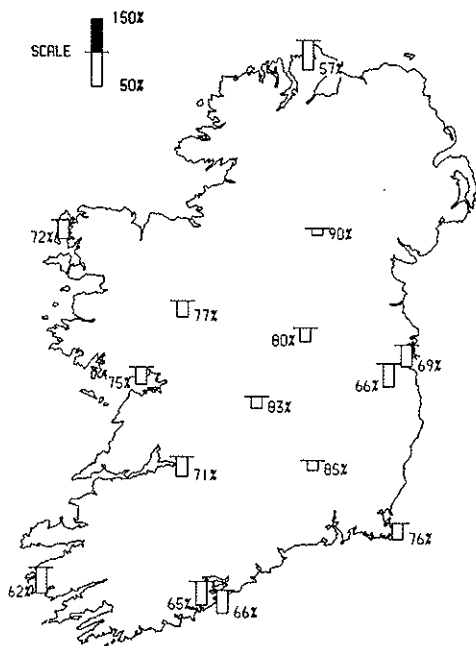


Dry with normal temperatures

November was a generally dry month with fairly high temperatures at the beginning of the month giving way to some sub-zero temperatures during the last week which had some sharp frosts. A high pressure cell dominated our weather for the first week and we had dry, hazy weather with light winds. In sharp contrast the next 12 days from Sunday, the 8th to Thursday the 19th found conditions much more unsettled. The bulk of the months rainfall fell in this period as southerlies alternated with westerly or southwesterly winds. Between the 20th and the 25th northwesterly winds slowly veered towards the north or northeast and daytime temperatures gradually fell below normal. Early on Wednesday the 25th we had the first widespread frost of the month. During the 26th a rainbelt moved in from the Atlantic but weakened as it progressed eastwards as pressure rose on either side of it. Fairly widespread fog was a feature of our weather on the 27th in a slack southwesterly airflow. On Saturday the 28th winds backed southerly as a rainbelt approached from the Atlantic to cross the country early on the 29th. A high pressure cell followed and became the dominant influence on our weather at the end of the month.



Rainfall percentage of (1951-1980) normals

LOW RAINFALL TOTALS

Rainfall totals were below normal everywhere and ranged from 57% of normal at Malin Head to 90% of normal at Clones. Amounts ranged from less than 50 millimetres in the Dublin area (less than 70% of normal) to 94 millimetres (62% of normal) at Cahirciveen. At Cork Airport it was the driest November since 1975. The first week of the month was extremely dry and amounts of rainfall between 20th and 28th were small in most areas (see daily distribution graphs). Wettest spells were the 8th, during 10th-12th, 14th/15th and 18th/19th.

On Thursday the 12th Clones recorded 25.1 millimetres the highest daily fall of the month. Between 20th and 25th there were only occasional showers but some of these were of hail or sleet. Except in some eastern and southern areas there was a spell of light rain on the 26th. The passage of a cold front late on 28th and early on 29th gave about 5 millimetres at most stations but only 1 millimetre at Malin Head and nearly 17 millimetres at Rosslare.

