

Monthly Weather Report

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OF THE METEOROLOGICAL OFFICE

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

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October 1960—*Dull and exceptionally wet in the south and east; extensive floods.*

Apart from the week 10th-16th when high pressure lay to the west or over the British Isles a complex low pressure system persisted for most of the month off our south-west coasts and associated troughs and secondaries moved north-eastwards across the country.

The exceptionally wet weather over southern England and Wales which began in late September continued during the first 8 or 9 days of October causing renewed flooding in south-west England and later in south-east England. The month began with a blocking pattern at 500 mb., which had been established for several days, consisting of a high over the Norwegian Sea and a complex low south-west of Ireland. On the 1st and 2nd a frontal system, associated with the warm sector of a depression centred in the South-West Approaches, moved northwards across the country giving exceptionally heavy rain in south-west England, South Wales, Northern Ireland and Scotland. On the 1st more than 4 in. of rain fell in 12 hr. over a wide area around Exeter, 3 in. being recorded in 90 min. at one place nearby. During five days ending on the 2nd, Teignmouth had nearly 7 in. Rain was less in amount, but thunder became rather more frequent during the next two days as the depression over the eastern Atlantic moved northwards and a mild southerly airstream spread over the country.

By the 5th, the flow over the North Atlantic had become more zonal, and depressions from the Atlantic brought another two or three days of heavy rain with scattered thunderstorms, which added to the already extensive floods in many parts of the country. On the 7th there was a very localized but extremely intense outbreak of thundery rain at Horncastle, Lincolnshire, when 7 in. fell in about 5½ hr.; at one time cars in the lower part of the town were submerged under 6 ft. of water. The wet spell ended with the movement eastward of a depression along the English Channel on the 8th, but for many places in southern England this was the wettest day of the month, falls of between 2 and 3 in. being fairly common while over 4 in. was recorded in 24 hr. at Luxborough, Somerset.

With the depression centred over the North Sea on the 9th and 10th, moderate to fresh northerly winds with rather frequent showers affected all districts of the British Isles. Pressure remained high to the west of Ireland for the next five days maintaining cool weather over much of the country with light northerly winds and scattered showers but good sunny periods. Ground frost was fairly widespread on most mornings and there was local air frost. The sunniest days were the 11th and 12th when many places recorded between 7 and 8 hr. of sunshine; on the 12th Boscombe Down and Ventnor each had about 10 hr.

The anticyclone moved east to cover the British Isles on the 16th. Winds fell light or calm during the evening and widespread fog developed becoming dense locally by morning and clearing from many places only on the arrival of warm front rain from the south-west.

On the 18th a depression lay to the north-west of the British Isles while a deepening secondary disturbance moved northwards near the west coast of Ireland. Weak troughs passing north-east over the country had given rain in many areas on the 17th and 18th, and rain became widespread and locally heavy on the 19th as an active cold front drifted slowly east over England. The next day was wetter still as this front returned westward ahead of a depression moving north across Cornwall. Pressure remained low in the South-West Approaches until almost the end of the month with active troughs crossing the country daily. Rain continued in most areas with little break, being heavy at times with occasional thunderstorms, many areas in east and south England, south Wales and the Midlands again becoming flooded although the south-west counties suffered most. On the 29th a depression became centred over central France moving later to the southern North Sea. During the last three

days of the month the eastern half of Britain generally experienced the heavier rainfall; on the 31st 3 in. of rain fell at Montrose, Angus, during a severe storm causing flooding in the neighbourhood to a depth of several feet.

Pressure and Wind. Except in north Scotland mean pressure was generally below the average, the deviation at 9hr. ranging from +3.4 mb. at Lerwick to -12.4 mb. at Plymouth. Surface winds were mainly between south and south-east until the 8th, becoming between north and north-west until the 14th, light and variable on the 15th and 16th and thereafter predominantly south-easterly until the 24th and light and variable for the remainder of the month. Winds reached gale force on 11 days, gales being widespread in the south of England on the 8th. Gusts of 51 kt. were recorded at Lizard and Aberporth on the 8th and 55 kt. at Jersey on the 9th.

Temperature. Mean temperature was above the average nearly everywhere except in south-west England, the excess being 0.3°F. in England and Wales, 1.1°F. in Scotland and 0.2°F. in Northern Ireland. Temperature was generally above the average until the 8th and below average from then until the 17th. During the remainder of the month day temperatures were only slightly above average but the nights were very warm.

Extremes included:- (England and Wales) 69°F. at several places on the 2nd, 3rd and 6th, 25°F. at Alwen on the 16th and 17th; (Scotland) 65°F. at several places on the 4th and 6th, 21°F. at Carnwath on the 13th; (Northern Ireland) 64°F. at Ballykelly on the 3rd, 31°F. at Ely Lodge on the 13th, at Aldergrove on the 15th and at Loughgall on the 16th.

Precipitation. The general rainfall expressed as a percentage of the 1916-50 average was 202 over England and Wales, 85 over Scotland and 102 over Northern Ireland. Less than half the average was recorded in Scotland west of a line from the Firth of Clyde to Cape Wrath, and less than the average fell in North Wales, north-west England, over much of Ireland and the western two thirds of Scotland. More than three times the average was recorded over eastern Devon and western Somerset, in Buckinghamshire, Lincolnshire and the east riding of Yorkshire. At Horncastle as much as 500 per cent. of the average was recorded. In estimates going back to 1727 there has only been one wetter October over England and Wales (that of 1903), and the total rainfall for the months July to October 1960 was the greatest for these four months since records began.

Thunder occurred on 9 days in Scotland in scattered places. In England and Wales thunder was heard at one place or another on the 1st, 3rd-9th, 11th, 14th-16th, 19th-20th, 22nd-24th, 27th and 28th; it was widespread on the 28th.

Sleet or snow fell on 7 days in Scotland, mostly on higher ground. There was some local sleet in the midlands of England on the 13th and 16th.

Sunshine. The general sunshine expressed as a percentage of the 1921-50 average was 68 over England and Wales, 63 over Scotland and 70 over Northern Ireland. In England and Wales it was the duller October since 1923. In Scotland sunshine was well below the average in the east but above the average in places in the west. Some places in the Midlands and north-east England had less than 50 per cent. of the average.

Fog. Morning fog was reported at one place or another on 21 days in Scotland; in England and Wales it occurred on all but four days (10th-12th and 21st.)

Miscellaneous Phenomena. The aurora was visible in Scotland on 21 nights; it was seen as far south as Guernsey on the night of the 12th/13th, Shawbury the next night and the Scilly Isles the night after.