

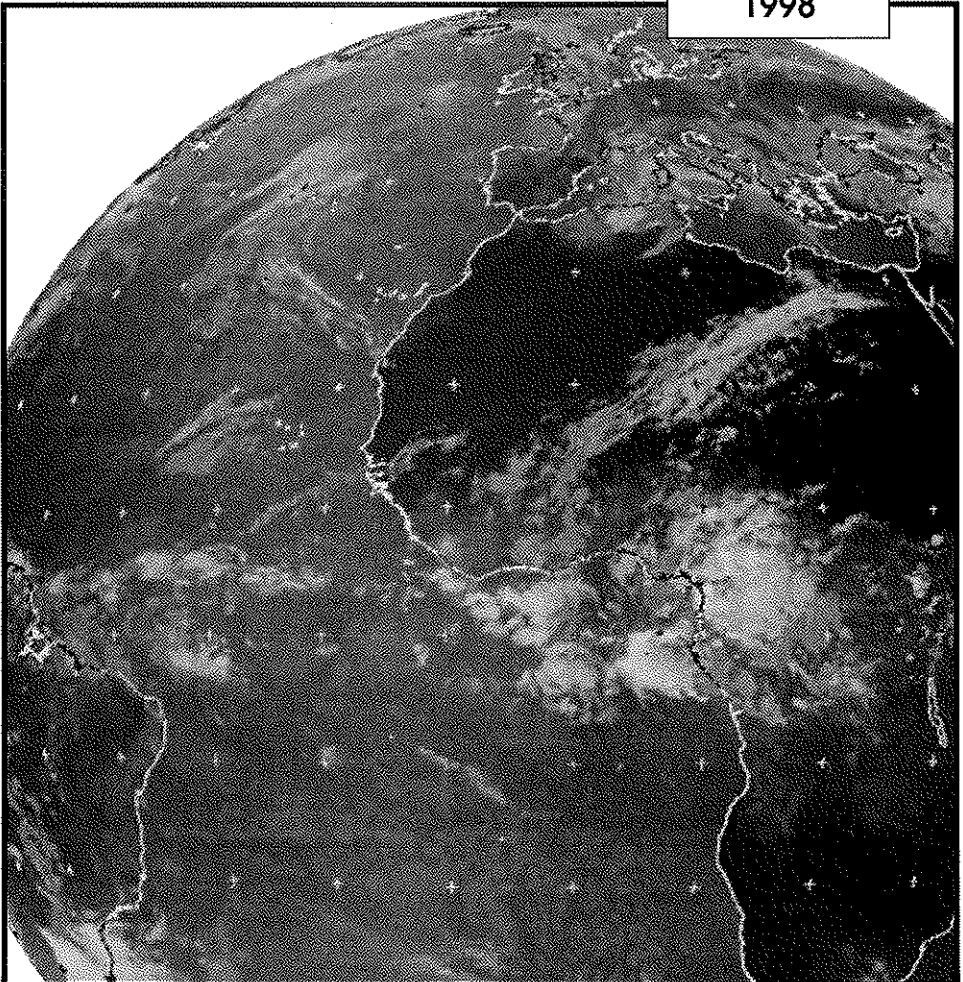


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Monthly Weather Bulletin

APRIL
1998



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VERY WET IN EAST AND SOUTH; COLD SPELL BETWEEN 9TH AND 16TH

Above
Heavy rain before the Waterford versus Kilkenny match on the 19th at Walsh Park in Waterford caused the game to be delayed while water was cleared from the pitch.
(picture The Examiner)

April is normally one of the driest months of the year, but this April was exceptionally wet in the east and south, with rainfall totals of over 100mm in these areas, much of which fell in the form of heavy showers. For the first time in over a year mean air temperatures were below normal everywhere, due mainly to a spell of unseasonably cold weather between the 9th and 16th. Sunshine totals were close to normal generally, with the southwest of the country faring best.

The month was dominated by areas of low pressure close to the country, the first of which approached slowly from the southwest between the 1st and 3rd. Bands of frontal rain moved northwards in a freshening southeasterly airstream, bringing 3-day falls of between 30 and 50mm in the south and east. The depression continued its slow eastward track over the country between the 4th and 7th, giving some heavy thundery showers in places as winds fell light. During the 8th and early on the 9th a

polar depression moved southwards in the Irish Sea, bringing wintry showers in the west and some longer outbreaks of rain or snow in the east as temperatures fell sharply in the strong to gale force northeasterlies. Winds eased sufficiently early on the 10th to allow a severe frost to develop over the eastern half of the country; this frost was particularly damaging to early crops following the

very mild weather of previous months. With low pressure almost stationary in the North Sea between the 10th and 17th, Ireland lay in a cold north to northeasterly airstream during this period. Frost was widespread at night and there were wintry showers of hail, sleet or snow each day, with a longer spell of sleet or snow in places on the 14th.

continued on page 4

Visit of schoolchildren to Met Éireann on GLOBE Earth Day

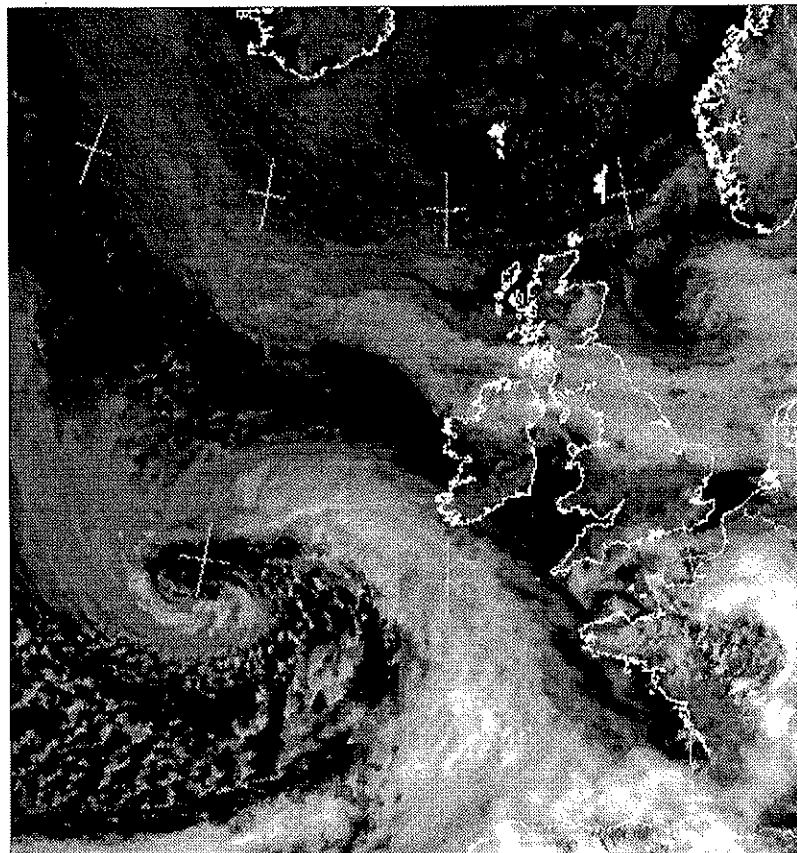


GLOBE (*Global Learning and Observations to Benefit the Environment*) is a programme which involves students in making weather and environmental observations, exchanging them with each other and transmitting them on the internet via GLOBE's website (www.globe.gov). Met Éireann was requested by the U.S. Embassy to facilitate a visit by about 100 students and teachers to its Headquarters in Glasnevin on Earth Day, April 22nd. The students received an overview of all of Met Éireann's activities from the instrumentation used in initial observations, its plotting and archiving, to the preparation and distribution of weather forecasts. Pictured above is a group of students receiving a demonstration of rainfall recording equipment from Peter Barry of the Climatological and Observations unit.
(picture Frank Fennell Photography)

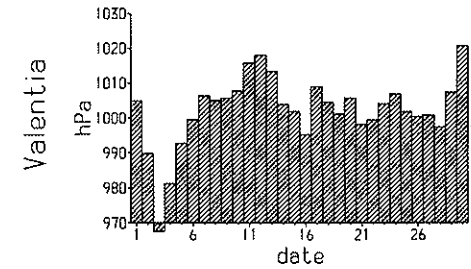
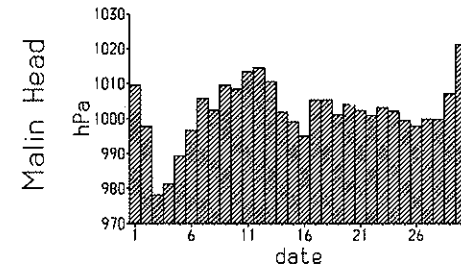
The 18th brought a change to milder southwesterly winds as a depression approached from the southwest. Rain moved slowly northeastwards on the 19th, followed by a weak ridge. More rain followed between the 21st and 23rd, giving some heavy falls in the south and southwest. With low pressure close to the northwest coast between the 24th and 29th, there was a return to very showery weather everywhere, some of the showers with hail and thunder. Winds were generally southwesterly during this period, however, keeping temperatures close to normal. Showers died out in most places on the 30th as pressure rose to the west.

Mean windspeeds for the month of

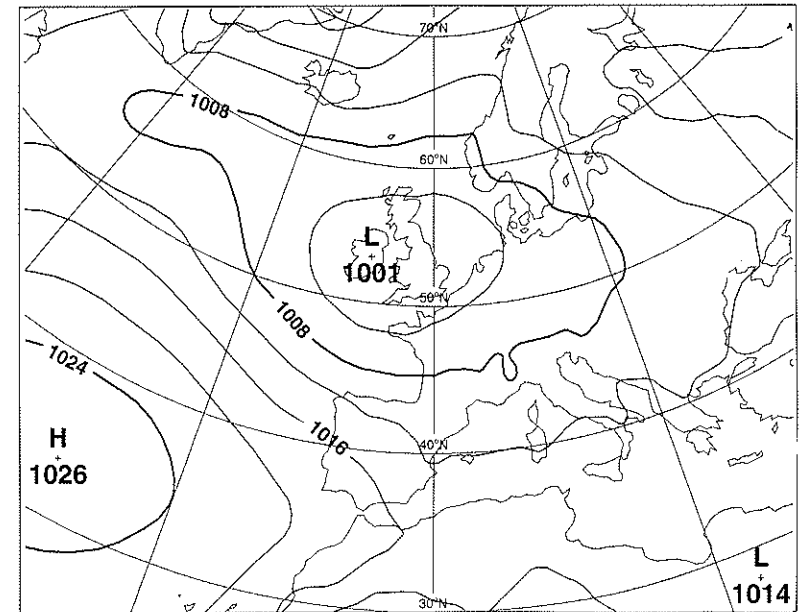
between 5 knots (6m.p.h.) at Birr and 17 knots (20m.p.h.) at Malin Head were above normal generally. Most stations recorded their highest winds of the month on the 9th, but Malin Head recorded the highest gust, 63 knots (73m.p.h.) on the 3rd. Hail and snow were recorded with much greater frequency than normal. Most stations have 1 or 2 days with snow in a typical April but a number of stations recorded up to 6 such days this month in the period 8th to 16th. Hail was widespread in the same period and again between the 26th and 28th. There were thunderstorms on the 5th, 7th, 8th, 16th and in the period 26th to 29th. Fog was confined mostly to the period 1st to 2nd.