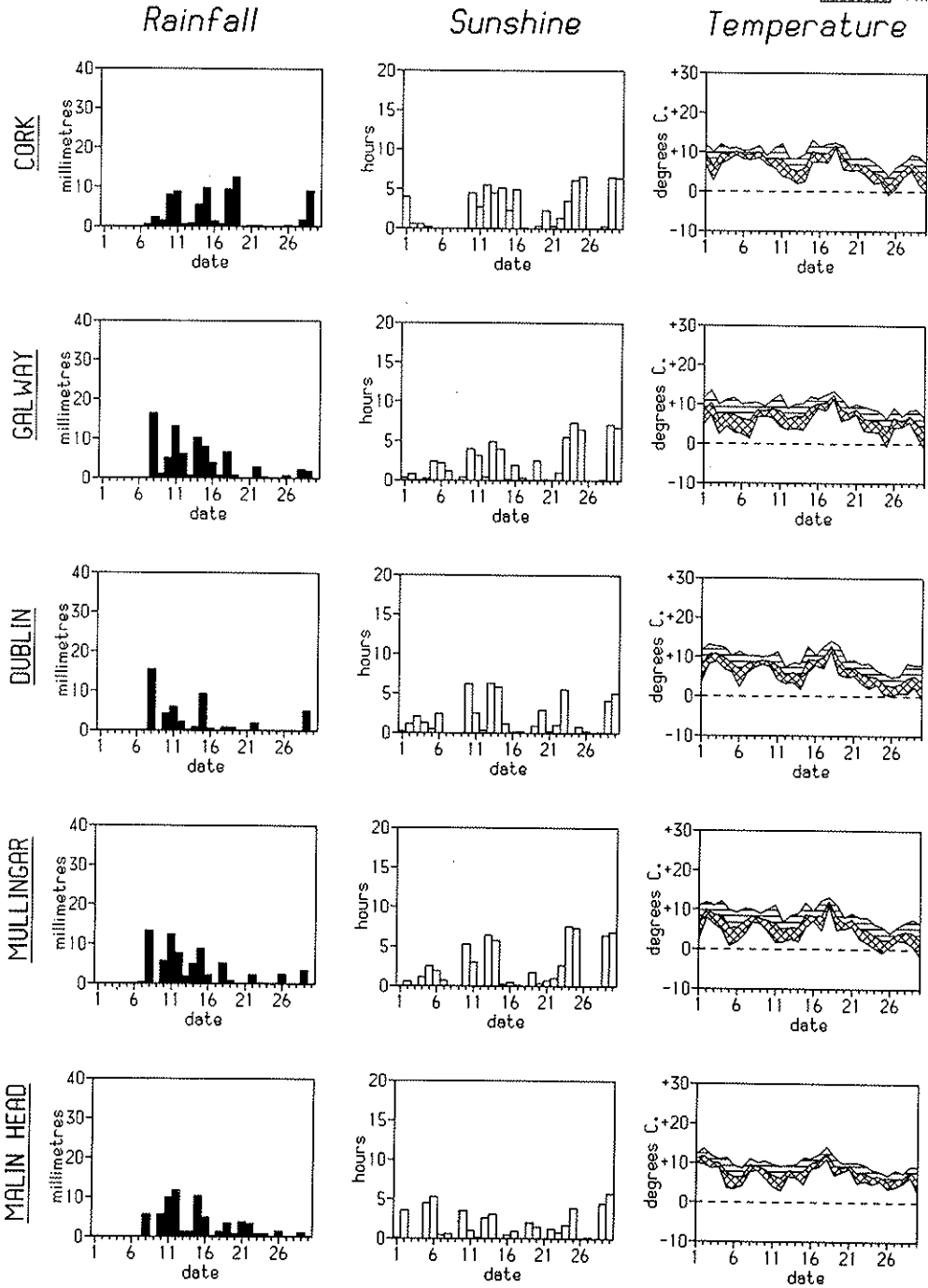
AIR TEMPERATURES

Daytime temperatures were mostly above normal for the first 11 days of the month but fell below normal in a blustery, westerly airflow on 12th/13th. Temperatures rose again during the 15th

