

Monthly Weather Bulletin

No. 216
APRIL 2004



INSIDE



**Lenticular clouds
on 24th- page 2**

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**World records of
precipitation**

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Notes on the tables and map
showing location of stations
appear in each April issue



Although much of April was relatively dull, sunnier conditions prevailed towards the end of the month; this picture was taken at Lahinch, Co. Clare, during the late evening of the 19th. (picture Irish Examiner)

MILD BUT MOSTLY DULL; DRY IN EAST AND SOUTHEAST

Summary: Rainfall totals for April were below normal over most of Leinster and Munster, but it was a relatively wet month in the west and north. It was the driest April for between 7 and 9 years at stations in the east and southeast, but the wettest since 1999 at Belmullet. Although at most stations there were few if any heavy daily falls, the number of wetdays (*days with 1mm or more rainfall*) was higher than normal almost everywhere, however, ranging between 10 and 16 wetdays at many stations, with between 18 and 22

wetdays in parts of the west. Apart from isolated heavy showers, very little rain was measured anywhere after the 21st of the month. Mean air temperatures were around a degree above normal generally. There was little variation in daytime temperatures during most of April, but they rose above normal during the final third. Minimum values were above normal throughout almost all of the month and over half the stations in the country recorded no air frost. Much of April was relatively dull, but there were a few very sunny days

during the second half of the month; a number of stations measured their highest daily sunshine values for April for over 20 years on either the 28th or 29th.

1st to 6th: The month began with a spell of very unsettled weather. Rain associated with a depression to the south of the country cleared to give very showery conditions for the remainder of the period. Many of these showers were heavy with hail and thunder, but there were also

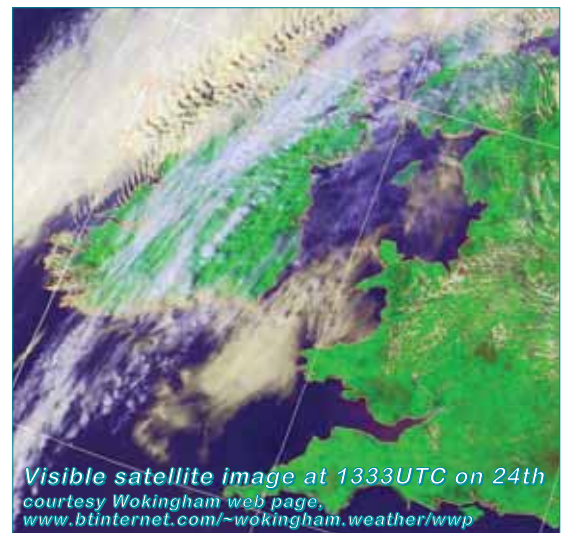
sunny spells between the showers. Strong to gale force winds were mainly westerly in direction.

7th to 12th: Apart from a relatively weak frontal system moving eastwards across the country on the 8th/9th, much of this period was dry, as an Atlantic anticyclone extended a ridge of high pressure towards Ireland. Dull with light northwesterly winds.

13th to 21st: A return to unsettled conditions, with widespread rain or

Below and right

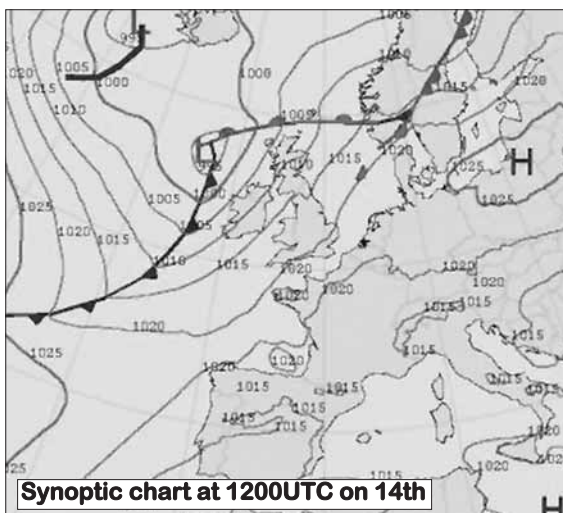
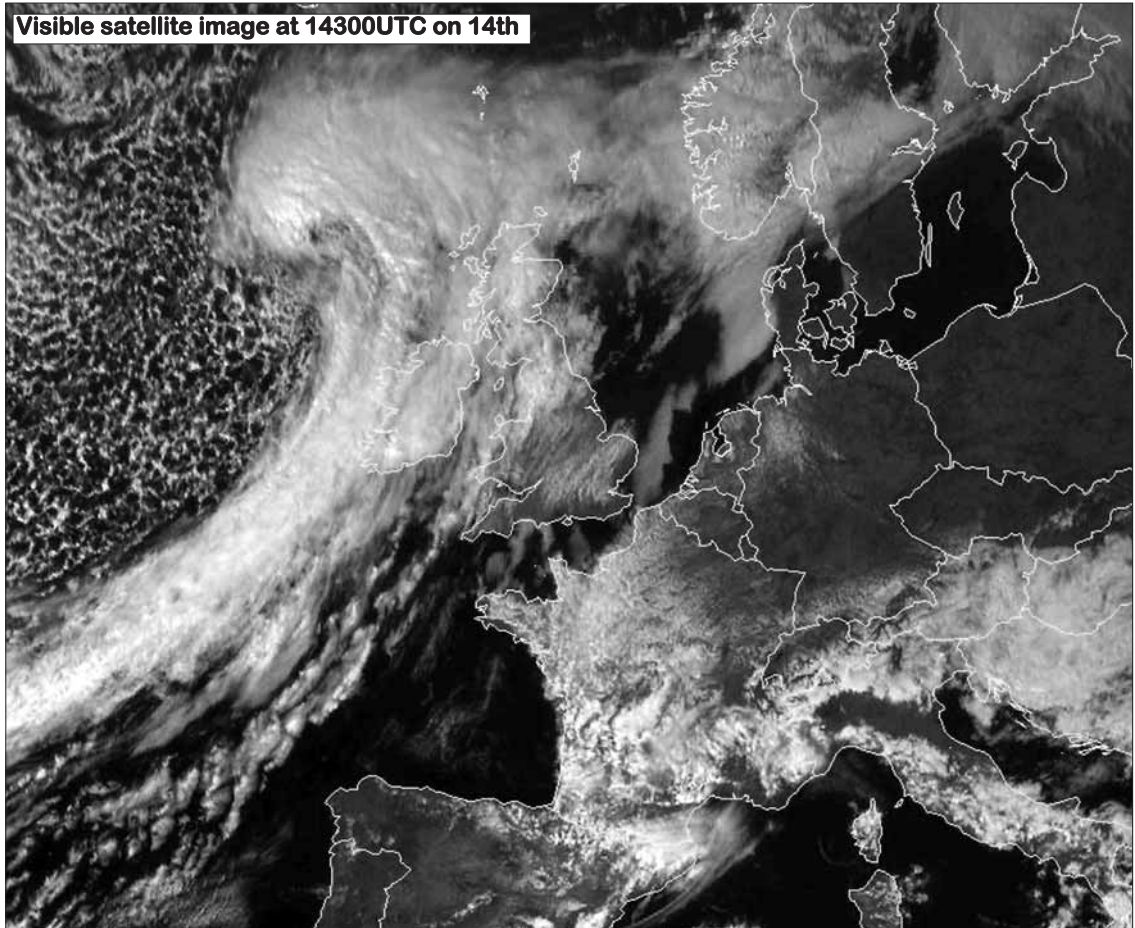
A warm southerly airstream on the 24th produced lenticular clouds over many parts of the country. This type of cloud forms under certain atmospheric conditions, when air is forced to rise over mountains; the cloud shape mirrors the mountain top over which the air has travelled. The striped pattern seen on the satellite image over the west of Ireland is also typical of this type of cloud. (pictures courtesy Oran O'Sullivan, David Tyner & Angus Tyner)



Visible satellite image at 1333UTC on 24th courtesy Wokingham web page, www.btinternet.com/~wokingham.weather/www

Right

April was a month of few heavy daily rainfalls, but between 10mm and 20mm was widely recorded on the 14th, as an active frontal system moved eastwards across the country.



showers on each day apart from the 16th. Falls were heaviest on the 14th and 17th, especially over the western half of the country. Strong to gale force west or southwesterly winds were recorded between the 17th and 21st, as an area of low pressure became slow-moving to the north of Ireland.

