

MONTHLY WEATHER REPORT

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Unsettled, with severe gales; heavy snowfall in north.

A succession of fronts with intervening ridges of high pressure crossed all areas from the west during the first 10 days of the month. On the 11th a deepening depression moved south-eastwards across the British Isles, leaving a very strong northerly flow in its wake. This was followed by a ridge of high pressure from the Azores anticyclone, while weak fronts moved across Britain from the north-west. Pressure fell rapidly on the 15th and a cold front moved slowly eastwards across the British Isles during the next two days. The weak ridge which followed was short-lived, and from the 19th until the end of the month a series of frontal systems from the Atlantic moved across all areas. Some of the associated depressions were very vigorous, particularly that which crossed central and northern England on the 28th and 29th. A very strong northerly airstream which developed behind this depression was followed by a weak ridge on the 30th and by further fronts from the west on the 31st.

Weather

The month was generally unsettled, with severe gales at times. Wintry showers of hail, sleet or snow occurred on a number of days and there were heavy falls of snow in the north. It was also wet in many areas. Notable events were a whirlwind in Newmarket (Suffolk) on the 3rd, severe gales causing widespread damage along the east coast of England on the 11th/12th, and an exceptionally severe blizzard which affected northern Scotland on the 28th and 29th. Fog formed extensively on the 7th/8th and the 17th/18th, but was otherwise infrequent and mostly local. In spite of the changeable weather, some parts had a sunny month.

Wind

Except at the end of the first week and around mid-month, winds were frequently fresh or strong, reaching gale force in exposed places. The gales were widespread and severe at times. Westerly gales developed on the night of the 2nd/3rd, when the high-level station at Snaefell (Isle of Man) recorded a gust of 110 kt; and severe northerly gales affected many areas, especially in eastern and south-eastern England, on the 11th/12th, when a tidal surge in the North Sea exceeded the danger level at a number of places along the coast. The heavy seas breached sea defences, and rivers draining the Fenland area burst their banks. The gales and floodwater caused considerable damage to property and farmland, and several seaside piers were reported to be irreparably damaged. The exceptionally rough weather also caused a number of deaths at sea. Gales were again widespread and severe on the 28th and 29th, when northerly gales, combined with heavy snowfall, brought blizzard conditions to northern Scotland.

Temperature

Monthly mean temperatures were between 0.5 and 1.0 °C below average in Cornwall, northernmost counties of England and over much of Scotland, but were mostly within 0.5 °C of the normal elsewhere. Temperatures were variable during the first half of the month: there were some cold nights,

particularly in the Scottish Highlands on the 3rd/4th, when the temperature fell to -18.2 °C at Lagganlia, but a number of places also recorded their monthly maxima during this period. The rest of the month was generally colder, especially in the north, and the night of the 17th/18th was very cold almost everywhere. A brief mild spell occurred in some southern and western districts at the beginning of the last week, the temperature rising to at least 12 °C at several places in south-west England on the 23rd. Ground frost was reported on many nights and air frost occurred frequently in the north.

Rainfall (including melted snow)

Rainfall was below or about average in some western districts, but was above normal elsewhere, with monthly totals exceeding 150 per cent of average in parts of Northern Ireland, eastern Scotland and England. More than twice the normal amount of precipitation was reported over high ground in places in Cumbria and the Grampian Region of Scotland, even though drifting snow made measurement difficult in mountainous areas. Except during the latter part of the first week and around mid-month, showers and outbreaks of rain, sleet or snow occurred frequently. The rain was heavy at times, although much of the precipitation in the north, particularly during the second half of the month, fell as snow.