Right
Low pressure to the southwest on the 2nd moved slowly across the country over the following days.



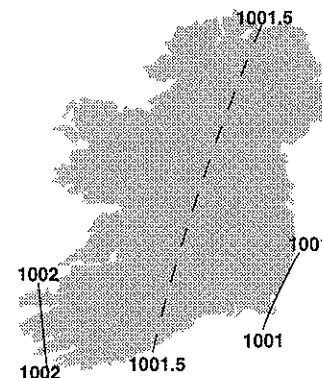
Mean daily M.S.L. pressure (hPa)



the above map is based on means of 1200 UTC values

MEAN ATMOSPHERIC PRESSURE

Mean sea level pressure values for the month were well below normal everywhere, by up to 15hPa in the southeast. The month began with exceptionally low pressure for April as a depression slowly crossed the country from the southwest. Valentia Observatory measured 965.3hPa on the 3rd, the lowest pressure of the month and the lowest April value at the station for over 50 years. Pressure returned to more normal values after the 6th, but only rose significantly above normal on the last day of the month. Belmullet recorded the highest pressure value of the month on the 30th, 1028.3hPa.

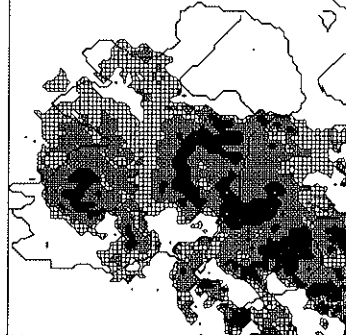


Very wet except in north

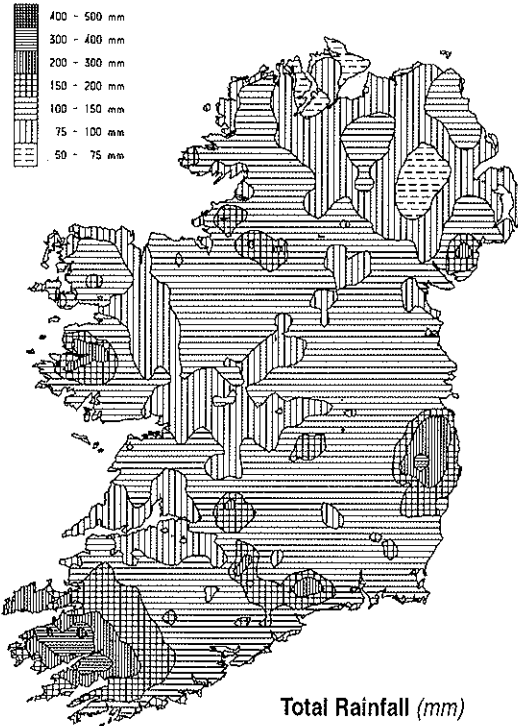
Rainfall totals were well above normal except at Malin Head; they ranged from 52mm there to over 150mm in parts of the west and southwest. The total of 173mm at Valentia Observatory almost equalled its previous highest April total of 174mm recorded in 1992. Eastern and southern stations had their wettest April since 1966, with between twice and three times the normal rainfall generally.

There was no completely dry day everywhere during the month and the number of wetdays in most places (days with 1.0mm or more of rainfall) was between 18 and 24, almost twice the normal range of 10 to 13. Many eastern and southern stations had received their normal April rainfall by the 9th of the month, with heavy falls in these areas in the periods 1st to 3rd and on the 8th. The 21st was very wet in the south and southwest, with heavy falls, mostly in the form of showers on a number of other days, especially in the period 24th to 25th. Cork Airport recorded a fall of 34.2mm on the 2nd; Phoenix Park's fall of 38.8mm on the 9th was the highest of the month and the highest daily fall for April in over a century of recording at the station.

Radar plot at 21Z on 2 Apr 1998 Opt= IRI

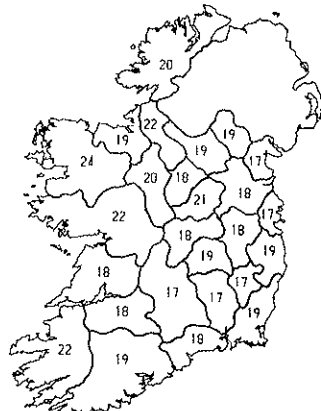


Left
A very wet start to the month saw bands of heavy rain or showers moving northwards over the country, as here on the 2nd.



Total Rainfall (mm)

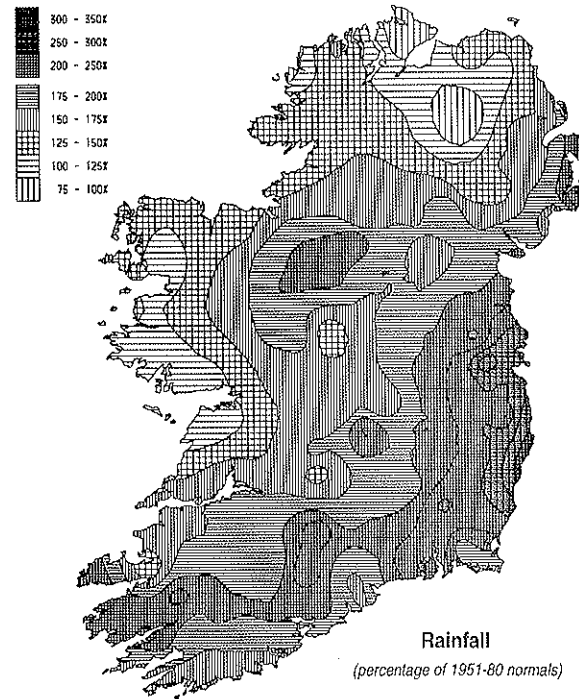
Below
The number of wetdays - days with 1mm or more rainfall - in each county



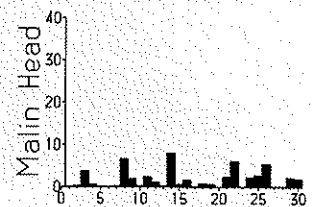
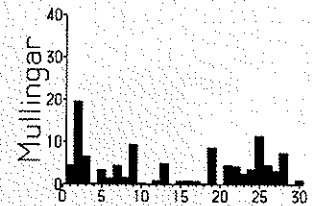
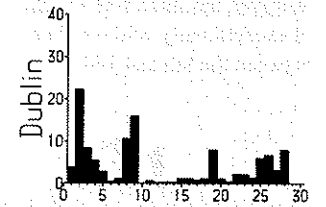
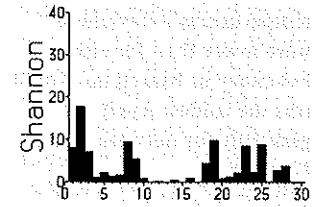
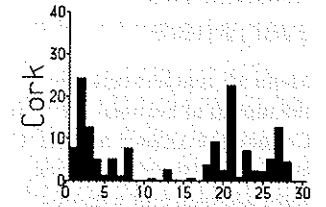
DAILY RAINFALL EXPRESSED AS % OF MONTHLY NORMAL

COUNTY	DAY																														TOTAL	
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Carlow	12	43	30	6	4	1	4	12	2	-	-	1	-	-	1	2	13	15	8	24	14	3	4	21	7	15	5	-	-	...	147	
Cavan	17	25	16	1	6	1	3	9	1	-	2	5	2	1	1	2	4	4	6	3	8	5	3	1	15	5	7	5	4	-	...	162
Clare	11	21	10	4	4	2	7	13	1	-	1	1	-	1	-	2	-	11	3	2	4	12	4	4	17	2	5	3	-	...	145	
Cork	7	36	7	9	2	9	6	7	1	1	1	1	-	2	1	-	17	3	12	20	14	4	8	8	4	11	1	-	...	193		
Donegal	3	10	3	1	2	3	5	8	5	2	4	4	6	2	2	11	3	4	2	5	7	2	4	8	2	3	3	5	-	...	121	
Dublin	18	41	32	5	5	2	3	7	1	2	-	2	2	-	1	3	13	9	-	3	6	2	2	12	6	9	15	-	...	265		
Galway	13	18	7	1	2	3	4	4	5	-	2	2	3	1	-	3	-	12	13	1	9	7	2	3	25	8	11	3	-	...	167	
Kerry	8	32	9	5	3	5	7	10	4	2	2	1	-	1	-	2	-	14	3	18	27	17	3	7	11	3	11	2	-	...	207	
Kildare	19	14	11	20	5	2	3	6	3	8	-	-	1	5	-	1	2	3	2	-	5	10	3	2	16	5	29	13	-	...	243	
Kilkenny	17	40	18	10	1	1	4	12	-	-	2	1	1	-	1	-	13	2	3	11	9	1	3	24	3	13	2	3	-	...	195	
Laois	14	22	13	8	5	1	8	17	1	5	2	2	1	1	1	3	-	13	4	4	9	7	1	9	10	16	2	18	-	...	192	
Letttrim	16	22	9	13	4	3	6	3	2	1	3	5	2	-	3	6	8	2	8	5	2	3	16	6	2	10	3	-	...	186		
Limerick	10	14	10	6	3	5	7	13	-	-	2	1	-	-	-	15	1	1	4	13	1	3	5	1	9	14	-	...	139			
Londonderry	19	26	16	2	9	2	4	15	-	-	2	-	2	-	-	3	3	7	1	7	10	3	2	23	9	7	3	6	-	...	174	
Louth	23	43	17	15	16	2	2	24	-	-	1	1	1	-	-	3	4	9	-	6	9	3	2	8	-	1	8	1	-	...	192	
Mayo	5	11	8	3	6	5	5	9	5	4	8	5	2	1	2	4	-	4	4	3	12	6	2	5	8	6	5	1	-	...	144	
Meath	28	28	14	4	5	2	2	34	-	-	-	1	-	5	1	2	5	6	1	5	10	1	12	11	4	17	10	2	-	...	200	
Monaghan	8	22	9	12	13	2	5	7	7	-	3	2	2	1	1	2	3	3	1	-	7	13	8	2	3	1	4	3	7	-	...	161
Offaly	17	24	5	4	3	3	7	20	-	-	1	1	3	-	-	3	-	11	8	2	4	10	3	8	22	3	4	12	-	...	178	
Rooscommon	21	31	7	1	5	3	3	3	6	1	1	2	1	2	-	3	1	6	11	1	5	9	3	4	26	2	6	20	2	...	186	
Sligo	10	15	11	4	2	3	6	9	10	5	6	6	2	5	2	3	1	8	13	1	7	9	2	4	17	3	3	4	1	...	172	
Tipperary	13	27	14	11	2	7	5	11	2	-	2	1	-	-	1	-	32	4	7	15	11	2	4	13	3	8	14	-	...	189		
Waterford	14	28	28	15	4	13	3	10	1	-	1	-	-	-	-	19	1	6	17	16	4	3	6	9	7	6	2	-	...	210		
Westmeath	22	23	7	1	5	2	10	16	-	1	-	2	8	-	1	1	5	10	2	6	11	2	4	23	3	6	12	-	...	186		
Wexford	12	39	21	8	9	4	4	15	1	2	1	-	-	-	2	-	18	4	6	16	19	6	4	2	4	7	3	-	...	207		
Nicklow	16	32	32	5	5	4	28	12	3	1	1	-	-	1	3	11	14	3	19	13	16	7	13	8	7	11	-	...	266			
MEAN	14	27	14	6	5	3	5	17	3	3	2	2	2	1	1	2	9	7	4	10	10	3	4	16	5	8	8	2	-	...	193	