22nd to 30th: High pressure became the dominant influence on Ireland's weather, at first situated to the east of the country and later becoming centred to the west.

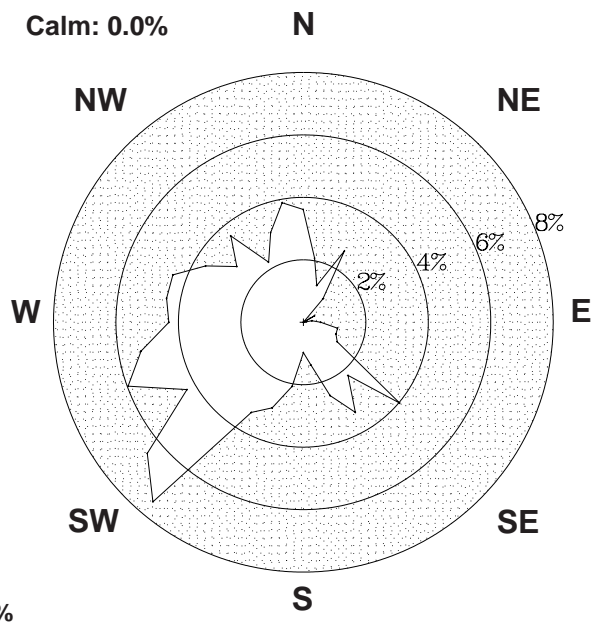
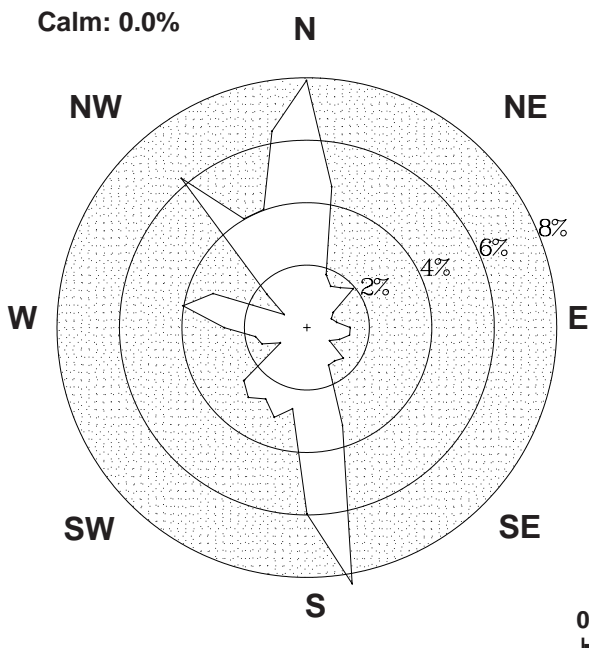
Most days during this period were dry and sunny, but isolated showers were heavy in a few places. A warm southerly airstream at first was replaced by a cooler north to northeasterly flow from the 26th onwards.

Wind and elements: Mean windspeeds for the month of between 8 and 11 knots generally (*9 and 13m.p.h.*) were near or above normal. The strongest winds of the month were measured in the period 5th to 6th and on the 21st. The highest gust of the month, 63 knots (*73m.p.h.*), was recorded at Malin Head on the 21st; Rosslare's gust of 58 knots (*67m.p.h.*) on the 6th was the highest April gust at the station since 1991. Thunder was frequent over the eastern half of the country during the first half of the month; it was recorded on the 2nd, 3rd, 4th, 6th, 15th, 18th, 19th, 21st and 29th. Hail showers were widespread in the periods 2nd to 6th, 14th to 18th and on the 29th, while snow showers fell at Belmullet on the 18th. Fog was most frequent in the period between the 24th and 26th.

County / Station	WIND (KNOTS)									ELEMENTS					
	Mean speed	Max. dir.	10-min. speed	mean date/hour	Max. dir.	Gust speed	date/time	Days with gales	gale gusts	Hours with gale gusts	Snow	Snow Lying	Hail	Thunder	Fog
CO. CLARE SHANNON AIRPORT	10.2	160°	30	21/04	170°	42	21/0352	0	6	32	0	0	0	0	0
CO. CORK CORK AIRPORT	10.3	330°	30	6/14	330°	45	6/1318	0	10	42	0	0	1	0	6
CO. DONEGAL MALIN HEAD	15.3	180°	40	21/13	180°	63	21/1024	5	15	138	0	0	6	1	2
CO. DUBLIN CASEMENT AERODROME	9.3	190°	32	21/12	190°	49	21/0817	0	7	27	0	0	6	0	0
DUBLIN AIRPORT	10.9	200°	31	21/13	320°	49	5/1143	0	9	40	0	0	2	0	2
CO. KERRY VALENTIA OBSERVATORY	10.2	190°	33	21/03	200°	52	21/0316	0	7	31	0	0	4	0	0
CO. KILKENNY KILKENNY	8.2	190°	27	21/13	350°	46	6/1316	0	4	15	n/a	0	---	n/a	---
CO. MAYO BELMULLET	14.1	160°	37	21/05	160°	55	21/0422	2	14	137	0	0	4	0	0
CONNACHT AIRPORT	10.7	170°	34	21/07	330°	49	6/1133	1	9	45	0	0	4	0	11
CO. MONAGHAN CLONES	8.6	170°	29	21/08	180°	45	21/1022	0	5	22	n/a	0	---	n/a	---
CO. OFFALY BIRR	7.9	180°	26	21/07	180°	40	21/0647	0	5	15	n/a	0	---	n/a	---
CO. WESTMEATH MULLINGAR II	7.4	180°	26	21/11	190°	40	21/1043	0	4	9	n/a	0	---	n/a	---
CO. WEXFORD ROSSLARE	11.0	030°	33	28/12	350°	58	6/1329	0	10	80	0	0	2	0	4