Snow

Showers of snow, sleet and hail fell mostly in northern districts between the 2nd and the 4th, but in many other places as well between the 9th and the 12th and from the 16th onwards. The snow was heavy in northern areas on the 10th; undrifted depths of 25 to about 40 cm were reported over high ground in Scotland and a depth of 22 cm was measured in level snow in Northern Ireland. Snowfall was again heavy in parts of northern and eastern Britain on the 19th. The snow fell continuously for about 12 hours over southern and central Scotland, accumulating to a level depth of 17 cm at Glasgow/Abbotsinch Airport. Maximum falls in

central and eastern England mostly occurred at this time, with depths of 10 - 12 cm in places in level snow. The heaviest snow fell at the end of the month, however, and north-east Scotland experienced a severe blizzard on the 28th and 29th. Very deep drifts caused by the gale force winds made accurate measurement extremely difficult, but undrifted depths of 40 to 60 cm were reported at several places and by the 30th the snow had accumulated to a depth of 90 cm at Clashnoir (Grampian Region). The exceptional weather brought considerable hardship to the area and some loss of life.

Sunshine

Sunshine totals were mostly between 75 and 100 per cent of average in East Anglia, the east Midlands, Lincolnshire and Kent and over most of northern Scotland. Monthly totals were near to or above normal elsewhere and in some areas exceeded 150 per cent of average. This was the sunniest January at Torbay (Torquay) and Teignmouth in south Devon since 1952 and at Glasgow's Springburn Park since 1959.

Fog

Fog formed on coasts and hills from time to time and overnight fog patches developed in inland areas, but much of the month was too windy for the development of widespread fog. There were some occasions, however, notably on the nights of the 7th/8th and the 17th/18th, when fog, which was dense and freezing in places, formed in many areas and in parts of eastern England persisted during the following day. The flight schedules at London/Heathrow Airport were severely disrupted on the 8th and the airport was closed all day on the 18th. Visibility was also reduced during periods of heavy snowfall.

Miscellaneous Phenomena

Whirlwinds were reported in Hull (Humberside) and Newmarket (Suffolk) on the 3rd. Extensive damage occurred in Newmarket, cars were overturned and people were blown off their feet, but apparently no one was seriously injured.

Table 1 District values

| District | air temperature °C | | | | | mean 30-cm earth temp °C | rain-days | rainfall | sunshine |
|--------------------------|--------------------|--------|-------------------------|------|------|--------------------------|-----------|----------|----------|
| | Highest | Lowest | max. | min. | mean | | | | |
| | Max. * | Min. * | difference from average | | | % of average | | | |
| 0 Scotland N | 10.5 | -8.2 | -0.7 | -0.8 | -0.7 | +0.3 | +4 | 111 | 85 |
| 1 Scotland E | 11.3 | -15.0 | -0.5 | -0.6 | -0.6 | +0.6 | +1 | 124 | 115 |
| 2 England E & NE | 10.6 | -8.7 | -0.3 | -0.6 | -0.5 | +0.1 | +4 | 158 | 90 |
| 3 East Anglia | 9.6 | -7.0 | -0.1 | -0.1 | -0.1 | +0.6 | +2 | 135 | 81 |
| 4 Midland Counties | 10.5 | -7.2 | -0.1 | -0.1 | -0.1 | +0.3 | +3 | 132 | 108 |
| 5 England SE & Central S | 10.4 | -7.8 | +0.2 | 0.0 | +0.1 | +0.3 | +3 | 139 | 105 |
| 6 Scotland W | 10.5 | -12.9 | -0.7 | -0.8 | -0.7 | +0.3 | +4 | 124 | 114 |
| 7 England NW & Wales N | 10.1 | -7.7 | -0.4 | +0.2 | -0.1 | +0.4 | +6 | 115 | 108 |
| 8 England SW & Wales S | 11.8 | -6.2 | 0.0 | -0.1 | -0.1 | 0.0 | +2 | 121 | 122 |
| N Ireland | 9.8 | -5.1 | -0.5 | -0.3 | -0.4 | +0.4 | +3 | 119 | 122 |
| Scotland | 11.3 | -15.0 | -0.6 | -0.7 | -0.7 | +0.4 | +3 | 120 | 105 |
| England & Wales | 11.8 | -8.7 | -0.1 | -0.1 | -0.1 | +0.3 | +3 | 133 | 102 |

*Highest maximum and lowest minimum of District Value Stations.