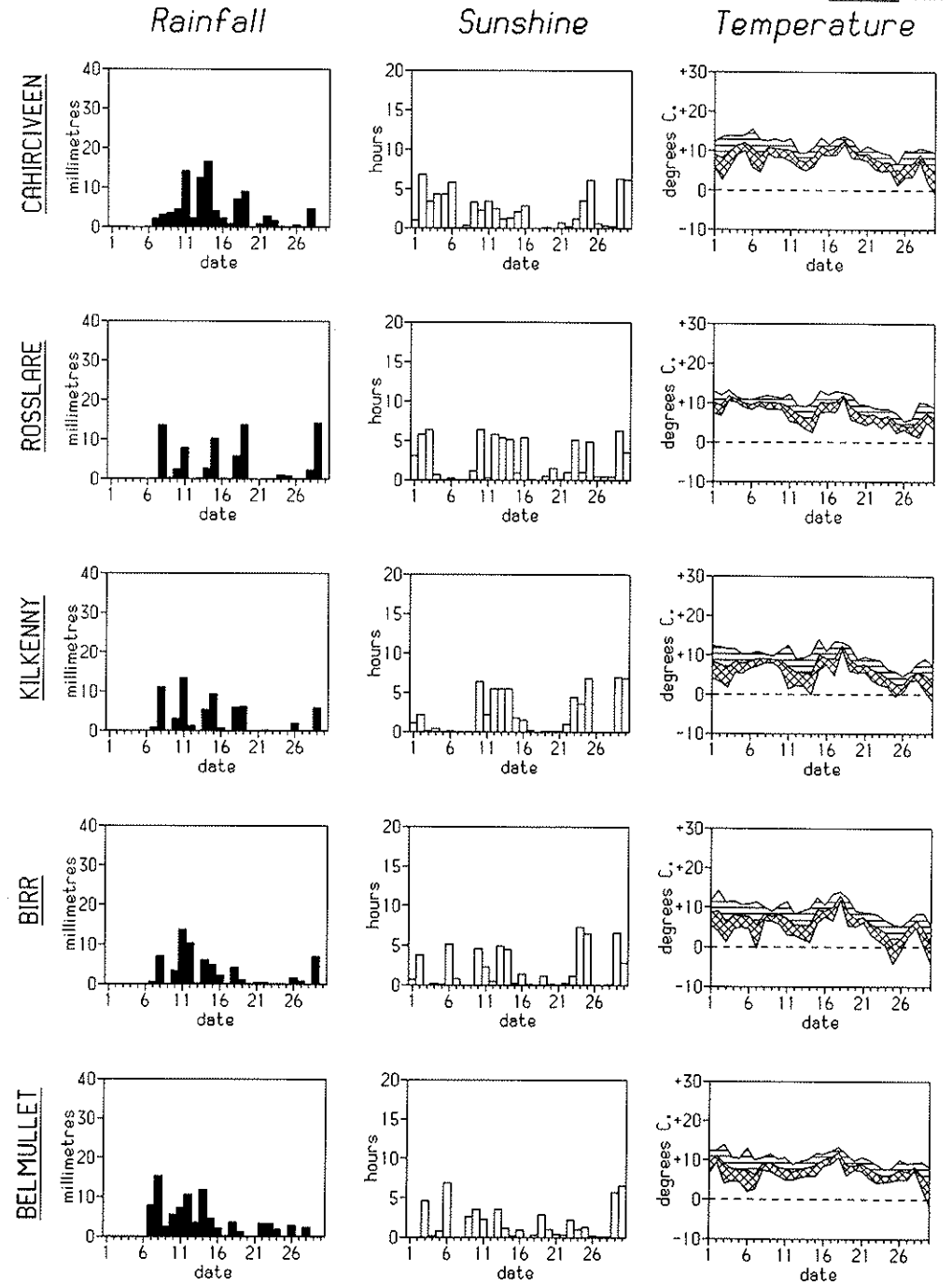
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Distribution of daily values