Valentia Observatory

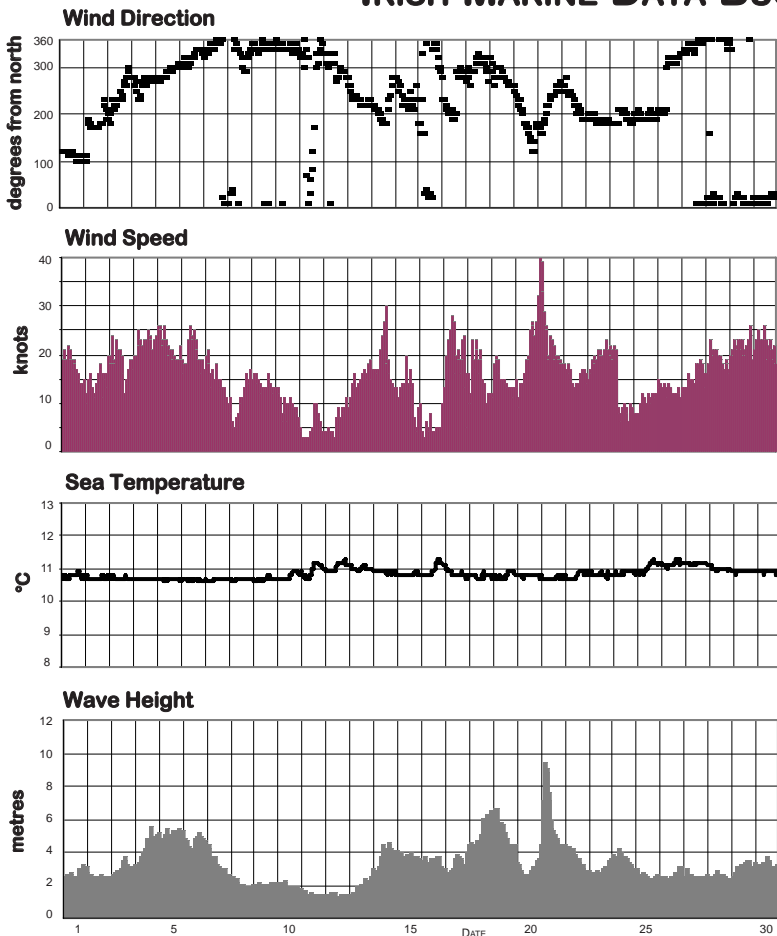
Dublin Airport



0 1 2 3 4%

FREQUENCY OF WIND DIRECTION

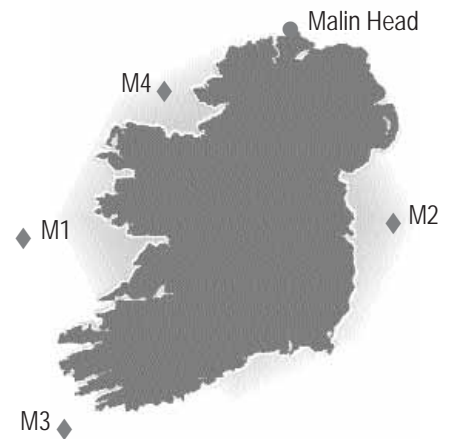
MARINE OBSERVATIONS FROM IRISH MARINE DATA BUOY NETWORK



Buoy	Sea surface temp. (°C)	Mean wind speed (knots)	Max. 10-min wind (knots)	Mean wave height (m.)	Max. wave height (m.)
M1	10.8	15.3	40	3.2	9.4
M2	8.7	13.6	31	1.2	3.4
M3	11.0	17.8	31	2.9	9.0
M4*		not available			
Malin Head	8.7				

Summary of Mean Monthly Values

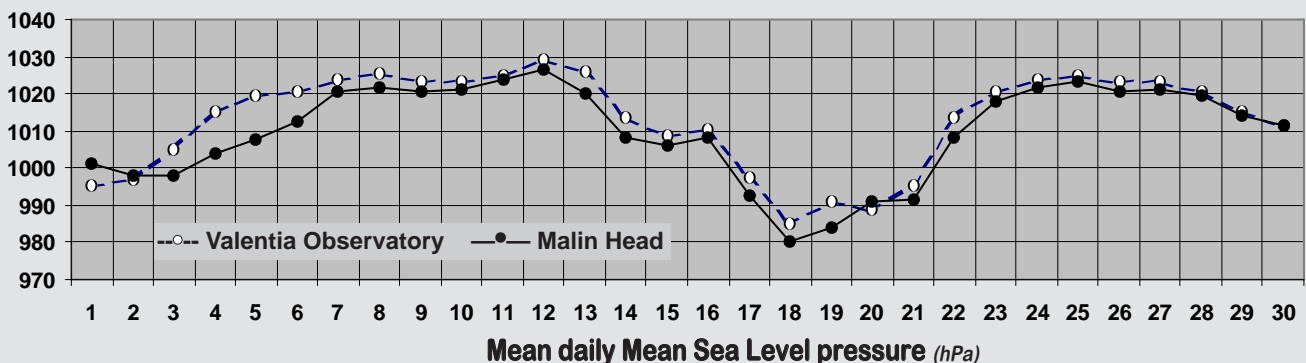
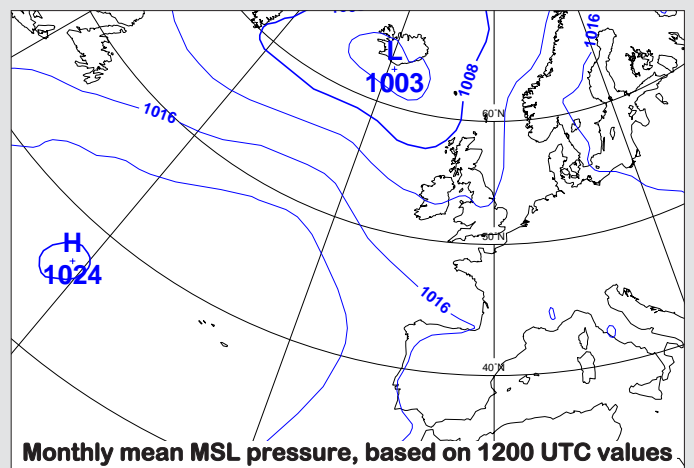
*- means based on data for 20 days



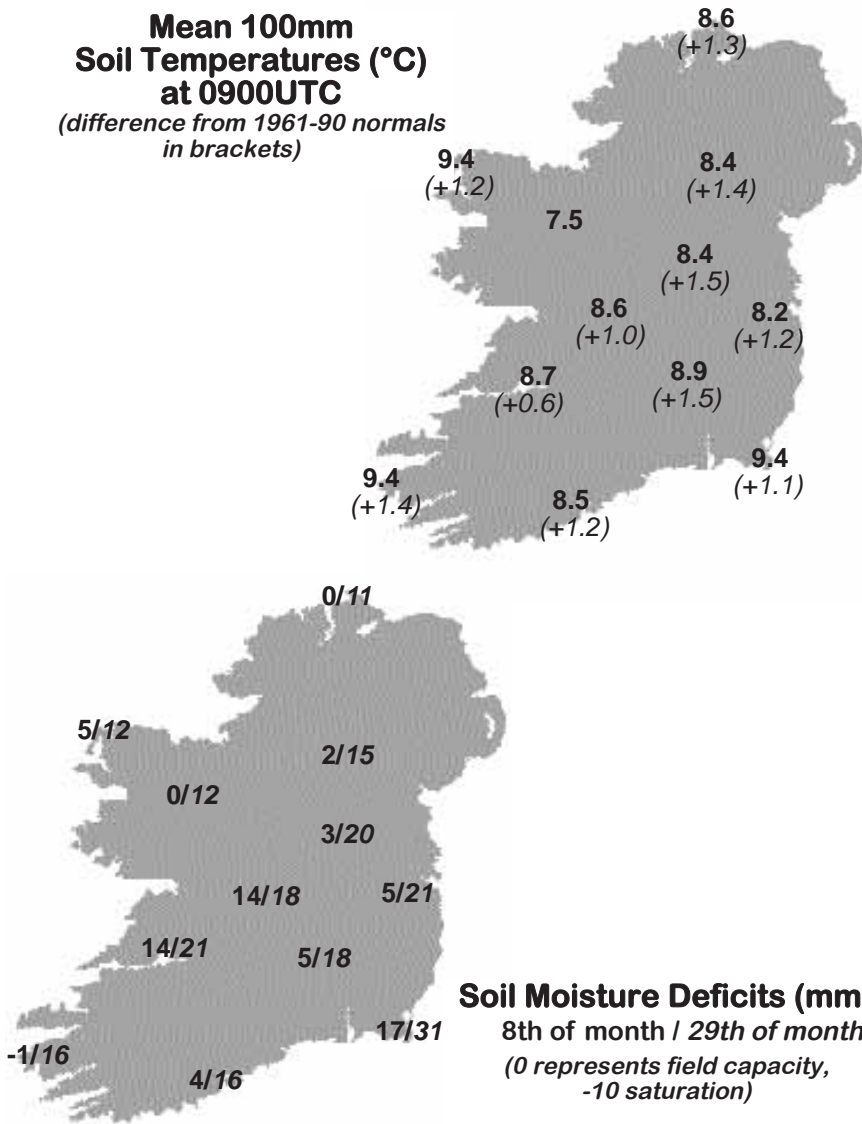
Hourly wind and wave conditions at M1 (53°07'N, 11°12'W)

MEAN ATMOSPHERIC PRESSURE

Mean sea level pressure values for the month ranged from close to 1010hPa in the north to over 1013hPa in the southwest, between 2hPa and 4hPa below normal for April. The highest pressure of the month, 1031.5hPa, was measured at Valentia Observatory on the 12th. Pressure fell well below normal after mid-month, when a series of deep Atlantic depressions passed close to the northwest coast. The lowest pressure value, 975.4hPa, was recorded at Belmullet on the 21st.