NOTE: In the above table, each value represents the percentage of the monthly normal that fell on each day. Stations within each county are averaged together. For example, 12% of the average monthly rainfall in Co. Carlow fell on the 1st.



Rainfall
(percentage of 1951-80 normals)



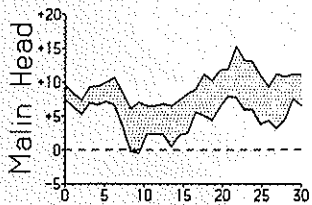
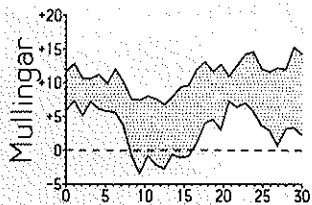
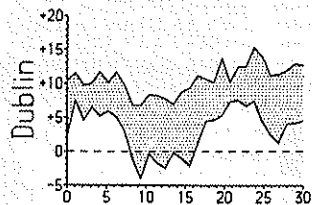
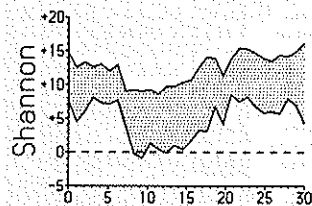
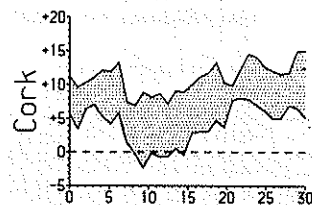
Daily rainfall amounts (millimetres)

Below normal almost everywhere

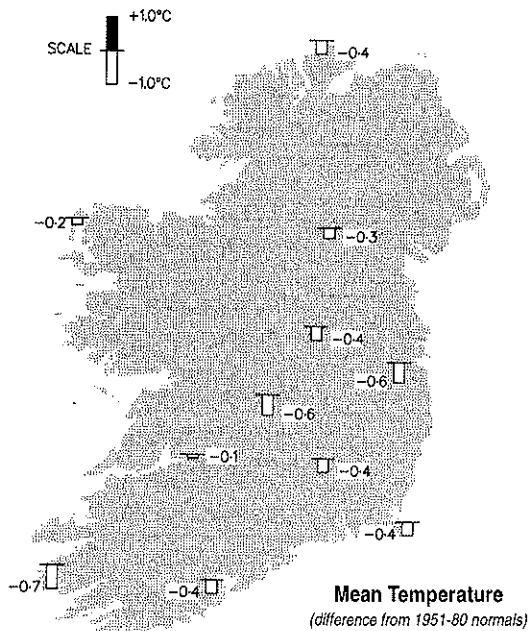
Mean air temperatures for the month of between 6.2°C at Connaught Airport and 9.1°C at Sherkin Island, Co. Cork, were between half a degree and a degree below normal at most stations. Mean temperatures everywhere were lower than for either February or March last and it was the coldest April generally for between 9 and 12 years.

Temperatures were close to normal for most of the month, however, but there was a spell of exceptionally cold weather between the 9th and 16th.

During this period, daily maxima were only between 6°C and 8°C generally, five degrees below normal, while there was widespread air and ground frost at night. Both Dublin Airport and Casement Aerodrome recorded their lowest ever April air temperatures on the 10th; Casement's value of -5.5°C, the lowest of the month, was lower than any temperature recorded there during the preceding winter. Mullingar recorded the lowest grass minimum temperature of the month, -10.5°C on the 13th, its lowest for April in almost 50 years of record. The month's highest temperature, 16.9°C, was recorded at Sherkin Island on the 30th.



Daily maximum and minimum temperatures (°C)



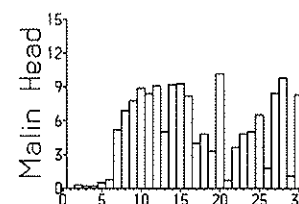
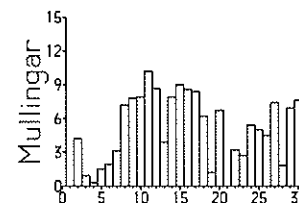
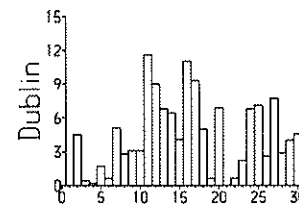
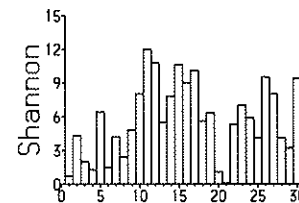
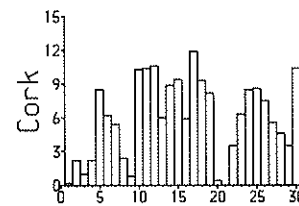
Mean Temperature (difference from 1951-80 normals)

Near normal in most places but dull in east

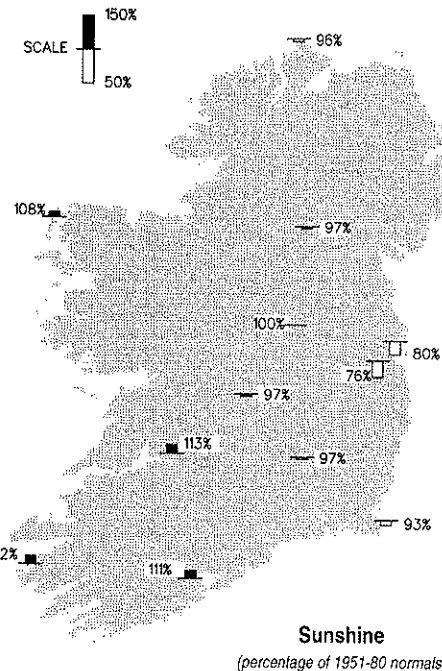
While sunshine totals for the month were close to normal in most places, there was a wide variation between the highest total, 203 hours at Sherkin Island, Co. Cork, and the lowest, 113 hours at Dublin (Phoenix Park). Percentage of normal sunshine ranged from 76% of normal at both Phoenix Park and Casement Aerodrome, where it was the dullest April for 6 years, to 120% at Sherkin Island; stations in the south and

southwest had their sunniest April for 8 or 9 years.

There was a dull start to the month, with a total of less than 10 hours sunshine in many places up to the 5th, but the very showery periods between the 10th and 17th and during the final week saw several hours of sunshine between the showers each day. Most stations had their sunniest day of the month on either the 11th, when there was over 10 hours sunshine in many places, or on the 17th in the south and southwest. Rosslare recorded the sunniest day of the month on the 27th, however, measuring 12.7 hours sunshine.



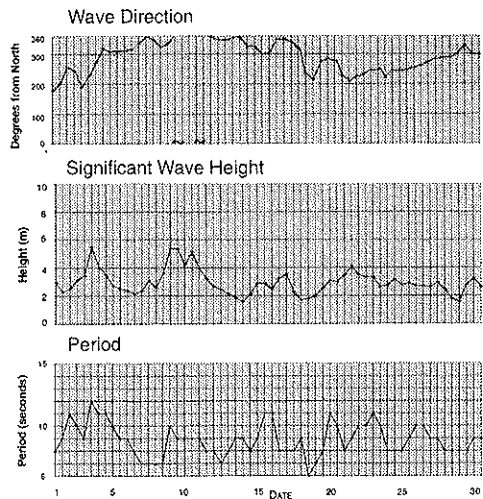
Daily sunshine amounts (hours)



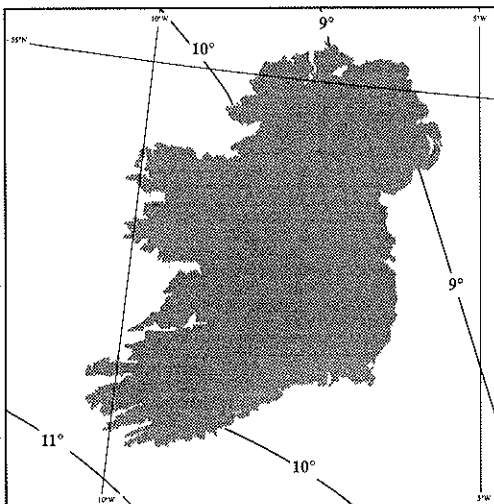
Sunshine (percentage of 1951-80 normals)

SEA TEMPERATURES

Sea temperatures fell a little during the month but recovered during the final week. Despite this, sea temperatures were above normal throughout the month, ranging from 9°C off the north coast to close to 11°C in the southwest by the end of the month. At Malin Head, the mean sea temperature for the month was 9.0°C, almost a degree above normal.