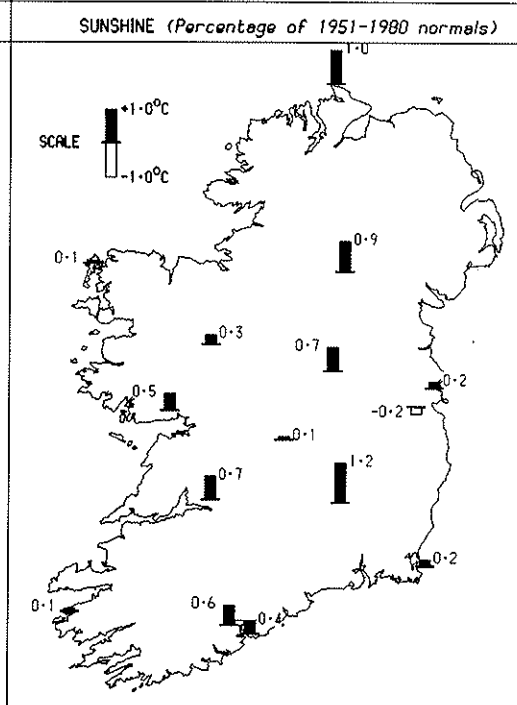
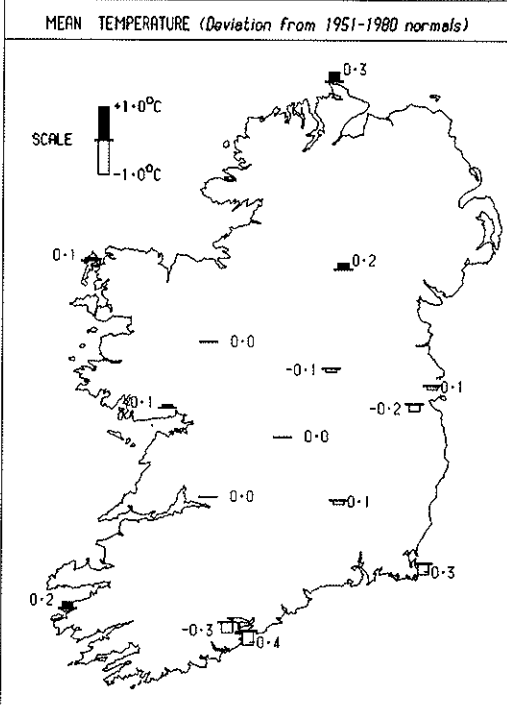
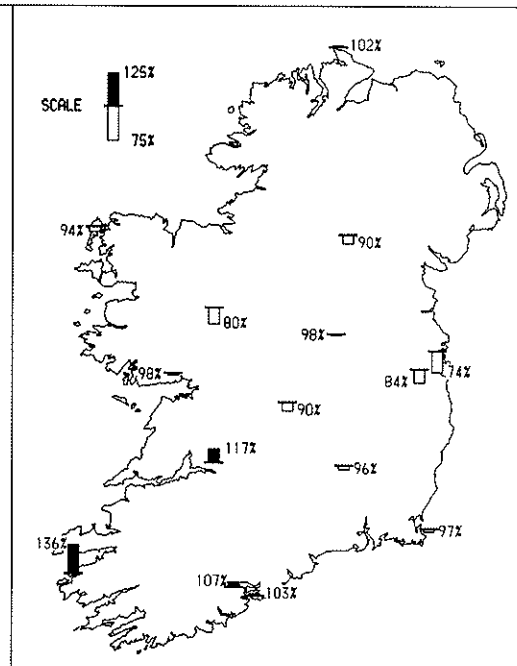
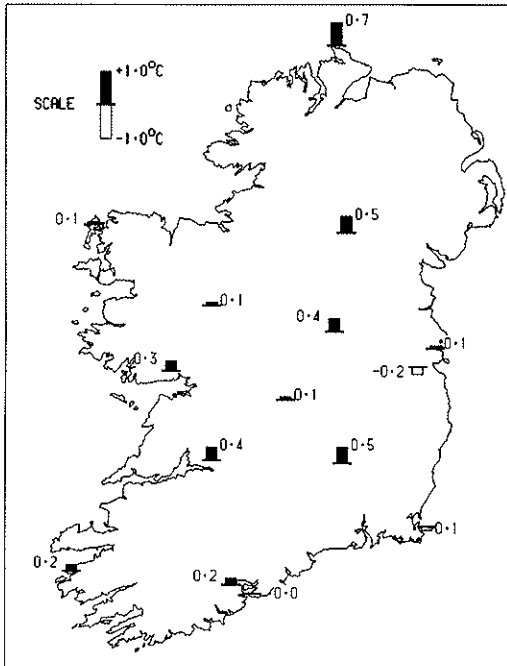
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Differences from average