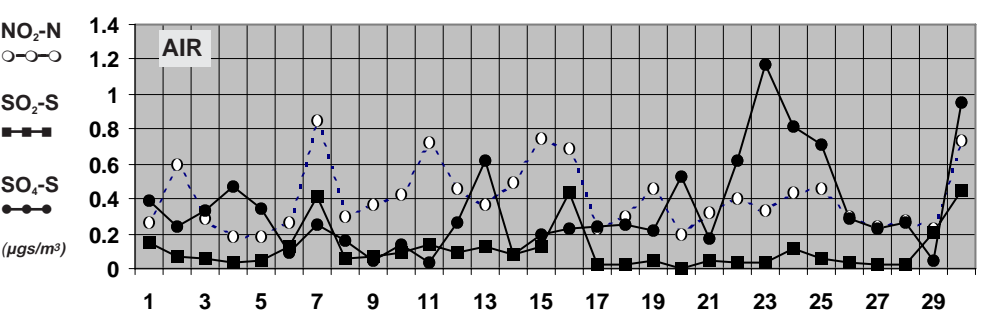
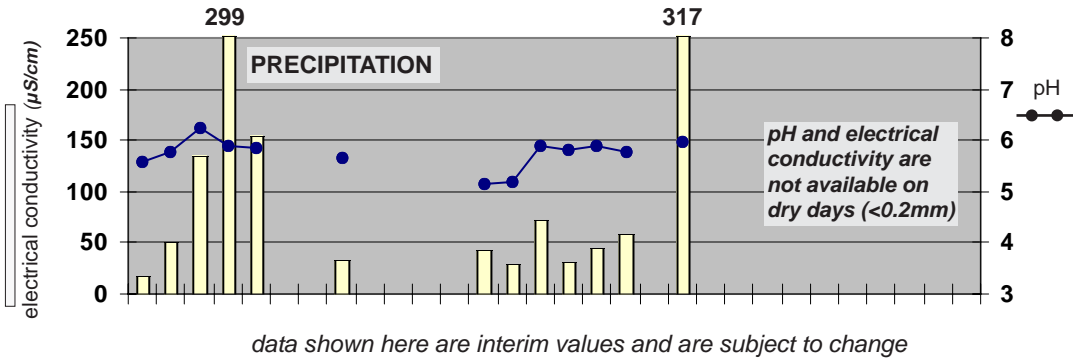
Mean 100mm Soil Temperatures (°C) at 0900UTC
(difference from 1961-90 normals in brackets)



Soil Temperatures at 0900UTC

County/ Station	°C		
	100mm	200mm	300mm
CO. CLARE			
SHANNON AIRPORT	8.7	9.0	9.3
CARRON	9.2		9.7
CO. CORK			
FERMOY (MOORE PARK)	9.5	9.2	9.6
CORK AIRPORT	8.5	8.3	9.3
SHERKIN ISLAND	10.2		10.8
BALLINCURRIG (PEAFIELD)	8.2	8.1	8.9
CO. DONEGAL			
MALIN HEAD	8.6	9.0	9.8
CO. DUBLIN			
DUBLIN AIRPORT	8.1	8.6	9.1
CASEMENT AERODROME	8.2	8.8	9.2
CO. KERRY			
VALENTIA OBSERVATORY	9.4	9.6	11.0
CO. KILKENNY			
KILKENNY	8.9	9.2	9.9
CO. LEITRIM			
BALLINAMORE	8.5	8.9	9.0
CO. LIMERICK			
MOUNT RUSSELL	7.7	8.3	
CO. LOUTH			
ARDEE (BOHARNAMOE)	8.7	9.2	8.8
CO. MAYO			
BELMULLET	9.4	10.0	11.1
STRAIDE	8.5		
CONNACHT AIRPORT	7.5	8.0	8.5
CO. MEATH			
WARRENSTOWN	8.1	8.8	9.4
CO. MONAGHAN			
CLONES	8.4	8.5	9.2
CO. OFFALY			
BIRR	8.6	9.2	9.9
CO. TIPPERARY			
FETHARD (PARSONSHILL)	7.5	8.0	
CO. WATERFORD			
DUNGARVAN (CARRIGLEA)		9.5	10.0
CO. WESTMEATH			
MULLINGAR II	8.4	8.7	9.7
CO. WEXFORD			
JOHNSTOWN CASTLE	9.2	9.2	9.5
ROSSLARE	9.4	9.6	11.0
JOHN F. KENNEDY PARK	9.4	9.7	10.6
CLONROCHE (KNOXTOWN)	8.1	8.9	9.4

Chemical Analysis of Precipitation and Air Samples at Valentia Observatory



Acid rain occurs when pollutants combine with moisture in the air to form sulphuric or nitric acid. pH is the simplest way of measuring the acidity of precipitation. Usually pH of 7.00 is considered neutral but this is not the case in rainfall samples. Pure water in the atmosphere has an equilibrium pH value of 5.65 at 20°C owing to carbon dioxide in the air dissolving to form carbonic acid. Any value below pH 5.65 is considered acid while any value above is considered alkaline.

Sulphur dioxide and sulphate in air contribute to the formation of sulphuric acid; nitrate in air contributes to the formation of nitric acid.

Conductivity measures the total ion activity in the rainfall, i.e. the higher the conductivity the greater the number of ions present.