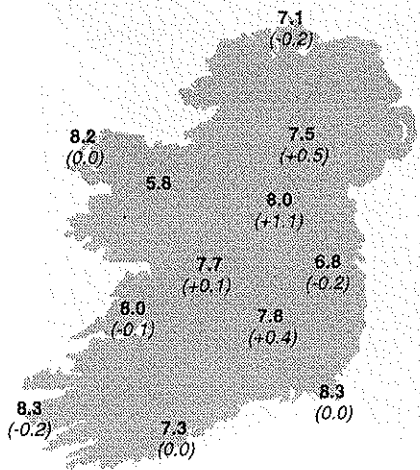


Wave conditions at 52.5°N, 12°W

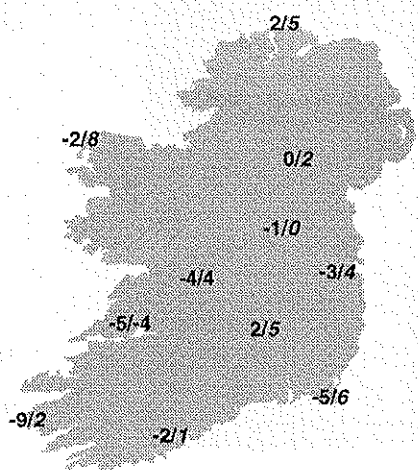


Sea Temperatures (°C) around mid-month

Mean 10cm Soil Temperatures (°C) at 0900Z (difference from 1961-90 normals in brackets)



Soil Moisture Deficits (mm) 10th of month / End of month (0 represents field capacity, -10 saturation)



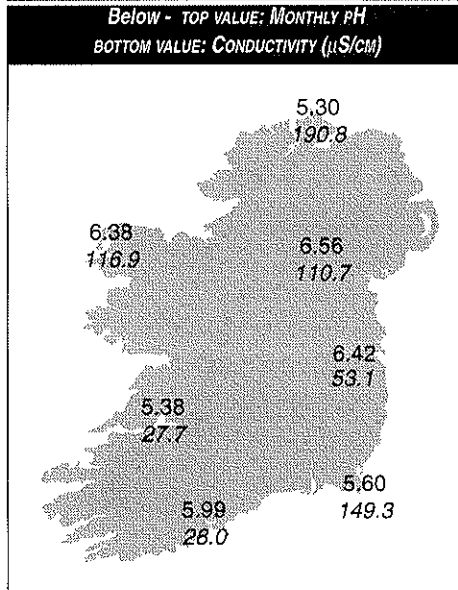
Station	period	RAINFALL		TEMPERATURE										SUNSHINE									
		amount	% of average	mean max	mean min	mean daily	diff from average	lowest min	date	days with air frost	degree days > 4°C	degree days > 10.0°C	lowest grass-min	date	days with ground frost	mean 10cm at 0900h	mean 30cm at 0900h	total no. of hours	% of average	mean wind speed (mph) (2m agl)	P.E. (Penman) (mm)		
Co. Cork Fermoy	1-10	79.2	-	9	8	11.0	4.0	7.5	-	-2.6	10	1	36	4	-5.0	10	2	8.9	10.3	-	-	3.5	-
	11-20	17.0	-	5	4	10.4	0.6	5.5	-	-1.5	13	5	22	3	-5.0	13	9	6.6	8.5	-	-	3.6	-
	21-end	41.4	-	8	7	13.9	5.4	9.7	-	1.2	27	0	54	12	-1.1	27	2	10.0	10.3	-	-	3.7	-
	month	137.6	241	22	19	11.8	3.3	7.6	-0.6	-2.6	10	6	112	19	-5.0	13	13	8.5	9.7	-	-	3.6	50
Co. Donegal Letterkenny	1-10	27.1	-	10	8	10.1	4.8	7.5	-	-1.5	10	1	33	1	-	-	-	-	-	-	-	-	-
	11-20	25.5	-	10	9	9.8	1.9	5.9	-	-0.8	13	2	21	2	-	-	-	-	-	-	-	-	-
	21-end	28.0	-	9	7	13.6	5.1	9.4	-	0.5	27	0	51	11	-	-	-	-	-	-	-	-	-
	month	80.6	-	29	24	11.2	3.9	7.6	-	-1.5	10	3	106	14	-	-	-	-	-	-	-	-	-
Co. Kerry Ardfert	1-10	31.3	-	10	8	11.3	5.2	8.3	-	-0.5	10	1	40	5	-3.6	10	3	-	-	36.9	-	-	-
	11-20	17.2	-	8	4	11.0	1.0	6.0	-	-2.9	15	3	26	3	-5.5	15	9	-	-	80.0	-	-	-
	21-end	52.6	-	8	8	13.9	6.3	10.1	-	3.0	29	0	57	12	0.0	29	0	-	-	58.7	-	-	-
	month	101.1	-	26	20	12.0	4.1	8.1	-	-2.9	15	4	123	20	-5.5	15	12	-	-	175.6	-	-	-
Co. Leitrim Ballinamore	1-10	61.5	-	10	7	10.2	4.3	7.3	-	-3.1	10	1	32	2	-5.0	10	1	8.3	9.1	30.2	-	3.0	-
	11-20	17.8	-	9	6	9.7	0.9	5.3	-	-3.4	16	5	21	2	-4.5	13	8	5.8	7.1	62.3	-	3.7	-
	21-end	63.3	-	10	9	13.3	4.8	9.1	-	-0.1	27	1	48	9	0.9	27	0	8.9	9.2	37.9	-	2.9	-
	month	142.6	219	29	22	11.1	3.3	7.2	-0.6	-3.4	16	7	101	14	-5.0	10	9	7.7	8.5	130.4	91	3.2	43
Co. Louth Ardee	1-10	74.0	-	8	8	10.5	4.2	7.4	-	-5.2	10	1	34	2	-9.2	10	1	8.9	9.3	-	-	-	-
	11-20	6.5	-	6	3	10.0	0.2	5.1	-	-4.5	16	5	21	2	-7.8	16	7	6.0	6.9	-	-	-	-
	21-end	18.0	-	10	6	13.6	5.1	9.4	-	0.4	28	0	51	11	-3.5	27	3	8.8	9.4	-	-	-	-
	month	98.5	186	24	17	11.3	3.2	7.3	-	-5.2	10	7	107	15	-9.2	10	11	7.9	8.5	-	-	-	-
Co. Waterford Dungarvan	1-10	67.1	-	8	8	11.7	4.7	8.2	-	-2.0	10	1	41	6	-5.0	10	3	-	10.3	29.5	-	-	-
	11-20	21.6	-	6	4	11.4	1.4	6.4	-	-1.5	13	3	29	4	-4.7	15	9	-	8.6	73.7	-	-	-
	21-end	52.5	-	9	7	14.0	6.5	10.3	-	1.3	27	0	59	14	-2.5	27	4	-	10.7	59.3	-	-	-
	month	141.2	-	23	19	12.4	4.2	8.3	-	-2.0	10	4	129	24	-5.0	10	16	-	9.9	162.5	-	-	n/a
Co. Wexford Johnstown Castle	1-10	65.3	-	10	10	11.0	4.7	7.9	-	-2.3	10	1	38	4	-3.1	10	1	7.5	9.6	22.1	-	1.4	-
	11-20	14.7	-	5	4	10.7	1.9	6.3	-	-0.8	12	2	26	3	-3.2	12	6	5.3	7.5	73.2	-	1.5	-
	21-end	48.2	-	9	8	13.2	6.4	9.8	-	3.3	27	0	54	9	0.2	27	0	9.6	10.4	46.4	-	1.9	-
	month	128.2	203	24	22	11.6	4.4	8.0	0.0	-2.3	10	3	118	16	-3.2	12	7	7.5	9.2	141.7	86	1.6	43

MEASURED POTENTIAL EVAPOTRANSPIRATION (P.E.) AND SOIL MOISTURE

County/Station	Period	P.E. (mm)		Soil Moisture (mm)	
		Amount	Deficit	Accumulated Deficit	Surplus
Co. Dublin Kinsealy	1-10	32.6	-	0	38
	11-20	22.0	10	10	-
	21-end	9.8	-	0	17
	month	64.4	-	-	-
Co. Kerry Valentia Obs.	1-10	17.7	-	0	59
	11-20	16.0	-	0	9
	21-end	16.7	-	0	60
	month	50.4	-	-	-
Co. Leitrim Ballinamore	1-10	3.6	-	0	58
	11-20	13.2	-	0	12
	21-end	10.0	-	0	53
	month	26.8	-	-	-
Co. Wexford Johnstown Castle	1-10	14.0	-	0	51
	11-20	15.6	1	1	-
	21-end	12.5	-	0	36
	month	42.1	-	-	-

SEE BACK PAGE FOR NOTES ON THE DATA

County/Station	GLOBAL SOLAR RADIATION (MJ/sq. m.)			P.E. (Penman) total for month (mm)
	1-10	11-20	21-end	
Co. Donegal Malin Head	88.74	155.36	125.57	369.67
	62			
Co. Dublin Dublin Airport	88.55	148.41	113.74	350.70
	44			
Co. Kerry Valentia Obs.	109.25	164.30	159.79	433.34
	66			
Co. Kilkenny Kilkenny	98.29	163.74	132.63	394.66
	57			
Co. Mayo Belmullet	106.18	154.36	182.16	442.70
	65			
Co. Monaghan Clones	88.93	146.83	129.00	364.81
	51			
Co. Offaly Birr	101.87	156.00	137.25	395.12
	46			



SEE BACK PAGE FOR NOTES ON THE DATA
THE DATA SHOWN HERE ARE PROVISIONAL AND MAY BE
SUBJECT TO ALTERATION

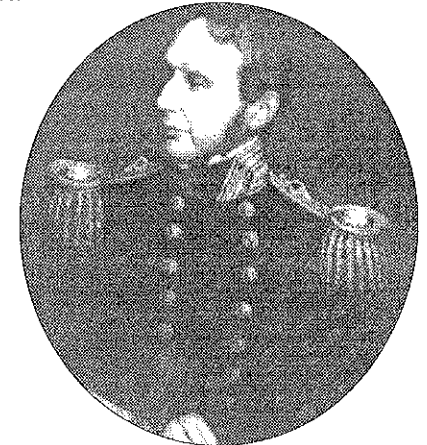
Right - DAILY PRECIPITATION AND AIR DATA AT
VALENTIA OBSERVATORY

date	PRECIPITATION			AIR		
	rainfall (mm)	pH	electrical conductivity ($\mu\text{S/cm}$)	NO ₂ -N ($\mu\text{g}/\text{m}^3$)	SO ₂ -S ($\mu\text{g}/\text{m}^3$)	SO ₄ -S ($\mu\text{g}/\text{m}^3$)
1	8.3	5.59	7.8	1.0	0.55	1.43
2	25.7	5.57	37.6	0.6	0.16	0.41
3	2.6	5.54	41.7	0.4	0.54	1.20
4	4.8	4.63	37.6	0.2	0.29	0.74
5	1.5	4.93	52.8	0.1	0.16	0.39
6	2.9	4.77	46.2	0.1	0.12	0.31
7	3.3	6.21	97.7	0.1	0.16	0.41
8	14.8	4.69	91.6	0.1	0.10	0.26
9	3.6	6.74	160.1	<0.1	0.09	0.25
10	0.8	5.37	65.8	0.2	0.25	0.66
11	5.4	7.01	106.2	<0.1	0.07	0.17
12	0.8	7.57	278.0	0.3	0.13	0.36
13	0.4			0.8	0.03	1.63
14	0.1			0.2	0.19	0.49
15	0.5	6.34	51.8	0.4	0.95	2.54
16	2.2	7.09	216.0	0.2	0.11	0.29
17	1.1	5.19	81.7	0.6	0.25	0.68
18	10.8	5.58	15.8	0.3	0.14	0.37
19	1.5	5.30	64.0	0.1	0.15	0.39
20	19.2	6.62	41.4	0.2	n/a	n/a
21	22.2	5.71	23.6	0.3	0.22	0.57
22	9.8	5.47	26.8	0.1	0.14	0.37
23	4.1	5.11	20.0	0.1	0.11	0.30
24	2.4	5.11	87.0	0.1	0.09	0.23
25	6.3	5.17	37.4	0.1	0.29	0.81
26	2.0	5.03	36.7	0.2	0.11	0.30
27	10.1	5.32	39.0	0.1	0.06	0.16
28	2.5	6.79	56.6	0.6	0.05	0.12
29	0.1			0.1	0.05	0.14
30	tr			0.2	0.05	0.14

