

MONTHLY WEATHER REPORT

JULY

1977

COMPILED FROM RETURNS OF OFFICIAL AND VOLUNTARY OBSERVERS

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RAINFALL (in millimetres)
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Mostly dry: warm in first week, becoming cooler.

Slow-moving fronts crossed northern and central districts at the beginning of the month, while an anticyclone over France drifted to Germany and then to Scandinavia. Pressure rose to the north of the British Isles on the 6th and a ridge developed from Scandinavia to the Azores. An anticyclone became established to the north-west of Scotland from the 9th to the 13th, but southern districts were occasionally affected by continental depressions. A weak cold front moved south-westwards across all areas on the 13th and 14th and the subsequent ridge of high pressure soon declined. Frontal systems from the west crossed all parts from time to time between the 15th and the 24th, when a north-westerly airstream developed. A ridge of high pressure from the Azores extended north-eastwards across the British Isles from the 28th, but weak fronts moved into north-western districts during the last few days.

Weather

Outbreaks of rain early in the month mainly affected northern and western parts, and most areas soon became dry, sunny and very warm. The summer weather lasted into the second week in the north and west, but north-easterly winds brought cool, cloudy conditions to eastern areas, and thunderstorms affected the south-west. Coastal fog occurred most frequently during the first two weeks. There was rain at times in the third week and the second half of the month was mostly cool. Unusually, large patches of snow were still visible on the upper slopes of the higher Scottish mountains at the end of the month.

Wind

Winds were fresh or strong on exposed coasts in the west and north at first, and also during the second half of the month, when speeds reached gale force at one or two places. Gusts exceeding 60 kt were recorded only at the high-level stations at Snaefell (Isle of Man) and Lowther Hill (Strathclyde) on the 2nd and 24th respectively. South-westerly winds at the beginning of the month were soon replaced by south-easterlies and then by north-easterlies, which blew persistently until the 14th. Directions were mainly between south and west from mid-month until about the 24th, when they became north-westerly. Southern and eastern districts had north-easterlies again towards the end of the month.

Temperature

Monthly mean temperatures were mostly within 1 °C of the normal, broadly below average east of a line from extreme north-east England to Dorset and also in the Northern Isles and the far north of mainland Scotland, and above average elsewhere. Values were between 1 and 2 °C above the normal in Northern Ireland and in parts of western Scotland. Many areas became very warm during the first week, the highest temperatures occurring in Scotland, where Paisley (Strathclyde) and Glenlee (Dumfries and Galloway Region) both recorded 30.0 °C on the 7th. The maximum of 29.6 °C reached in Glasgow on the same day was the highest July temperature in a composite record for the area beginning in 1888. It then became cooler in the south and east of the United Kingdom, but the hot weather continued into the second week in the north and west and Onich (Highland Region) recorded a maximum of 30.0 °C on the 11th. Apart from a very warm day in some eastern and southern

districts on the 23rd, the remainder of the month was generally cool and ground frost occurred as far south as Kew Observatory (Greater London) and Filton (Avon) on the night of the 14th/15th.

Rainfall

Except in a few places in south-western England, rainfall was well below average almost everywhere. Less than a quarter of the normal amount for July fell over much of central and eastern England and in places in Wales and south-eastern Scotland. Parts of the Midlands and East Anglia recorded less than 10 per cent of their normal rainfall and as little as 0.3 mm fell at East Bergholt (Suffolk). This was the driest July over England and Wales, taken together, since 1935. Outbreaks of rain, mainly in the north and west, occurred during the first few days, but most areas then became dry until mid-month, although there were thunderstorms in places. A rainfall classified as 'noteworthy' occurred at Penmaen (West Glamorgan) on the 8th, when 20 mm fell between 1625 and 1635 GMT, and a slow-moving storm over Dorset on the morning of the 12th accounted for above-average monthly rainfall in the Weymouth area. Most districts had rain at times between the 15th and the 27th, although amounts were small in eastern England. The last few days were mainly dry.

Sunshine

Monthly sunshine totals were below average in the Northern Isles, in northernmost parts of mainland Scotland, and in many coastal districts from south-eastern Scotland to

Kent and along the south coast of England to Dorset. Except in Shetland and in places on the East Anglian coast, amounts in these areas were mostly not more than 10 per cent below the average. Totals were above normal almost everywhere else, and exceeded 125 per cent of average over most of Northern Ireland, north-west England, and Scotland, away from northern and eastern coasts. The first two weeks were the sunniest generally and some places in Scotland reached their long-term average for the month by the 15th. Several places in Strathclyde had their sunniest July since 1955 and at Glasgow/Abbotsinch Airport this was the seventh successive July with above-average sunshine. In Northern Ireland it was the sunniest July since 1971.

Fog

Fog chiefly affected coastal areas and occurrences were most frequent during the first half of the month. The fog was persistent in places, particularly along northern and eastern coasts. Local patches of overnight fog inland usually cleared quickly. Hill fog occasionally developed and this was extensive in some western areas on the 22nd and 23rd.

Miscellaneous Phenomena

On the 8th three tornadoes swept over homes in the Gower peninsula, whipping up large objects and damaging property. The second of the whirlwinds was the most severe. Apparently, no one was injured, but birds were caught up in the whirlwind and then beaten to the ground. The aurora was not seen in Scotland during July.

Table 1 District values

District	air temperature °C					mean 30-cm earth temp °C	rain-days	rainfall	sun-shine
	Highest Max *	Lowest Min. *	max.	min.	mean				
			difference from average						
0 Scotland N	30.0	3.0	+0.6	-0.1	+0.3	-0.3	-5	62	103
1 Scotland E	28.6	0.1	+0.6	+0.2	+0.4	+0.5	-5	51	119
2 England E & NE	26.5	3.2	-0.7	-0.3	-0.5	0.0	-6	31	101
3 East Anglia	27.3	3.6	-0.7	-0.4	-0.5	-0.7	-5	17	100
4 Midland Counties	28.0	3.0	-0.3	-0.4	-0.3	-0.1	-6	24	106
5 England SE & Central S	28.4	4.4	-0.3	-0.1	-0.2	-0.6	-4	37	103
6 Scotland W	30.0	3.5	+1.7	+0.3	+1.0	+0.5	-5	54	136
7 England NW & Wales N	28.3	3.6	+0.7	+0.1	+0.4	-0.3	-3	46	119
8 England SW & Wales S	27.8	5.0	+0.4	+0.3	+0.3	+0.1	-5	40	109
N Ireland	28.5	6.5	+1.5	+0.7	+1.1	+0.7	-3	52	128
Scotland	30.0	0.1	+1.0	+0.1	+0.6	+0.2	-5	56	119
England & Wales	28.4	3.0	-0.1	-0.1	-0.1	-0.3	-5	33	106

*Highest maximum and lowest minimum of District Value Stations.