data shown here are interim values and are subject to change

10-DAY VALUES FOR SELECTED AGROMETEOROLOGICAL STATIONS		RAINFALL				TEMPERATURE										SUNSHINE		P.E. (Penman) (mm)					
Station	period	amount	% of average	rain days	wet days	mean max.	mean min.	mean daily	diff. from average	lowest min.	date	days with air frost	degree days > 4.4°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 (m/s) 2m a.g.l.	P.E. (Penman) (mm)
Fermoy	11-20	46.0	-	6	6	12.1	3.2	7.7	-	-0.5	20	1	38	6	-4.6	19	5	9.1	9.4	-	-	2.7	-
	21-end	2.2	-	1	1	14.2	6.1	10.2	-	1.7	22	0	59	14	-1.7	22	1	10.7	10.7	-	-	4.1	-
	month	64.5	109	14	11	12.7	5.0	8.9	0.9	-0.5	20	1	141	25	-4.6	19	8	9.5	9.6	-	-	3.4	78
Co. Donegal	1-10	43.3	-	9	7	11.6	4.7	8.2	-	0.1	8	0	40	5	-2.2	8	3	-	-	-	-	-	-
Glenties	11-20	69.5	-	10	8	11.7	3.0	7.4	-	-0.5	16	1	34	5	-2.3	16	5	-	-	-	-	-	-
	21-end	9.2	-	8	4	14.6	7.3	11.0	-	4.8	29	0	66	18	2.2	26	0	-	-	-	-	-	-
	month	122.0	153	27	19	12.6	5.0	8.8	1.3	-0.5	16	1	140	28	-2.3	16	8	-	-	-	-	-	-
Co. Kerry	1-10	24.7	-	10	5	13.1	5.2	9.2	-	-0.6	8	1	49	8	-5.3	8	3	-	-	46.8	-	-	-
Ardfert	11-20	38.6	-	8	6	13.0	4.5	8.8	-	1.2	19	0	46	9	-4.1	19	6	-	-	40.6	-	-	-
	21-end	3.3	-	4	1	15.3	7.1	11.2	-	5.0	22	0	68	20	-2.5	22	1	-	-	55.5	-	-	-
	month	66.6	-	22	12	13.8	5.6	9.7	1.3	-0.6	8	1	163	37	-5.3	8	10	-	-	142.9	-	-	-
Co. Leitrim	1-10	34.0	-	10	7	11.5	4.7	8.1	-	1.0	8	0	39	4	-4.4	8	3	7.8	8.2	42.4	-	-	-
Ballinamore	11-20	43.8	-	9	7	11.9	3.3	7.6	-	-1.6	16	2	37	5	-3.5	16	5	8.2	8.9	37.5	-	-	-
	21-end	6.1	-	8	3	13.7	6.7	10.2	-	2.2	22	0	59	13	-1.5	22	1	9.6	9.9	55.0	-	-	-
	month	83.9	129	27	17	12.4	4.9	8.7	1.0	-1.6	16	2	134	22	-4.4	8	9	8.5	9.0	134.9	98	-	-
Co. Louth	1-10	24.9	-	7	5	12.9	5.2	9.1	-	1.3	8	0	48	9	-2.4	8	2	7.5	8.0	-	-	-	-
Ardee	11-20	26.2	-	8	5	12.3	4.2	8.3	-	0.4	19	0	42	7	-0.5	19	2	8.7	8.6	-	-	-	-
	21-end	1.9	-	4	0	15.3	6.8	11.1	-	4.2	27	0	66	19	2.6	27	0	9.8	9.9	-	-	-	-
	month	53.0	96	19	10	13.5	5.4	9.5	2.0	0.4	19	0	157	35	-2.4	8	4	8.7	8.8	-	-	-	-
Co. Waterford	1-10	14.6	-	9	4	12.2	6.4	9.3	-	2.3	8	0	50	7	-0.5	8	1	-	9.2	41.8	-	2.1	-
Dungarvan	11-20	44.2	-	7	6	12.7	4.2	8.5	-	0.4	17	0	44	8	-0.8	17	2	-	9.8	32.8	-	1.6	-
	21-end	2.2	-	3	0	14.4	6.7	10.6	-	2.0	22	0	62	15	0.5	22	0	-	11.1	62.4	-	2.2	-
	month	61.0	-	19	10	13.1	5.8	9.5	1.0	0.4	17	0	156	29	-0.8	17	3	-	10.0	137.0	91	1.9	49
Co. Wexford	1-10	21.8	-	7	7	12.2	5.8	9.0	-	2.6	8	0	46	6	1.2	8	0	8.0	8.3	34.1	-	1.2	-
Johnstown Castle	11-20	32.1	-	8	5	12.6	5.0	8.8	-	0.4	19	0	46	8	-1.4	19	2	8.9	9.4	31.7	-	0.8	-
	21-end	2.6	-	2	1	14.4	7.0	10.7	-	5.8	26	0	63	15	2.3	22	0	10.7	10.9	59.3	-	1.2	-
	month	56.5	88	17	13	13.1	5.9	9.5	1.6	0.4	19	0	155	29	-1.4	19	2	9.2	9.5	125.1	78	1.1	43

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

SEE BACK PAGE OF APRIL ISSUE FOR NOTES ON THE DATA

County/Station	Period	P.E. (mm) Amount	Soil Moisture (mm) Deficit	Accumulated Deficit	Surplus
Co. Dublin	1-10	11.7	-	3	2
Kinsealy	11-20	11.4	-	2	1
	21-end	25.2	21	23	-
	month	48.3			
Co. Kerry	1-10	14.6	-	0	11
Valentia Obs.	11-20	14.9	-	0	32
	21-end	10.1	-	0	3
	month	39.6			
Co. Leitrim	1-10	11.1	-	0	23
Ballinamore	11-20	21.7	-	0	22
	21-end	14.4	8	8	-
	month	47.2			
Co. Wexford	1-10	20.5	-	6	1
Johnstown Castle	11-20	21.3	-	0	11
	21-end	14.4	12	12	-
	month	56.2			

County/Station	GLOBAL SOLAR RADIATION (MJ/sq. m)				P.E. (Penman) total for month(mm)
	10-day totals 1-10	11-20	21-end	total for month	
Co. Donegal					
Malin Head	119.43	121.43	140.24	381.10	61
Co. Dublin					
Dublin Airport	112.06	112.74	173.00	397.80	66
Co. Kerry					
Valentia Obs.	122.88	124.54	151.32	398.72	64
Co. Kilkenny					
Kilkenny	111.46	111.20	164.51	387.17	n/a
Co. Mayo					
Belmullet	132.33	115.20	159.44	406.97	63
Co. Monaghan					
Clones	98.57	106.56	137.10	342.23	57
Co. Offaly					
Birr	114.88	107.27	147.87	370.02	n/a

Thursday 1st: The day was generally dull, mild and misty, with outbreaks of rain moving into the southwest early in the morning and moving very slowly northwards during the rest of the day. Northwestern areas got most sunshine with temperatures generally around normal. Winds were light to moderate southeasterly, fresh and gusty at times during the day on exposed coasts.

Rainfall: nil to 13mm, heaviest at Cork Airport, nil at Malin Head

Temperature: max. 9°C to 16°C, min. 6°C to 9°C, no ground frost

Sunshine: nil to 5 hours, sunniest at Malin Head, nil at Cork Airport

Friday 2nd: Scattered showers and sunny spells during the day; some of the showers were heavy and with hail. Afternoon temperatures up to normal. The showers became more scattered after dark. Light to moderate southeasterly winds increased moderate to fresh and gusty during the day before easing gradually again by evening.

Rainfall: <1 to 10mm, heaviest at Kilkenny

Temperature: max. 10°C to 15°C, min. 5°C to 8°C, ground temperatures down to -1°C at Dublin Airport

Sunshine: 2 to 9 hours, sunniest at Belmullet, 2 hours at Connacht Airport

Saturday 3rd: Mild during the night with showers most frequent in the west and quite strong southerly winds with gale gusts. Showers and rain persisting in many western areas during the morning and afternoon. Sunny periods also in places, mainly in the southwest. Strong and gusty southwesterly winds eased a little by late afternoon, with showers also becoming less frequent. Some slight to sharp frost in the late evening.

Rainfall: 1 to 8mm, heaviest at Clones, 1mm at Kilkenny

Temperature: max. 10°C to 13°C, min. 3°C to 7°C, ground temperatures down to -2°C at Clones

Sunshine: 1 to 8 hours, sunniest at Valentia and Shannon, 1 hour at Rosslare

Sunday 4th: Showers in the northwest, heavy and blustery at times, moved quickly eastwards across the country. Showers of rain and hail continued on and off throughout the rest of the period. Sunny spells also between the showers. West to southwesterly winds were fresh to strong, up to gale force in many areas with frequent stronger gusts in the showers.