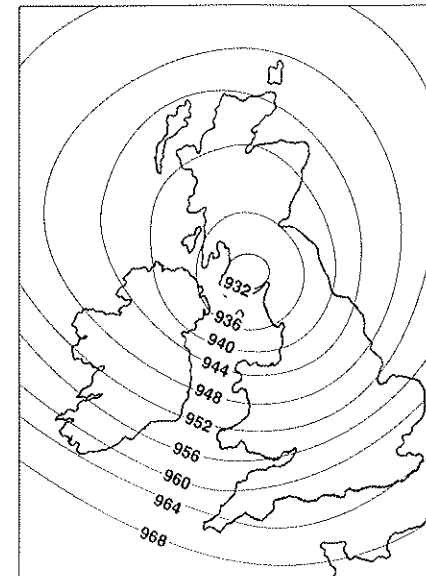
Storm of December 1886 gave lowest recorded air pressure in Ireland

The Christmas Eve storm of 1997 brought some of the strongest winds ever recorded over the country, especially in Munster and Leinster. Over the past couple of centuries, however, the most notorious storms are probably the 'Night of the Big Wind' in January 1839, which is estimated to have damaged up to a quarter of the houses in Dublin, and the very destructive storm of February 1903, when in parts of the country it was reported that entire woodlands were destroyed. The storm of December 1886 is not as prominent in weather folklore, but was nevertheless a major storm, during which the lowest observed air pressure in Ireland was measured, with probably the steepest pressure gradient over the country since 1839 or before.

While in 1839 there was considerable interest in storms and the laws of motion, it was confined to a small community of scientists. Governments, especially those with far-flung trading interests, were just beginning to realise that a knowledge of wind regimes and ocean currents on a global scale would be of considerable commercial benefit. As yet no meteorological services to the public existed, but over the next thirty years these two impulses led to considerable developments. During the late 1850s and early 1860s Admiral Fitzroy (pictured right) pioneered storm warnings and made the first efforts in weather forecasting for the United Kingdom. After his untimely death the development of an observational network and of weather charts continued, so that a detailed analysis of the December 1886 storm was produced and subsequently published by Harding in 1887 in the Journal of the Royal Meteorological Society.

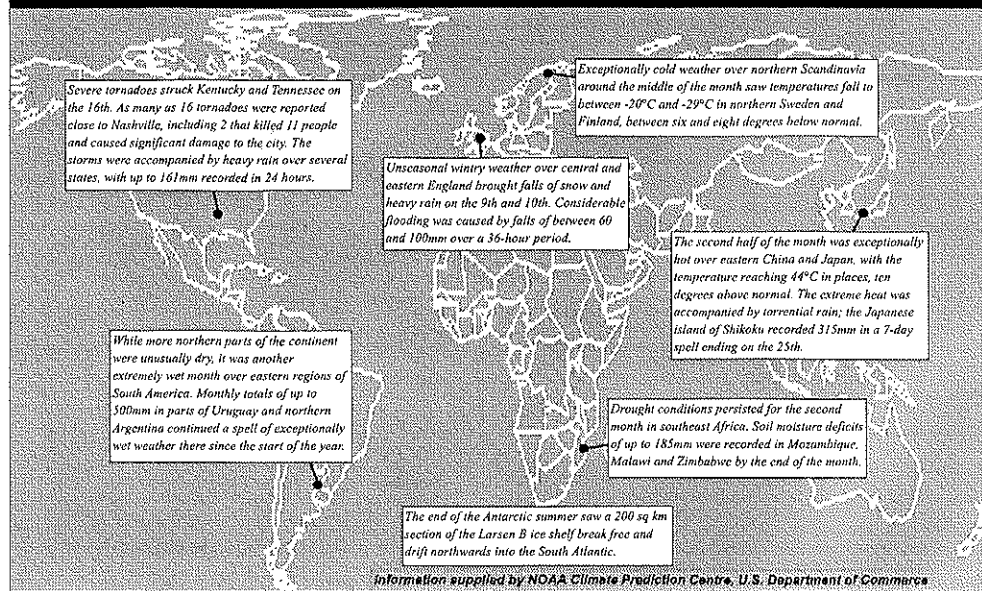


The centre of the storm passed eastwards across the north of Ireland during the middle part of December 8th, when a mean sea level pressure of 27.38 inches (927hPa) was measured in Belfast, the lowest ever recorded in the country. The lowest pressure measured in Dublin on the same day was 27.76 inches (940hPa), at 3 o'clock. The pressure gradient to the south of the depression centre was at least equal to and may have exceeded that of the 'Night of the Big Wind'. At Valentia Observatory, gales commenced late on December 7th and persisted until the early hours of the 9th, with violent storm force 11 winds around midday on the 8th. The extreme severity of the gale may be judged from the fact that two lifeboats capsized in the Irish Sea, off the Lancashire coast, with the loss of 27 lives in winds of hurricane force 12. Losses to shipping were considerable with eight steam-powered vessels stranded by the storm. The centre of the depression moved northeastwards into the North Sea and filled gradually later on the 8th and on the 9th.



Left
Synoptic situation at 6 p.m. on December 8th 1886 showing the depression starting to fill, i.e. lose intensity. The hectoPascal values shown here are converted from original measurements in inches.

SUMMARY OF SIGNIFICANT WEATHER WORLDWIDE DURING APRIL



Wednesday 1st: Rain in the southwest pushed very slowly northwards and did not affect the extreme north until late; falls were heaviest in Munster and south Leinster but conditions brightened here in the evening. Winds from the southeast or east became strong near the north and northeast coasts.

Rainfall: trace to 1mm in the northwest, 4mm to 5mm in the east, 6mm to 14mm elsewhere

Temperature: max. 9°C to 15°C, min. 2°C to 9°C; ground temperatures down to -1°C at Dublin Airport

Sunshine: nil to 2 hours

Thursday 2nd: Some rain, mostly in Ulster and northeast Leinster at first; also fog in places but both cleared gradually during the morning and early afternoon and sunny spells developed. A further belt of rain, heavy in places affected the southwest in the afternoon and spread to all parts during the course of the evening. A fresh to strong easterly wind developed ahead of the rain. Temperatures normal.

Rainfall: trace to 3mm in the northwest, 8mm in Birr and Connaught Airport, 11mm to 24mm elsewhere

Temperature: max. 8°C to 14°C, min. 3°C to 8°C; ground temperatures down to -2°C at Cork Airport

Sunshine: 2 to 7 hours generally, trace in Malin Head

Friday 3rd: The rain belt affected the north overnight. However, it was a showery day, with longer spells of rain in places, as a depression moved eastwards along the south coast. Winds remained strong near the north coast. Temperatures normal or a little below.

Rainfall: 1 to 4mm in the northwest, 5mm to 8mm in the midlands and east, 11mm to 14mm elsewhere

Temperature: max. 7°C to 13°C, min. 4°C to 7°C

Sunshine: trace to 3 hours

Saturday 4th: Depression moving northeastwards in the Irish Sea today gave another showery day, with longer spells of rain in parts of the north and east. Winds mainly light to moderate northwesterly but fresh or strong northerly or northeasterly near the north and northwest coasts. Temperatures a little below normal.

Rainfall: trace to 5mm generally, 11mm at Casement Aerodrome

Temperature: max. 9°C to 13°C, min. 5 to 8°C

Sunshine: nil to 2 hours

Sunday 5th: Depression filling to the northeast of Ireland. Variable shower activity today but still locally heavy. Best of the sunshine in Munster and south Leinster. Winds mainly northwesterly light to moderate.

Rainfall: trace to 6mm

Temperature: max. 9°C to 14°C, min. 5°C to 7°C

Sunshine: 1 to 2 hours to the north, 4 to 9 hours to the south

Monday 6th: Showers more scattered today but still locally heavy. Mostly cloudy with the best of the sun again near the south coast. Temperatures a bit below normal.

Rainfall: nil to 5mm

Temperature: max. 8°C to 13°C, min. 4°C to 7°C; ground temperatures down to zero in Kilkenny

Sunshine: nil to 3 hours generally, 6 to 7 hours in the southwest

Tuesday 7th: Slack northerly winds gave a day of bright spells and scattered but locally heavy showers. Temperatures a little below normal.

Rainfall: trace to 4mm

Temperature: max. 11°C to 13°C, min. 5°C to 8°C; ground temperatures down to zero in Clones

Sunshine: 3 to 7 hours

Wednesday 8th: Another day of sunny spells and locally heavy showers which merged to give longer spells of rain on parts of the north and east coasts during the evening. Light variable winds becoming northerly or northeasterly and increasing fresh or strong near northern, northwestern and some eastern coastal districts during the evening. Temperatures a bit below normal.

Rainfall: 2mm to 5mm generally, 7mm to 10mm in the southwest, 11mm to 13mm in the east

Temperature: max. 6°C to 11°C, min. 1°C to 5°C; ground temperatures down to -1°C in Clones

Sunshine: 2 to 7 hours

Thursday 9th: Early rain, heavy in the east and southeast, cleared from the northwest during the morning, the clearance reaching the extreme southeast in the afternoon. A strong, cold northeasterly windflow then prevailed, with sun and wintry showers, some of hail. Winds decreasing during the evening and turning more northerly.