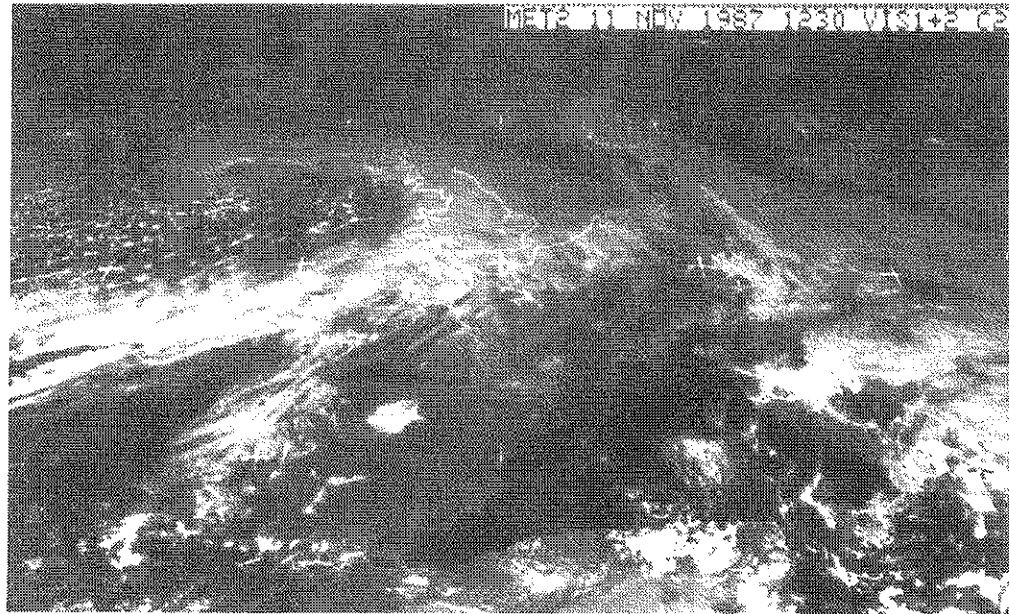
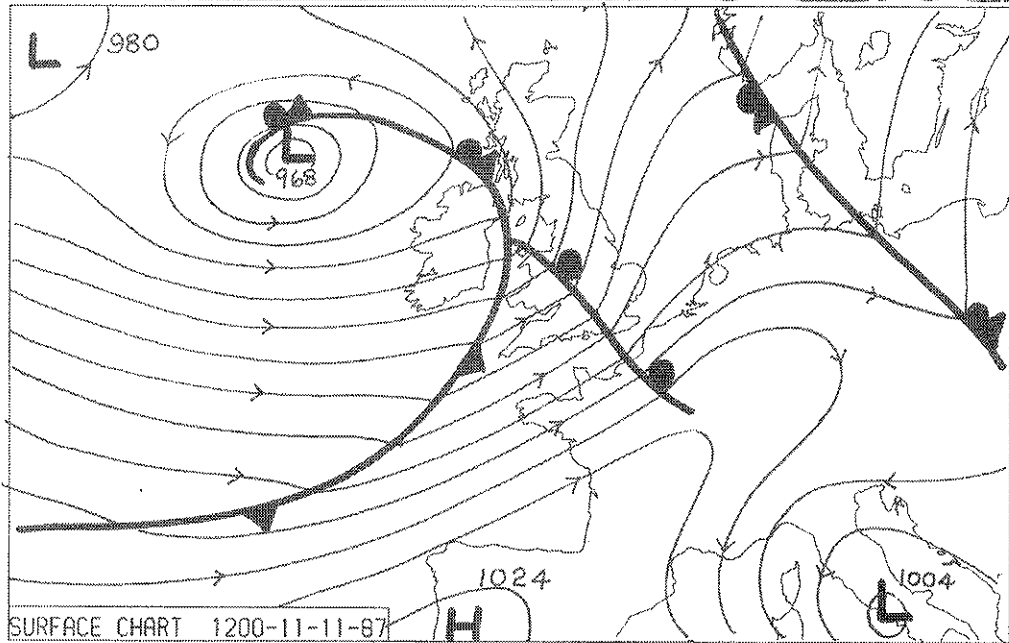