Rainfall: 2 to 8mm, heaviest at Casement Aerodrome, 2mm at Kilkenny

Temperature: max. 9°C to 12°C, min. 2°C to 7°C, ground temperatures down to -3°C at Kilkenny

Sunshine: 4 to 9 hours, sunniest at Belmullet, 4 hours at Malin Head

Monday 5th: Scattered showers overnight, with one or two of hail. It was a cool and windy day with scattered showers, some of hail, and sunny spells. The showers became less frequent later in the evening. Moderate to fresh southwesterly winds overnight became fresh to strong and very gusty; they were west to northwesterly in direction during the day before easing during the evening.

Rainfall: 1 to 5 mm, heaviest at Connacht Airport, 1mm at Dublin Airport

Temperature: max. 8°C to 13°C, min. 4°C to 8°C, no ground frost

Sunshine: 3 to 7 hours, sunniest at Malin Head, 3 hours at Kilkenny

Tuesday 6th: Showers becoming widespread in the morning, leading to a generally cool, showery and windy day with sunny spells. The showers, some of which were heavy with hail, largely died out by late afternoon and the rest of the day was mostly dry and clear. Winds were northwesterly, fresh to strong and very gusty, reaching gale force at times before easing gradually by evening.

Rainfall: nil to 3 mm, heaviest at Belmullet, nil at Birr

Temperature: max. 9°C to 12°C, min. 3°C to 8°C, ground temperatures down to -3°C at Clones

Sunshine: 6 to 10 hours, sunniest at Shannon Airport

Wednesday 7th: Some showers in the west early in the period, but mainly dry elsewhere. Well scattered showers continued through the morning with sunny spells also. The showers became more widespread and heavier through the afternoon. Dry and sunny in most places by evening with clear spells after dark and some ground frost developing in places. Northerly winds were fresh to strong early in the period, becoming light by evening.

Rainfall: nil to 1 mm, heaviest at Connacht Airport

Temperature: max. 9°C to 12°C, min. 0°C to 7°C, ground temperatures down to -7°C at Birr

Sunshine: 2 to 11 hours, sunniest at Kilkenny, 2 hours at Valentia Observatory

Thursday 8th: After a frosty night in most parts it was a mainly dry morning with just the odd shower. However, rain in the northwest extended to all areas by evening. Very little sunshine except in parts of the south and southeast. Winds were north to northwesterly in direction, generally light to moderate but occasionally strong.

Rainfall: nil to 5 mm, heaviest at Valentia, nil at Rosslare

Temperature: max. 10°C to 12°C, min. -2°C to 6°C, ground temperatures down to -7°C at Birr

Sunshine: nil to 5 hours, sunniest at Rosslare, nil at Malin Head

Friday 9th: Patchy rain and drizzle in most parts during the day, with some heavy rain in places. Mist and fog patches also developed during the day. Just a few sunny spells during the afternoon. Dry in most places by evening or early night. Light north to northwesterly winds throughout the period.

Rainfall: nil to 3mm, heaviest in the east

Temperature: max. 11°C to 14°C, min. 7°C to 9°C, no ground frost

Sunshine: nil to 2 hours, sunniest at Malin Head

Saturday 10th: Cloudy with some drizzle overnight. Rain and drizzle continued in places during the morning. A mainly dry afternoon with sunny spells and just the odd shower. Mostly dry and sunny for the evening. Some mist in places overnight. Light north to northwesterly winds throughout.

Rainfall: nil to 1mm, heaviest at Mullingar

Temperature: max. 10°C to 14°C, min. 5°C to 9°C, no ground frost

Sunshine: trace to 4 hours, sunniest at Malin Head

Sunday 11th: A generally dry, overcast day in all areas with early patches of mist and drizzle, mainly in the west. A few sunny spells also, particularly in the north of the country. The east and northeast remained dull throughout. Temperatures were around normal with light and variable winds.

Rainfall: nil to <1 mm

Temperature: max. 11°C to 14°C, min. 5°C to 8°C, ground temperatures down to -2°C at Connacht Airport

Sunshine: nil to 3 hours, sunniest at Malin Head

Monday 12th: A bright start to the day in most parts, although the east experienced some early fog. A generally dry day with isolated light showers in the north and northwest. Sunny spells in most parts, particularly in the southwest. Light variable winds, turning northwesterly.

Rainfall: nil to <1mm

Temperature: max. 12°C to 15°C, min. 3°C to 9°C, ground temperatures down to -4°C at Kilkenny

Sunshine: 1 to 9 hours, sunniest at Valentia, 1 hour at Mullingar

Tuesday 13th: Rain and drizzle moved into western and northwestern areas overnight and pushed eastwards during the day. It was a dull and cloudy day almost everywhere with persistent rain and drizzle in the northern half of the country, but little or no rain in the south. Very little sunshine. Light southwesterly winds increased gradually by evening.

Rainfall: nil to 8mm, heaviest at Malin Head

Temperature: max. 11°C to 13°C, min. 2°C to 10°C, ground temperatures down to -4°C at Kilkenny

Sunshine: nil to 4 hours, sunniest at Rosslare

Wednesday 14th: It was a windy, overcast day generally, with some patches of light rain or drizzle in western areas, but mainly dry elsewhere. Little or no sunshine with afternoon temperatures around normal. Heavier rain moved into the west during the afternoon. Light south to southwesterly winds initially, turning southerly and increasing fresh to strong and very gusty, strongest on northern and northwestern coasts.

Rainfall: nil to 15mm, heaviest at Valentia, nil at Dublin Airport and Rosslare

Temperature: max. 11°C to 14°C, min. 6°C to 10°C, no ground frost

Sunshine: nil to 2 hours, sunniest at Dublin Airport

Thursday 15th: Early rain and drizzle cleared during the morning to sunny spells and scattered showers. Long sunny periods also, especially in the west. Winds were southeast to southwesterly in direction, light to moderate, but stronger along the east coast during the night with occasional gale gusts.

Rainfall: <1 to 12mm, heaviest at Casement Aerodrome

Temperature: max. 10°C to 13°C, min. 1°C to 6°C, ground temperatures down to -4°C at Kilkenny

Sunshine: 4 to 10 hours, sunniest at Belmullet, 4 hours at Dublin Airport

Friday 16th: Sharp to severe frost in many areas during the night with just a few showers in the southern half of the country, a few of these heavy. Dry during the day with long sunny spells and just the odd shower. Dry after dark with sharp to severe frost again setting in. Winds were mainly light and variable throughout.

Rainfall: nil to 4mm, heaviest at Cork Airport

Temperature: max. 11°C to 14°C, min. -1°C to 5°C, ground temperatures below zero at all inland stations, down to -7°C at Birr

Sunshine: 5 to 13 hours, sunniest at Malin Head, 5 hours at Cork Airport

Saturday 17th Rain spread into the west in the early hours of the morning, slowly pushing eastwards through the morning and afternoon, followed by a clearance to showers. The rain was heaviest in the west. A few sunny spells in most parts. Winds were light to moderate southerly, veering westerly and increasing almost to gale force before easing back by evening.

Rainfall: 3 to 20mm, heaviest at Valentia, 3mm at Dublin Airport

Temperature: max. 8°C to 11°C, min. -1°C to 4°C ground temperatures down to -4°C at Kilkenny

Sunshine: nil to 4 hours, sunniest at Belmullet, nil at Shannon Airport

Sunday 18th: Cold and frosty overnight with isolated showers in the west. The showers became widespread and heavy with some of hail for a time during the afternoon, before dying out by evening. Sunny breaks between the showers everywhere. Winds were light and variable at first, later becoming northwesterly, mainly light but moderate near coasts.