Rainfall: trace to 8mm generally, 9mm to 16mm in the southwest and east, up to 27mm at Casement Aerodrome

Temperature: max. 6°C to 9°C, min. -3°C to zero inland, up to 2°C coastal; ground temperature down to -6°C in Clones

Sunshine: trace to 4 hours generally, 5 to 8 hours in the northwest

Friday 10th: Frosty start with wintry showers some of snow or hail as a minor depression moved southwards over the west of Ireland early. A fresh northerly windflow, strong on exposed coasts, then developed with sunshine and further wintry showers. Cold with ground frost after dark.

Rainfall: nil to 4mm generally, up to 7mm in the west

Temperature: max. 6°C to 9°C, min. -6°C to -1°C inland, up to 1°C coastal; ground temperatures down to -10°C in the midlands

Sunshine: 3 to 10 hours

Saturday 11th: A cold north to northeast windflow gave sunny conditions with well scattered but wintry-type showers. Wind strengths were moderate to fresh. Ground frost early and late.

Rainfall: nil to 5mm generally

Temperature: max. 6°C to 9°C, min. -2°C to 1°C inland, up to 3°C coastal; ground temperatures down to -6°C in the midlands

Sunshine: 7 to 12 hours

Sunday 12th: North to northwesterly winds were moderate in strength today. Conditions were bright but with occasional wintry showers, locally thundery. Frost early and late. Cold.

Rainfall: nil to 4mm generally, up to 7mm in the west

Temperature: max. 5°C to 9°C, min. -3°C to zero inland, up to 2°C coastal; ground temperatures down to -9°C in the midlands

Sunshine: 7 to 11 hours

Monday 13th: West to northwesterly winds were light to moderate today. Less sun than of late and scattered, locally heavy, showers, some of snow or hail. Cold with frost early and late.

Rainfall: nil to 5mm

Temperature: max. 6°C to 10°C, min. -4°C to zero inland, up to 2°C coastal; ground temperatures down to -11°C in the midlands

Sunshine: 3 to 7 hours

Tuesday 14th: Mist in places early but generally a cold bright day with scattered wintry showers, some heavy chiefly in the north and northwest overnight and early this morning. Frost early and late. Light to moderate north or northeasterly winds, fresh at times near the north and northwest coasts.

Rainfall: nil to 2mm generally, 8mm in Malin Head

Temperature: max. 6°C to 10°C, min. -2°C to 1°C inland, up to 3°C coastal; ground temperatures down to -6°C in the midlands

Sunshine: 6 to 10 hours

Wednesday 15th: Continuing cold with frost early and late except in some coastal districts. Sunny spells and well scattered but locally heavy wintry showers. Moderate northerly winds becoming light and variable. Some light rain in the extreme southwest late in the day.

Rainfall: nil to 2mm

Temperature: max. 7°C to 11°C, min. -2°C to zero inland, up to 3°C coastal; ground temperatures down to -5°C in the midlands

Sunshine: 4 to 11 hours

Thursday 16th: Frosty overnight and at first this morning except near the south coast where there was light rain at times. Bright day with scattered wintry showers, thundery in places. Light variable winds becoming moderate, locally fresh, northerly or northeasterly.

Rainfall: trace to 4mm

Temperature: max. 8°C to 11°C, min. -3°C to 4°C; ground temperatures down to -9°C in the midlands

Sunshine: 6 to 11 hours

Friday 17th: Ground frost in many areas cleared early and the morning and afternoon were bright with a few showers in places. Moderate northerly winds became light to moderate northwesterly in the evening and shower activity increased especially in the east and northeast. A afternoon temperatures a bit below normal.

Rainfall: nil to 2mm

Temperature: max. 9°C to 13°C, min. 1°C to 3°C inland, up to 6°C coastal; ground temperatures down to -4°C in Mullingar

Sunshine: 4 to 12 hours

Saturday 18th: Overnight eastern coastal areas had occasional rain; elsewhere there was slight ground frost in places and a few fog patches which cleared quickly in the morning. With a light south to southeasterly windflow developing, the forenoon and afternoon were dry apart from isolated showers. Rain reached the southwest late in the afternoon and spread into west Munster and coastal areas of west Connaught during the evening. Temperatures about normal.

Rainfall: nil to 4mm generally, 10mm in Valentia

Temperature: max. 11°C to 16°C, min. 1°C to 6°C; ground temperatures down to -2°C in the west

Sunshine: 4 to 10 hours

Sunday 19th: The rain spread slowly northeastwards overnight and during the morning to reach the extreme north towards noon. A clearance to brighter conditions but with scattered and locally heavy showers reached the southwest early but still had not reached the northeast at midnight. Temperatures were below normal in the north but a little above in the sunnier areas in the south and southwest.

Rainfall: 1mm to 3mm in the north, 8mm to 13mm elsewhere

Temperature: max. 9°C to 14°C, min. 3°C to 8°C; ground temperatures down to zero at Dublin Airport

Sunshine: nil to 3 hours in the north and east, 5 to 8 hours in the south and southwest

Monday 20th: Most areas had a dry night but parts of the east and northeast had a little light rain. Southwesterly winds turned southerly today as a trough approached the southwest. There was rain at times in west Munster and coastal areas of west Connaught today. Elsewhere there were sunny spells and a few light showers, mostly during the evening. Slight ground frost in places overnight but normal temperatures this afternoon.

Rainfall: nil to 3mm generally, 7mm in Valentia

Temperature: max. 10°C to 14°C, min. 2°C to 5°C inland, up to 7°C coastal; ground temperatures down to -2°C in the midlands

Sunshine: nil to 1 hour in the southeast, 4 to 10 hours elsewhere

Tuesday 21st: Cloudy with rain at times as a succession of troughs moved northeastwards in a moderate south to southeasterly windflow. Falls were light and intermittent at first but were locally heavy later especially near the south and southwest coasts. A clearance spread into Munster, south Connaught and south Leinster after dark. Close with near normal temperatures.

Rainfall: 1mm in the east up to 9mm generally, 23mm to 35mm in the southwest

Temperature: max. 10°C to 14°C, min. 6°C to 9°C

Sunshine: nil to 1 hour

Wednesday 22nd: Close night with mist and a few fog patches which cleared quickly this morning. The southwest and west had good bright spells and occasional showers. A minor wave moving northwards near the east coast gave a spell of rain in the southeast this morning, in the east and east midlands this afternoon and in the north this evening. Mild and close. Light occasionally moderate south to southeasterly winds became moderate southerly and fresh at times near the west coast.

Rainfall: nil to 6mm generally, up to 9mm in Rosslare

Temperature: max. 12°C to 15°C, min. 5°C to 9°C

Sunshine: trace to 7 hours

Thursday 23rd: A depression moving eastwards near the south coast gave a rainy spell in Munster, Leinster and east Ulster. Bright conditions with isolated showers in the northwest spread gradually southeastwards to reach all parts by mid afternoon. Further rain spread into the southwest after dark. Light variable winds becoming westerly and then southerly.

Temperatures normal or above, especially in the west.

Rainfall: nil to 3mm in the west and east, 5mm to 10mm in the south and southwest

Temperature: max. 12°C to 15°C, min. 5°C to 8°C

Sunshine: 1 to 3 hours generally, 5 to 11 hours in the west and southwest

Friday 24th: A weak rain belt crossed the country overnight. Today there was sun and scattered showers. Afternoon temperatures were above normal but there was a moderate to fresh southwesterly wind.

Rainfall: 1mm to 6mm

Temperature: max. 12°C to 17°C, min. 5°C to 8°C

Sunshine: 5 to 11 hours

Saturday 25th: A blustery south to southwesterly windflow today. Very variable amounts of sun and also showers, heavy and with hail or thunder in places. Afternoon temperatures normal or a little above. Slight ground frost in a few sheltered places early.

Rainfall: trace to 6mm generally, 9mm to 14mm in the west and midlands

Temperature: max. 11°C to 14°C, min. 2°C to 6°C inland, up to 8°C coastal; ground temperatures down to -3°C in Kilkenny

Sunshine: 2 to 5 hours in the southwest and midlands, 7 to 11 hours elsewhere

Sunday 26th: Again very variable amounts of sun and also showers, heavy or thundery in places. Light occasionally moderate southwesterly or westerly winds. Temperatures a little below normal.

Rainfall: trace to 7mm generally

Temperature: max. 9°C to 14°C, min. 2°C to 7°C; ground temperatures down to -3°C in the midlands

Sunshine: 2 to 5 hours generally, 6 to 11 hours in the south and southwest and in Belmullet

Monday 27th: Ground frost and a few fog patches cleared early. A day of sunny spells and scattered showers, locally heavy with thunder in a few places. Light variable or southerly winds. Afternoon temperatures about normal.

Rainfall: nil to 7mm generally, 13mm at Cork Airport

Temperature: max. 11°C to 14°C, min. 1°C to 7°C; ground temperatures down to -5°C in the midlands

Sunshine: 5 to 8 hours generally, 13 hours in Rosslare

Tuesday 28th: Ground frost in a few places early. A day of widely varying amounts of sunshine and also some heavy or thundery showers. Light variable winds. Normal temperatures this afternoon.

Rainfall: trace to 5mm generally, up to 8mm in the east

Temperature: max. 11°C to 14°C, min. 2°C to 8°C; ground temperatures down to -3°C in Kilkenny

Sunshine: trace to 6 hours generally, 10 hours in Malin Head

Wednesday 29th: Ground frost and fog patches in a few places soon cleared. Best of the sunshine today in the west and southwest. Again there were scattered showers, some heavy in northern areas but generally less activity than in the previous few days. Light occasionally moderate winds mainly from the north or northeast but winds fresh at times on the southeast coast. Temperatures normal or a little above this afternoon.

Rainfall: nil to 2mm

Temperature: max. 11°C to 15°C, min. 3°C to 8°C; ground temperatures down to -1°C in the midlands

Sunshine: 1 to 4 hours generally, 6 to 10 hours in the west and midlands

Thursday 30th: Ground frost in places cleared early. Dull in the east at first but sunny spells in all areas. Showers were well scattered but locally fairly heavy. Light to moderate northerly or northeasterly winds, fresh at times on southeastern coasts. Afternoon temperatures above normal in inland areas of the west and south, which had the best of the sunshine.