METEOROLOGICAL SERVICE WEATHER SUMMARY FOR NOVEMBER 1987

STATION	RAINFALL		AIR TEMPERATURE				SUNSHINE DURATION		WIND		NUMBER OF DAYS WITH						
	Total	Most in Day Am't Date	Means of Max. Min.	Extreme Hi'st Date	Extreme Lo'st Date	Temperature Lo'st Date	Total	Most in Day Am't Date	Max Gale	Gust	Ra*	Snw	Afr	Ha	Th	Fg	Gg
Belmullet	91.5	15.4 8	10.6 5.7	8.2 14.0 3	-1.7 30	48.8	6.9 6	64	19	1	1	6	-	-	10		
Birr	64.2	13.8 11	9.8 3.5	6.7 14.2 2	-4.3 30	55.2	7.3 24	54	16	-	4	1	1	3	3		
Cahiriveen	94.2	16.7 14	11.6 6.3	9.0 15.5 6	-0.6 30	70.2	6.8 2	56	20	-	1	2	-	1	13		
Casement	45.9	17.0 8	9.6 3.3	6.5 13.6 18	-2.7 30	52.7	7.1 5	55	11	-	6	1	-	5	7		
Claremorris	90.3	15.2 8	9.6 3.6	6.6 13.1 18	-2.5 30	43.8	5.8 30	59	18	-	3	4	1	5	7		
Clones	79.5	25.1 12	9.3 4.1	6.7 13.4 18	-1.3 30	48.0	6.7 24	42	16	-	2	-	-	7	4		
Cork Airport	74.2	12.5 19	9.7 5.2	7.5 13.0 15	-0.8 25	68.7	6.6 25	48	18	-	1	-	-	8	10		
Dublin Airport	47.8	15.5 8	9.7 4.6	7.2 14.1 18	-0.6 30	50.9	6.3 13	50	12	1	1	-	-	9	3		
Galway	81.4	16.4 8	10.2 4.7	7.5 13.5 2	-1.0 30	63.1	7.3 24	55	17	-	2	2	2	3	8		
Kilkenny	65.5	13.4 11	10.0 4.2	7.1 14.1 15	-1.7 30	62.4	7.0 29	47	13	-	3	1	-	5	5		
Malin Head	68.4	11.8 12	10.2 6.3	8.3 14.2 18	2.6 30	47.5	5.7 30	60	19	1	-	5	-	-	16		
Mullingar	72.8	13.3 8	9.1 3.6	6.4 13.2 18	-1.8 30	62.3	7.5 24	51	15	-	2	-	1	6	3		
Roche's Point	57.7	11.3 19	10.4 6.6	8.5 13.7 15	1.7 25	72.6	7.5 25	60	13	-	-	-	-	4	13		
Rosslare	75.6	14.2 29	10.4 6.2	8.3 13.1 3,15	1.3 28	72.2	6.4 3,10	53	12	-	-	-	-	1	10		
Shannon Airport	69.6	14.6 8	10.5 5.2	7.9 14.1 18	-1.5 25	68.0	7.4 29	48	17	-	2	1	1	8	3		

Notes: Rainfall in millimetres, Temperatures in Degrees Celsius, Sunshine in Hours and Wind in knots. * = days with 0.2mm or more Gale Gust = Gust > 33.5 kts. Ra = Rain, Snw = Snow, Afr = Air Frost, Ha = Hail, Th = Thunder, Fg = Fog, Gg = Gale Gusts.