Rainfall: trace to 9mm, heaviest at Birr

Temperature: max. 7°C to 11°C, min 0°C to 4°C, ground temperatures down to -5°C at Kilkenny

Sunshine: 4 to 9 hours, sunniest at Kilkenny, 4 hours at Belmullet

Monday 19th: A fine, cold start with early frost clearing. There were sunny spells and scattered showers of rain and hail, initially in western counties, becoming more widespread in the afternoon. Thunderstorms in the north and northeast. Showers died out by evening. Winds were light south to southwesterly.

Rainfall: nil to 6mm, heaviest at Cork Airport, nil at Rosslare

Temperature: max. 10°C to 14°C, min. -1°C to 6°C, ground temperatures down to -9°C at Kilkenny

Sunshine: 5 to 12 hours, sunniest at Mullingar, 5 hours at Belmullet

Tuesday 20th: Rain and showers in western areas during the morning, extending slowly eastwards throughout the period. The rain became persistent and heavy, easing by late evening. Some sunny periods, mainly in eastern areas. Winds were light southeasterly, initially strengthening to gale or strong gale with gusts, easing later.

Rainfall: nil to 10mm, heaviest at Connacht Airport, nil at Casement Aerodrome

Temperature: max. 10°C to 13°C, min. 2°C to 7°C, ground temperatures down to -2°C at Mullingar and Birr

Sunshine: <1 to 5 hours, sunniest at Clones

Wednesday 21st: Early showers in the west spread countrywide during the morning. Sunny spells in most parts also between the showers. The showers continued throughout the afternoon and evening, some of them heavy. Winds were strong and gusty, south to southwesterly in direction, decreasing later.

Rainfall: nil to 15mm, heaviest at Connacht Airport, nil at Rosslare

Temperature: max. 11°C to 15°C, min. 5°C to 9°C, ground temperatures down to -1°C at Kilkenny

Sunshine: 2 to 8 hours, sunniest at Belmullet, 2 hours at Malin Head

Thursday 22nd: Dry and sunny during the morning with the odd shower in the west. Sunny spells continued during the afternoon in most areas, but cloud increased by evening. Light rain and drizzle in the southwest and west by nightfall, but dry further east. Light southerly winds.

Rainfall: nil to 3mm, heaviest at Shannon Airport

Temperature: max. 13°C to 16°C, min. 1°C to 8°C, ground temperatures down to -5°C at Kilkenny

Sunshine: 6 to 12 hours, sunniest at Rosslare, 6 hours at Valentia

Friday 23rd: Drizzle in places during the morning with some bright spells also. Mostly cloudy during the afternoon with drizzle continuing in the west and north; mist in places also. Becoming mostly dry and cloudy by late afternoon. Some rain and drizzle in northern, western and southern areas during the night, but staying dry elsewhere with mist forming in places.

Moderate to fresh southwesterly winds throughout.

Rainfall: nil to 2mm, heaviest at Malin Head

Temperature: max. 12°C to 18°C, min. 8°C to 11°C, no ground frost

Sunshine: nil to 5 hours, sunniest at Dublin Airport

Saturday 24th: Early rain or drizzle in the west, but mainly fair in eastern areas. During the day there were long spells of sunshine in most places but the rain and drizzle still affected more western areas. It was a breezy day with gale gusts near western coasts; winds were generally moderate elsewhere, southerly in direction.

Rainfall: nil to trace generally, 4mm at Belmullet

Temperature: max. 12°C to 18°C, min. 6°C to 10°C, ground temperatures down to -2°C at Kilkenny

Sunshine: nil to 9 hours, sunniest at Dublin Airport, nil at Belmullet and Malin

Sunday 25th: Early mist and fog cleared during the morning and it was a dry, warm and sunny day generally. Some patches of cloud in the western half of the country with temperatures around normal here, while elsewhere it was a very sunny day with temperatures well above normal. Light, variable or southerly winds were moderate at times on western coasts.

Rainfall: nil generally, <1mm at Belmullet

Temperature: max. 13°C to 18°C, min. 3°C to 9°C, ground temperatures down to -3°C at Kilkenny

Sunshine: 5 to 13 hours, sunniest in the east, 5 hours at Clones

Monday 26th: Cloudy weather with outbreaks of mostly light rain or drizzle moved into western coastal areas in the morning and moved slowly eastwards across the country during the day. Dry weather with sunny spells followed. Mostly dry and clear for the evening. Light variable winds at first veered northwesterly and strengthened.

Rainfall: nil to 2mm, heaviest at Malin Head

Temperature: max. 12°C to 16°C, min. 2°C to 9°C, ground temperatures down to -4°C at Kilkenny

Sunshine: 1 to 9 hours, sunniest at Belmullet, 1 hour at Birr

Tuesday 27th: Dry during the day with a few showers in places, mainly in western areas; some of the showers were heavy. Long sunny periods in most areas, but cool in the northerly airstream. Light north to northwesterly winds at first increased moderate to fresh with stronger gusts.

Rainfall: nil to 1mm, heaviest at Mullingar and Kilkenny

Temperature: max. 12°C to 15°C, min. 2°C to 9°C, ground temperatures down to -2°C at Mullingar

Sunshine: 8 to 13 hours, sunniest at Dublin Airport, 8 hours at Valentia

Wednesday 28th: Mainly dry throughout with just a few showers in the western half of the country during the evening. Cool inland overnight, but temperatures rose quickly during the morning and afternoon in bright sunshine; all areas had long sunny spells except in the west, where it turned cloudy later. Winds were north or northwesterly in direction, generally light, but fresh or strong on northern and western coasts.

Rainfall: nil to trace generally, 1mm at Belmullet

Temperature: max. 11°C to 16°C, min. 3°C to 8°C, ground temperatures down to -2°C at Birr

Sunshine: 4 to 13 hours, sunniest at Cork Airport, 4 hours at Belmullet

Thursday 29th: Mainly dry during the night with a few showers in places. Dry and clear during the day with sunny spells and a few showers, generally well scattered. Remaining cool in a fresh northerly airstream. Continuing dry during the evening with just a few scattered showers. No frost. Winds from a northerly direction, moderate to fresh in strength generally, but up to gale force in some coastal areas.

Rainfall: nil to 2mm, heaviest at Dublin Airport

Temperature: max. 9°C to 14°C, min. 5°C to 8°C, no ground frost

Sunshine: 6 to 14 hours, sunniest at Shannon Airport

Friday 30th: Mainly dry throughout with just a few showers in the southwest. A few breaks in the cloud giving some sunshine, but overall it was quite a cloudy day. Remaining cool in the northerly winds, which were strong on northern and western coasts, but light to moderate elsewhere. The winds eased later everywhere, becoming light by evening.

Rainfall: nil to trace generally, 2mm at Valentia

Temperature: max. 11°C to 13°C, min. 5°C to 8°C, no ground frost

Sunshine: trace to 4 hours, sunniest at Rosslare and Malin Head

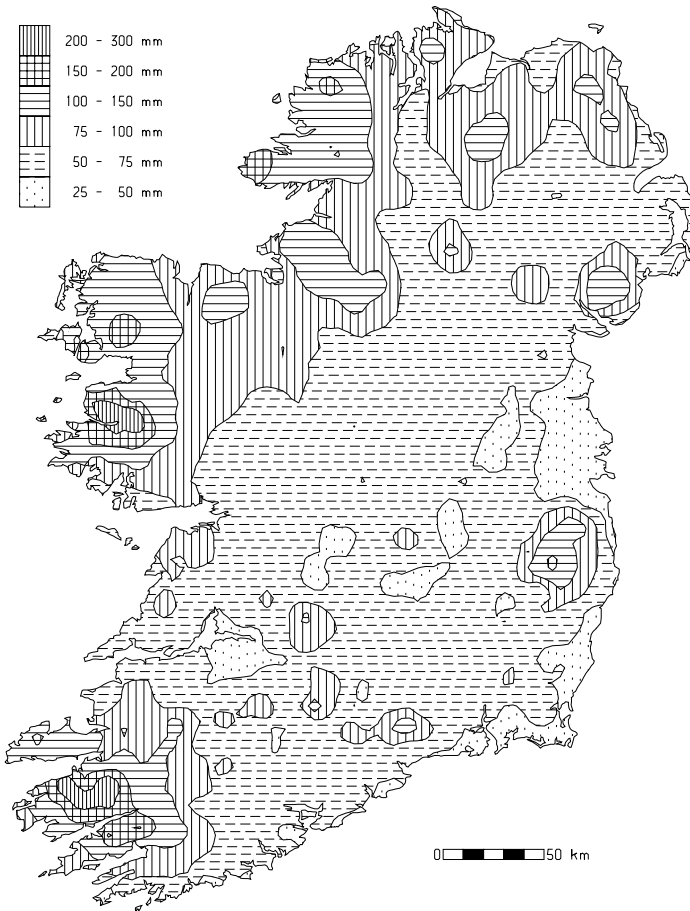
Dry in east, but wetter than normal in west and northwest