Rainfall: nil to 2mm

Temperature: max. 11°C to 16°C, min. 2°C to 5°C inland, up to 8°C coastal; ground temperatures down to -4°C in Mullingar

Sunshine: 3 to 5 hours in the east, 8 to 12 hours generally

TEMPERATURE (°C)

County / Station	TEMPERATURE (°C)						
	Mean max.	Mean min.	Mean/ deviation from average	Highest max./date	Lowest min./date	Lowest grass min./date	
CO. CLARE							
SHANNON AIRPORT	12.5	5.0	8.8 -0.1	16.2 30	-0.9 10	-4.3 15	
CARRON	10.8	3.6	7.2	14.3 30	-1.4 10	-6.3 15	
CO. CORK							
FERMOY (MOORE PARK)	11.8	3.3	7.6 -0.6	15.7 24	-2.6 10	-5.0 10 13	
CORK AIRPORT	11.0	4.2	7.6 -0.4	15.0 30	-2.3 10	-4.3 10	
SHERKIN ISLAND	11.9	6.2	9.1 0.2	16.9 30	0.9 18	-2.2 13 18	
BALLINACURRIG (PEAFIELD)	11.0	3.1	7.1	14.9 24 29	-3.4 10	-5.0 15	
CO. DONEGAL							
MALIN HEAD	9.7	5.0	7.4 -0.4	15.3 22	-0.5 10	-2.5 10	
BALLYSHANNON (CATHLEEN'S FALL)	10.7	4.2	7.5 -0.5	15.9 30	-2.4 16		
LETTERKENNY (MAGHERENAN)	11.2	3.9	7.6	16.1 23	-1.5 10		
CO. DUBLIN							
DUBLIN (PHOENIX PARK)	11.5	3.2	7.4 -0.6	16.0 24	-4.7 10	-7.8 10	
DUBLIN AIRPORT	10.6	3.5	7.1	15.3 24	-4.0 10	-5.6 10	
CASEMENT AERODROME	10.9	3.5	7.2 -0.6	15.3 24	-5.5 10	-8.5 10	
DUBLIN (MERRION SQUARE)	10.9	5.6	8.3 -0.8	16.2 24	-1.9 10		
CO. GALWAY							
GALWAY (UNIV. COLL.)	11.8	4.6	8.2 -0.6	15.6 30	-0.7 16	-5.8 10	
MAAM VALLEY	11.2	4.6	7.9	15.3 30	-0.5 11	-4.6 11	
CONNEMARA NATIONAL PARK	11.5	4.6	8.1	16.1 23	-1.0 11		
BALLYGAR	12.2	3.4	7.8	17.4 23	-3.0 16	-5.1 16	
CO. KERRY							
VALENTIA OBSERVATORY	11.4	5.5	8.5 -0.7	14.1 29	-0.4 13	-3.5 13	
ARDFERT (LISCAHANE)	12.0	4.1	8.1	14.9 24 30	-2.9 15	-5.5 13 15	
CO. KILKENNY							
KILKENNY	11.8	3.8	7.8 -0.4	16.5 24	-3.0 10	-7.1 10	
CO. LEITRIM							
BALLINAMORE	11.1	3.3	7.2 -0.6	16.1 23	-3.4 16	-5.0 10	
CO. LIMERICK							
MOUNT RUSSELL	10.5	3.4	7.0	14.1 24	-3.9 10	-6.8 10	
CO. LOUTH							
ARDEE (BOHARNAMOE)	11.3	3.2	7.3	15.7 24	-5.2 10	-9.2 10	
CO. MAYO							
BELMULLET	11.8	5.1	8.5 -0.2	15.5 18	0.6 10	-3.4 16	
STRAIDE	11.5	3.7	7.6	15.3 23	-3.3 16	-8.8 16	
CONNAUGHT AIRPORT	9.4	2.9	6.2	14.3 23	-2.8 10	-5.3 10	
CO. MEATH							
WARRENTOWN	10.8	4.0	7.4 -0.4	15.0 24	-3.3 10	-4.9 10	
CO. MONAGHAN							
CLONES	11.0	3.7	7.4 -0.3	15.4 24	-3.5 10	-8.3 10 16	
CO. OFFALY							
BIRR	11.5	3.4	7.5 -0.6	14.6 29	-4.0 13	-9.1 13	
DERRYGREENAGH	11.2	2.8	7.0 -0.5	16.0 18	-3.1 10	-9.8 16	
CO. SLIGO							
ARDTARMON	11.3	4.5	7.9	15.6 30	-0.9 10	-4.3 16	
CO. TIPPERARY							
FETHARD (PARSONSHILL)	10.9	2.9	6.9	14.9 24	-4.0 10	-4.3 10	
CO. WATERFORD							
WATERFORD (TYCOR)	12.2	4.5	8.4 -0.2	15.8 30	-2.5 10		
DUNGARVAN (CARRIGLEA)	12.4	4.2	8.3	16.3 30	-2.0 10	-5.0 10	
CO. WESTMEATH							
MULLINGAR II	11.1	3.3	7.2 -0.4	15.3 29	-3.4 10	-10.5 13	
CO. WEXFORD							
JOHNSTOWN CASTLE	11.6	4.4	8.0 0.0	14.2 29 30	-2.3 10	-3.2 12	
ROSSLARE	11.1	5.6	8.4 -0.1	14.0 19	-0.1 10	-1.9 10	
CLONROCHE	11.4	3.8	7.6 -0.2	16.5 30	-2.5 10	-8.6 10	
JOHN F. KENNEDY PARK	11.3	4.3	7.8 -0.6	14.9 23	-2.5 10	-3.7 13	

County / Station

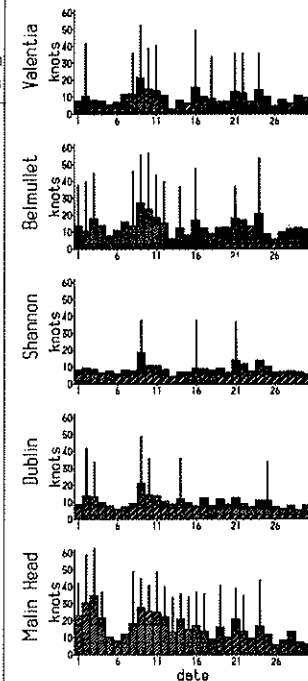
RAINFALL (MM)

SUNSHINE (HOURS)

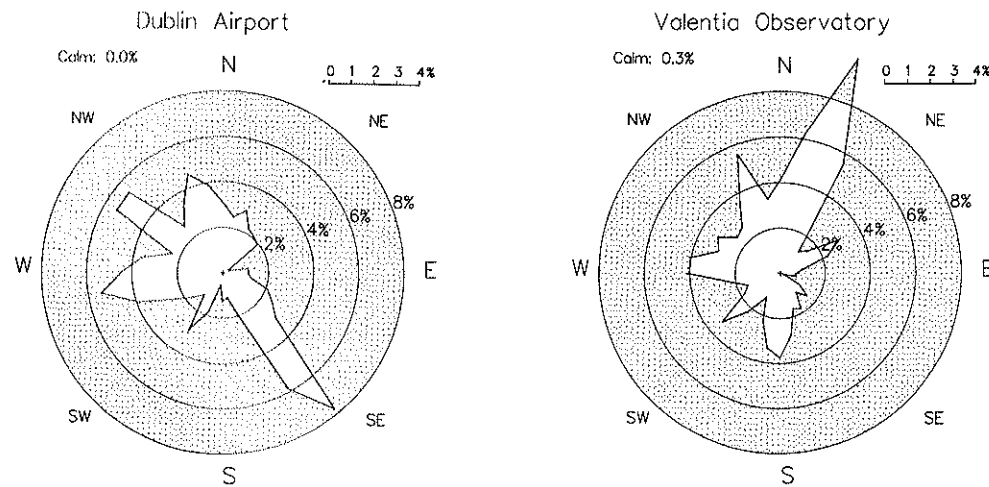
County / Station	RAINFALL (MM)			SUNSHINE (HOURS)			
	Total amount	% of average	Most in a day/date	Daily mean (hrs/day)	% of average	% of possible	Most in a day/date
CO. CLARE							
SHANNON AIRPORT	100.8	177	20.5 2	5.70	113	41	12.0 11
CARRON	103.1	115	19.9 25				
CO. CORK							
FERMOY (MOORE PARK)	137.6	241	26.5 2				
CORK AIRPORT	139.2	199	34.2 2	5.96	111	43	11.9 17
SHERKIN ISLAND	93.2	153	16.0 18	6.78	120	49	12.1 12
BALLINACURRIG (PEAFIELD)	157.1		30.0 2	5.81		34	10.9 17
CO. DONEGAL							
MALIN HEAD	52.0	91	8.2 13	5.08	96	36	10.2 20
BALLYSHANNON (CATHLEEN'S FALL)	81.5	141	9.1 2	4.89	100	35	9.4 10
LETTERKENNY (MAGHERENAN)	80.6		9.0 26				
CO. DUBLIN							
DUBLIN (PHOENIX PARK)	133.5	267	38.8 8	3.76	76	27	9.2 11 16
DUBLIN AIRPORT	115.0		26.2 8	4.36	80	31	11.6 11
CASEMENT AERODROME	120.8	257	37.8 8	3.91	76	28	11.3 11
DUBLIN (MERRION SQUARE)	120.6	262	30.7 8				
CO. GALWAY							
GALWAY (UNIV. COLL.)	81.4	123	18.8 25	5.36	105	38	10.5 11
MAAM VALLEY	171.2		20.1 2				
CONNEMARA NATIONAL PARK	136.5		18.3 2				
BALLYGAR	108.6	184	12.6 2				
CO. KERRY							
VALENTIA OBSERVATORY	172.7	219	25.1 2	5.74	112	42	10.7 26
ARDFERT (LISCAHANE)	101.1		14.5 21	5.85		42	11.8 17
CO. KILKENNY							
KILKENNY	95.5	184	22.4 2	4.92	97	35	9.7 11
CO. LEITRIM							
BALLINAMORE	142.6	219	31.6 25	4.35	91	31	9.6 11
CO. LIMERICK							
MOUNT RUSSELL	151.1		33.6 2				
CO. LOUTH							
ARDEE (BOHARNAMOE)	98.5	186	22.5 2				
CO. MAYO							
BELMULLET	82.0	144	8.2 11	5.89	108	42	11.6 30
STRAIDE	95.4		8.2 25	5.44			10.2 23
CONNAUGHT AIRPORT	110.5		11.7 25	5.08			10.1 14
CO. MEATH							
WARRENTOWN	110.4	197	19.7 8				
CO. MONAGHAN							
CLONES	92.0	174	18.3 25	4.53	97	32	10.2 11
CO. OFFALY							
BIRR	88.0	160	12.5 25	4.74	97	34	10.0 11
DERRYGREENAGH	108.5	197	16.4 2				
CO. SLIGO							
ARDTARMON	77.8		12.2 19				
CO. TIPPERARY							
FETHARD (PARSONSHILL)	101.6		17.3 2				
CO. WATERFORD							
WATERFORD (TYCOR)	145.6	247	25.9 3				
DUNGARVAN (CARRIGLEA)	141.2		30.8 2	5.42		42	10.7 11
CO. WESTMEATH							
MULLINGAR II	109.9	186	13.8 25	5.00	100	36	10.2 11
CO. WEXFORD							
JOHNSTOWN CASTLE	128.2	203	23.5 2	4.72	86	34	10.5 11
ROSSLARE	109.5	203	21.4 2	5.53	93	40	12.7 27
CLONROCHE	156.0	229	24.8 2	4.69	88	34	10.8 11
JOHN F. KENNEDY PARK	141.5	232	26.4 2	5.17	98	37	10.6 11