APPROACH OF WINTER !



On the morning of Wednesday the 11th of November as gale force winds gusted up to 60 kts, pressure falls of over 10 hPa (hectopascals) in 3 hours were recorded. The synoptic chart shows the deep winter depression to the west of Ireland and its active frontal troughs crossing the country, heralding the beginning of another winter.

METEOROLOGICAL SERVICE WEATHER SUMMARY FOR AUTUMN

1987

STATION	RAINFALL		AIR TEMPERATURE				SUNSHINE DURATION		WIND		NUMBER OF DAYS WITH									
	Total	Most in Day Am't Date	Means of Max. Min.	Extreme Temperature		Total	Most in Day Am't Date	Max Gale Gust	Ra* Snw Afr Ha Th Fg Gg											
				Hi'st Date	Lo'st Date				Ra*	Snw	Afr	Ha	Th	Fg	Gg					
Beaulieu	358.4	46.4 25Oct	12.8	7.3	10.1	17.8	2Sep	-1.7	30Nov	295.2	9.5	5Sep	64	67	2	1	11	-	1	37
Birr	253.0	22.9 19Sep	12.8	5.5	9.2	21.0	20Sep	-4.3	30Nov	278.9	8.5	14Sep	54	55	-	7	1	1	8	15
Cahiriveen	499.4	38.7 21Sep	13.8	7.6	10.7	20.8	25Sep	-0.6	24Oct	293.4	10.5	1Sep	56	65	-	2	4	2	2	35
Casement	252.7	43.0 21Oct	12.7	5.6	9.2	21.1	25Sep	-2.7	30Nov	302.4	10.8	3Sep	55	52	-	8	1	-	10	29
Claremorris	333.2	24.3 14Oct	12.5	5.1	8.8	19.2	25Sep	-4.0	24Oct	231.1	8.5	14Sep	59	61	-	6	6	2	13	14
Clones	288.5	76.8 21Oct	12.3	5.5	8.9	19.7	25Sep	-3.0	24Oct	279.0	8.9	28Sep	50	54	-	5	3	-	18	11
Cork Airport	341.1	24.7 11Sep	12.5	6.7	9.6	18.6	1Sep	-0.8	25Nov	328.9	10.6	14Sep	50	60	-	1	-	1	24	30
Dublin Airport	247.1	47.5 21Oct	12.9	6.9	9.9	20.2	20Sep	-0.6	30Nov	303.4	10.8	14Sep	50	53	1	1	-	-	20	13
Galway	350.1	39.5 19Sep	12.8	6.9	9.9	20.5	25Sep	-1.1	24Oct	318.9	11.2	1Sep	55	65	-	3	4	3	5	22
Kilkenny	245.7	13.4 11Nov	13.4	5.2	9.3	20.1	1Sep	-2.5	24Oct	312.0	9.8	3Sep	47	54	-	8	1	1	19	14
Malin Head	327.8	63.2 21Oct	12.5	7.6	10.1	18.5	3Sep	2.6	30Nov	308.8	8.8	29Sep	60	62	1	-	8	2	-	53
Mullingar	299.0	60.2 21Oct	12.4	5.0	8.7	20.4	20Sep	-2.5	24Oct	318.1	9.5	1Sep	51	59	-	5	2	1	18	11
Roche's Point	276.3	16.7 4Sep	13.1	8.1	10.6	19.1	1Sep	1.7	25Nov	346.7	10.9	14Sep	60	51	-	-	1	1	10	42
Rosslare	338.0	19.2 1Sep	13.2	8.1	10.7	18.3	25Sep	1.3	28Nov	365.4	11.3	3Sep	53	48	-	-	1	4	5	27
Shannon Airport	276.1	20.1 4Sep	13.5	7.3	10.4	22.0	20Sep	-1.5	25Nov	290.9	8.5	14Sep	49	61	-	3	2	2	15	16

