weather remained generally dry with day temperatures mainly around freezing point and with very severe frost at night; early morning temperatures on the 12th and 13th fell to -16°C at places as far apart as Gatwick and Eskdalemuir. Freezing fog was widespread at night over the Midlands, northern England and the Clyde-Forth Valley and persisted throughout the day at many places from 11th to 14th.

On the 13th the ridge of high pressure moved westwards from the North Sea over the British Isles, and light northerly winds brought a slow day-time thaw to most districts on the 14th. Most of Scotland escaped frost that night, but it was general elsewhere and severe in the Midlands and southern England. After a little sleet on the 15th, associated with a weak depression moving southwards over western districts, cold easterly winds returned to all parts of the country on the 16th as an anticyclone over Scandinavia rapidly intensified.

The next nine or ten days were among the coldest of the month with continuous frost at many places from 16th to 25th. On the 17th the anticyclone over Scandinavia moved south-west and pressure became high to the north of the British Isles. During the next few days snow showers occurred fairly widely in the easterly airstream, especially in eastern districts, but on the 19th a depression in the Bay of Biscay moved north towards southern Ireland and that night and the following day snow, accompanied by strong to gale force winds with gusts frequently exceeding 50 kt, spread northward over the country. Over southern England the snow was followed by freezing rain. Another spell of freezing fog began on the 23rd as an anticyclone from the North Sea extended over the British Isles. Fog, dense at night with heavy rime deposits, persisted for much of the day over parts of the Midlands and London area on the 23rd, 24th and 25th.

On the 25th the anticyclone moved to the west of Ireland and less cold air from the Atlantic, preceded by a narrow belt of rain, spread round the northern flank of the system to cover the whole of the British Isles the following day. The night of the 26th/27th was the first frost-free night over most of the Midlands and eastern England for about three weeks. Afternoon temperatures during the next two days rose to 5°C at many places.

Cold weather returned to most districts on the 30th as winds veered to north-east with the formation of a shallow depression at the mouth of the English Channel. This depression and another small

disturbance in the southern North Sea gave fairly widespread snow in southern England during the last two days of the month.

Pressure and Wind — Pressure was everywhere considerably above the average, the excess at 9 hr ranging from 24.9 mb at Stornoway to 5.8 mb at Scilly. Surface winds were predominantly easterly broken by periods of light and rather variable winds sometimes from a northerly point, on the 12th-15th and 22nd-29th. Wind reached gale force in Scotland on 11 days and in England and Wales on the 1st-4th, 9th-11th, 16th-22nd and 30th-31st (16 days). Gales were widespread on the 19th and gusts of 68 kt were recorded on the 19th and 20th at Shoeburyness and Ronaldsway respectively.

Temperature — Mean temperatures during this exceptionally cold month were considerably below the 1931-60 average especially in England and Wales where the deficit was 5.3°C . In Scotland and Northern Ireland the deficits were 2.8°C and 4.2°C respectively. (1931-60 averages will in future be used as a reference period for temperature and sunshine). For England and Wales the month was the coldest month of the century, the nearest approach being February 1947. At Kew there has been no colder January since 1838. It was the coldest January in the records of many long established stations; at Ross-on-Wye for example since 1877 and at Newquay since 1891.

Extremes included: (England and Wales) 9.4°C at Urswick on the 26th, -20.6°C at Stanstead Abbots on the 23rd; (Scotland) 9.4°C at Paisley on the 26th, -22.2°C at Braemar on the 18th; (Northern Ireland) 8.3°C at Larne on the 25th, -15.0°C at Loughgall on the 24th.

Precipitation — In spite of the occasionally heavy snowfall it was a very dry month. The general rainfall expressed as a percentage of the 1916-50 average was 36 over England and Wales, where it was the fourth successive month with rainfall below average and the driest January since 1881, 33 over Scotland and 32 over Northern Ireland. The rainfall equivalent of the precipitation, which fell mainly as snow, was above the average locally in the extreme south-east of Scotland and in the Durham area, but was less than 25 per cent of average over most of southern England, South Wales, Lancashire and the Peak District.

Thunder was heard in the Channel Islands on the 4th and in Scotland on the 20th.

Snow fell at one place or another in England and Wales every day, and also daily in Scotland except the 22nd and 23rd; ground was snow-covered throughout the month. Snow depths varied considerably from place to place, but much of south-east England was under 12 in. of snow on the 1st and snow was still 3-6 in. deep at the end of the month. Snowdepths on the 1st and 31st, in inches were: at Hampstead 12 and 9, at East Grinstead 20 and 6, at Spadeadam in Cumberland 15 and 25, at Tredegar in South Wales 32 and 40 and at Princetown on Dartmoor 18 and 20. Snow drifts 10-15 feet deep were fairly common and drifts up to 25 feet deep were reported from the south-west.

Sunshine — The general sunshine expressed as a percentage of the 1931-60 average was 127 in England and Wales, 131 in Scotland and 128 in Northern Ireland. In Scotland sunshine was considerably above the average in the north-west; Stornoway had its sunniest January since 1881. In England and Wales it was sunniest in the west; twice the average amounts were reported from places in Westmorland and Lancashire, and at Newquay it was the sunniest January since records began in 1891.

Fog — Fog was reported at 9 hr from one place or another on 16 days in Scotland, and daily except the 8th, 19th and 21st (on 28 days) in England and Wales. It was widespread on the 4th, 5th, 24th and 25th and persisted all day in many places on the 11th-14th and 23rd-25th.

Miscellaneous Phenomena — The aurora was visible in Scotland on 10 nights.