County / Station	WEATHER — NO. OF DAYS WITH									MEAN 0900 SOIL TEMPERATURES (°C)		
	Rain days	Wet days	Air frost	Ground frost	Snow lying	Snow lying	Hail	Thunder	Fog	10cm	20cm	30cm
CO. CLARE												
SHANNON AIRPORT	25	18	2	12	2	0	7	1	1	8.0	8.7	9.6
CARRON	25	18	5	12						8.2		9.2
CO. CORK												
FERMOY (MOORE PARK)	23	19	6	13						8.5	8.9	9.7
CORK AIRPORT	23	19	5	9	2	0	5	1	3	7.3	8.4	9.9
SHERKIN ISLAND	24	16	0	6						9.5		10.6
BALLINACURRIG (PEARFIELD)	23	20	5	13								
CO. DONEGAL												
MALIN HEAD	25	15	1	1	6	0	9	0	0	7.1	7.8	9.0
CO. DUBLIN												
BALLYSHANNON (CATHLEEN'S FALL)	28	21	4									
LETTERKENNY (MAGHERENAN)	30	24	3									
DUBLIN (PHOENIX PARK)	26	16	7	11								
DUBLIN AIRPORT	26	18	7	12	5	0	8	1	3	7.2	7.3	8.6
CASEMENT AERODROME	27	18	7	11	4	0	7	1	1	6.8	7.5	8.5
DUBLIN (MERRION SQUARE)	27	16	2									
CO. GALWAY												
GALWAY (UNIV. COLL.)	23	18	2	12								
MAAM VALLEY	29	25	1	9								
CONNEMARA NATIONAL PARK	27	24	2									
BALLYGAR	30	22	7	13								
CO. KERRY												
VALENTIA OBSERVATORY	29	25	1	5	3	0	6	0	0	8.3	9.1	10.9
ARDPERT (LISCAHANE)	26	20	4	12								
CO. KILKENNY												
KILKENNY	26	17	5	16	1	0	9	2	3	7.8	8.5	9.7
CO. LETTRIM												
BALLINAMORE	30	22	7	9						7.7	7.9	8.5
CO. LIMERICK												
MOUNT RUSSELL	27	18	6	11						6.1	7.4	
CO. LOUTH												
ARDEE (BOHARNAMOE)	25	17	7	11						7.8	8.4	8.5
CO. MAYO												
BELMULLET	29	24	0	9	6	0	12	1	0	8.2	9.1	10.4
STRAIDE	29	23	6	15						7.7		
CONNAUGHT AIRPORT	29	26	7	9	8	2	8	0	9	5.8	7.0	7.4
CO. MEATH												
WARRENTOWN	25	18	6	9						7.4	8.0	8.9
CO. MONAGHAN												
CLONES	27	19	5	12	4	0	8	0	0	7.5	8.3	9.1
CO. OFFALY												
BIRR	26	17	7	11	3	0	7	1	1	7.7	9.0	9.8
DERRYGREENAGH	25	19	7	15								
CO. SLIGO												
ARDTARMON	26	18	3	8								
CO. TIPPERARY												
PETHARD (PARSONSHILL)	23	16	7	9						6.9	7.9	
CO. WATERFORD												
WATERFORD (TYCOR)	23	16	4									
DUNGARVAN (CARRIGLEA)	23	19	4	16						9.4	9.9	
CO. WESTMEATH												
MULLINGAR II	28	21	6	14	6	0	6	1	0	8.0	8.6	9.7
CO. WEXFORD												
JOHNSTOWN CASTLE	25	22	3	7						7.5	8.2	9.2
ROSSLARE	25	17	1	5	0	0	5	0	1	8.3	8.9	10.4
CLONROCHE	21	18	6	21						7.6	8.7	9.4
JOHN F. KENNEDY PARK	20	19	3	11						8.4	8.9	10.5

County / Station	WIND (KNOTS)						Days with gales	Days with gale gusts	Hours with gale gusts
	Mean speed	Max. 10-min. dir. speed	mean date/hour	Max. Gust dir. speed	date/time				
CO. CLARE									
SHANNON AIRPORT	8.8	020°	27 9/12	020°	38 9/1148	0	3	15	
CO. CORK									
CORK AIRPORT	10.6	010°	31 9/09	010°	43 9/0831	0	9	27	
CO. DONEGAL									
MALIN HEAD	16.3	090°	47 3/03	090°	63 3/0204	6	18	190	
CO. DUBLIN									
CASEMENT AERODROME	8.5	200°	28 25/13	050°	43 9/0312	0	5	17	
DUBLIN AIRPORT	10.0	040°	31 9/07	040°	49 9/0656	0	6	25	
CO. KERRY									
VALENTIA OBSERVATORY	9.9	030°	30 9/ 9	030°	53 9/0805	0	10	60	
CO. KILKENNY									
KILKENNY	8.6	020°	26 9/12	020°	45 9/1154	0	6	22	
CO. MAYO									
BELMULLET	13.6	060°	35 9/02	070°	57 10/1520	2	12	113	
CO. MONAGHAN									
CLONES	8.1	30°	25 9/03	20°	40 9/0336	0	5	13	
CO. OFFALY									
BIRR	5.1	30°	18 9/05	30°	38 9/0417	0	1	7	
CO. WESTMEATH									
MULLINGAR II	6.9	30°	19 9/05	20°	35 9/0528	0	1	2	
CO. WEXFORD									
ROSSLARE	11.4	30°	46 9/10	40°	59 9/0920	2	11	74	

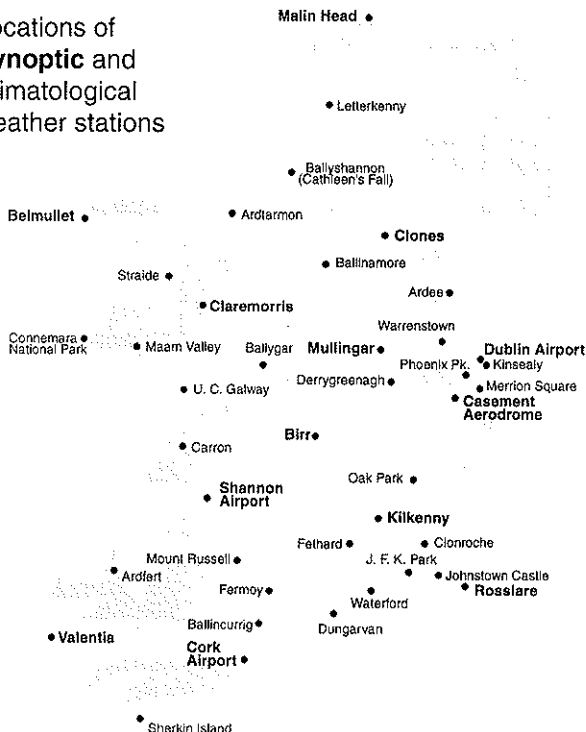


Daily mean wind speeds and maximum significant gusts (34 knots or more)



FREQUENCY OF WIND DIRECTION

Locations of Synoptic and Climatological weather stations



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NOTES ON THE TABLES

A. General

- Rainfall amounts are given in millimetres, temperature in degrees Celsius, sunshine duration in hours and wind speed in knots. (1 knot=1.15 m.p.h.)
- At all stations daily rainfall totals refer to the 24-hour period ending at 0900UTC the following day. The term rainfall includes all forms of precipitation, such as snow and hail, and deposition from dew or frost, measured as equivalent rain.
- 'Raindays' and 'wetdays' are days during which the total rainfall is not less than 0.2mm and 1.0mm respectively.
- A 'day' for the purposes of this publication refers to the period from 0900UTC on a particular day to 0900UTC on the following day. (This is because climatological stations make their daily observations at 0900UTC.)
- The mean daily air temperature over a period is taken as the mean of the daily maxima and daily minima (averaged separately over the period).
- Days with air frost are those during which the minimum air temperature was below 0°C. Similarly days with ground frost indicate days when the grass minimum temperature was below 0°C. (Grass minimum temperatures are measured by a thermometer placed horizontally on pegs just above the tips of short grass.)
- Mean soil and earth temperatures are based on readings taken at 0900UTC.
- A gale is a mean wind over a 10 minute period of 34 knots or more. A gale gust is a gust of 34 knots or more. All wind speeds refer to the wind at an effective height of 10 metres above the ground.
- 'e' denotes that the value is calculated using one or more estimated readings.
- Data from Northern Ireland is kindly provided by the Belfast Weather Centre.

B. Agmet

- Calculated Potential Evapotranspiration (P.E.) values are based on values of temperature, sunshine, wind speed and vapour pressure using the Penman formula. Because of formula limitations, negative values can occur in winter, these are replaced in the table by zero. Measured P.E. values are those measured by means of soil-filled tanks sunk into the ground with their upper grass-covered ends at surface level.
- Soil moisture deficits and surpluses are computed from the differences between rainfall and actual evapotranspiration (A.E.). Estimates of A.E. are derived from measured values of P.E. (See Agmet. Memo No. 1, 1968). Soil moisture surpluses are assumed to be removed by drainage and surface run-off and are not therefore carried forward from one period to the next. Soil moisture deficits are regarded as being cumulative. Where heavy rain occurs near the end of the fixed period, the date of cut-off may be adjusted to avoid error due to insufficient run-off time.
- Degree day totals are calculated using the method set out by McVicker in the Journal of the Institution of Heating and Ventilating Engineers (Vol. 14 No. 38, Nov-Dec 1946).
- Global solar radiation values are given in MJ/sq.m. correct to two decimal places (3.6MJ=1kWh).

C. Laboratory

- Daily samples of air and precipitation are taken at Valentia Observatory at 1000UTC each day. Monthly precipitation samples at other stations are taken at 1200UTC on the 1st of each month.
- Air sample data are given in microgrammes per cubic metre, electrical conductivity in micro-Siemens per centimetre and pH in pH units.