Notes: Rainfall in millimetres, Temperatures in Degrees Celsius, Sunshine in Hours and Wind in knots. * = days with 0.2mm or more
Gale Gust = Gust > 33.5 kts. Ra = Rain, Snw = Snow, Afr = Air Frost, Ha = Hail, Th = Thunder, Fg = Fog, Gg = Gale Gusts.

(Continued from front page)

and remained above normal for the following 4 days. Between 20th and 25th daytime temperatures were below or about normal and there was a biting northwesterly or northerly wind. On the 26th maximum temperatures were some 10°C near the west coast but only 4°C in parts of the east. For the last 4 days of the month daytime temperatures were generally below normal. The resultant mean maximum temperatures ranged from 0.3°C above normal at Malin Head to 0.4°C below normal at Roche's Point.

In the anticyclonic conditions of the first week, minimum temperatures varied widely according to whether clear spells developed or not. Slight air frost was recorded on 6th and 7th. From Saturday the 21st nighttime temperatures fell gradually and the first widespread frost of the month was recorded on the 25th when Birr recorded -4.2°C. Early on 30th frost was again widespread Birr recorded -4.3°C and freezing fog persisted there throughout the morning. Mean minima varied from 1.2°C above normal at Kilkenny to 0.2°C below normal at Casement Aerodrome.

SUNSHINE

Sunshine amounts ranged from 72.6 hours at Roche's Point to 43.8 hours at Claremorris while percentages of normal ranged from 136% at Cahirciveen to 74% at Dublin Airport. Only on the last two days of the month did all stations record a good deal of sunshine but high totals were recorded at some stations during the month (see distribution graphs).

Highest daily totals were the 7.5 hours recorded at Mullingar on the 24th and at Roche's Point on the 25th. Dullest spells occurred between 7th and 9th, 17th/18th and 26th to 28th.

STRONG WINDS

The passage of a vigorous depression caused winds to gust from 40 to 60 knots in the period 10th to 12th and Belmullet recorded the highest gust of the month, 64 knots, on 12th. On the 16th and in the periods 18th-19th and 22nd to 24th winds gusted 35 to 50 knots in most areas and occasional gusts of between 50 and 60 knots were recorded on the north coast.

FOG

Fog affected many areas in the anticyclonic conditions of the first week of the month and was again widespread on the 27th. Some patches of fog occurred on 8th, 26th and 30th.

THUNDER

Thunder was recorded on Wednesday the 11th and on Thursday the 12th.

AUTUMN 1987

SEPTEMBER: Rainfall and sunshine above normal, temperatures (especially minima) below normal.

OCTOBER: Sunny but cool with some heavy rain especially in the north and east.

NOVEMBER: Dry with temperatures about or above normal.

The low rainfall totals in November offset the high totals recorded in September and October to some degree and totals for Autumn ranged from 246 millimetres at Kilkenny to 358 millimetres at Belmullet. Percentages varied from 97% of normal at Cork Airport to over 120% in the Dublin area.

Mean maximum temperatures ranged from 0.3°C to 0.8°C below normal mainly because of the low maxima in October. The cool nights of both September and October caused mean minimum temperatures to range from 0.3°C to 1.0°C below normal. Mean air temperatures for Autumn were the lowest for 11 to 13 years at many stations.

Sunshine totals ranged from 365 hours at Rosslare to 231 hours at Claremorris. Percentages ranged from 100% at Claremorris to 133% at Malin Head where it was the sunniest Autumn for 28 years.

FOR LATEST FORECAST RING

Dublin area	: 1199
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