Monthly rainfall totals were above normal over much of the west and northwest of the country, but it was a relatively dry month in the east and southeast. It was a particularly wet month in parts of Donegal, Galway and Mayo, where some rain fell on almost every day of the month. Totals ranged from 31mm at Dublin Airport to 170mm at Maam Valley, Co. Galway, with percentage of normal values between 65% at Dublin (Phoenix Park) and 159% at Ballyshannon (Cathleen's Fall), Co Donegal. It was the driest April for between 7 and 9 years at stations in the east and southeast, but the wettest since 1999 at Belmullet.

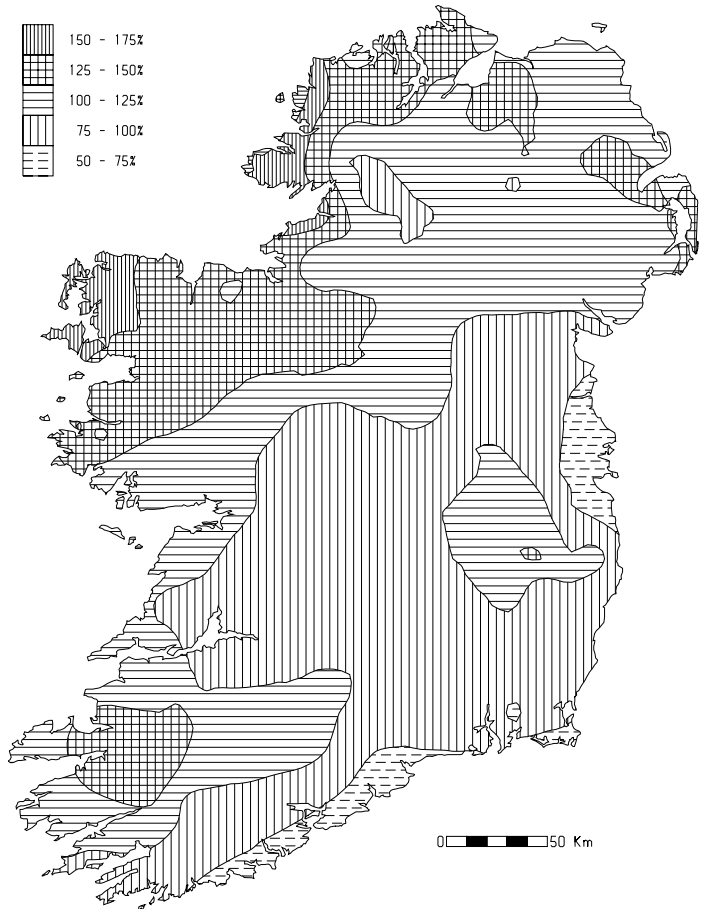
Although totals were below normal over most of Leinster, the number of wetdays (*days with 0.2mm or more rainfall*) was at or above normal at almost all stations. There were between 10 and 13 wetdays during the month at stations in the east and southeast, with between 18 and 20 wetdays in the northwest. Some isolated heavy falls were recorded around the middle of the month, especially on the 14th, 17th and 20th. The highest daily fall of the month, 29.1mm, was recorded at Maam Valley on the 20th; in contrast, Dublin Airport's highest daily fall was only 4.8mm on the 14th.

County/ Station	Total Amount (mm)	% of 1961-90 average	Most in		Number of	
			a day / date	date	Raindays (>0.2mm)	Wetdays (≥1mm)
CO. CLARE						
SHANNON AIRPORT	43.9	78	8.8	14	18	11
CARRON	92.3	107	13.8	14	24	15
CO. CORK						
FERMOY (MOORE PARK)	64.5	109	15.6	20	14	11
CORK AIRPORT	59.4	85	9.4	1	22	13
SHERKIN ISLAND	53.3	82	11.0	17	17	12
BALLINCURRIG (PEAFIELD)	73.7		12.1	14	22	16
CO. DONEGAL						
MALIN HEAD	74.8	129	13.5	17	21	17
BALLYSHANNON (CATHLEEN'S FALL)	90.7	159	13.7	14	23	19
GLENTIES	122.0	153	18.4	14	27	19
CO. DUBLIN						
DUBLIN (PHOENIX PARK)	34.7	65	6.3	14	16	11
DUBLIN AIRPORT	31.2		4.8	14	18	12
CASEMENT AERODROME	44.4	87	10.7	14	14	12
DUBLIN (MERRION SQUARE)	32.3	66	15.1	6	8	5
CO. GALWAY						
GALWAY (UNIV. COLL.)	82.9	124	17.1	2	19	16
MAAM VALLEY	170.4		29.1	20	28	22
CONNEMARA NATIONAL PARK	126.3	152	23.2	17	27	18
BALLYGAR	50.4	83	10.8	14	19	13
CO. KERRY						
VALENTIA OBSERVATORY	85.6	111	20.6	17	21	14
ARDFERT (LISCAHANE)	66.6		11.9	17	22	12
CO. KILKENNY						
KILKENNY	51.2	98	10.1	14	17	14
CO. LEITRIM						
BALLINAMORE	83.9	125	14.4	14 17	27	17
CO. LIMERICK						
MOUNT RUSSELL	93.2		15.4	14	21	19
CO. LOUTH						
ARDEE (BOHARNAMOE)	53.0	96	13.6	2	18	9
CO. MAYO						
BELMULLET	87.4	153	15.3	20	26	18
STRAIDE	95.2	149	15.0	20	22	19
CONNACHT AIRPORT	95.7		19.3	20	24	19
CO. MEATH						
WARRENSTOWN	53.1	92	12.0	2	17	12
CO. MONAGHAN						
CLONES	63.1	113	12.1	17	21	16
CO. OFFALY						
BIRR	50.7	96	10.3	14	19	12
DERRYGREENAGH	55.8	98	14.3	14	16	12
CO. SLIGO						
ARDTARMON	71.8		8.6	14	20	16
CO. TIPPERARY						
FETHARD (PARSONSHILL)	60.9		18.5	14	19	12
CO. WATERFORD						
WATERFORD (TYCOR)	50.7	83	10.3	14	19	11
DUNGARVAN (CARRIGLEA)	61.0		13.5	14	19	10
CO. WESTMEATH						
MULLINGAR II	58.6	99	11.2	17	17	11
CO. WEXFORD						
JOHNSTOWN CASTLE	56.5	88	8.8	17	17	13
ROSSLARE	41.8	75	7.7	17	17	13
JOHN F. KENNEDY PARK	52.4	82	12.4	14	14	10
CLONROCHE (KNOXTOWN)	78.6		16.4	17	19	15

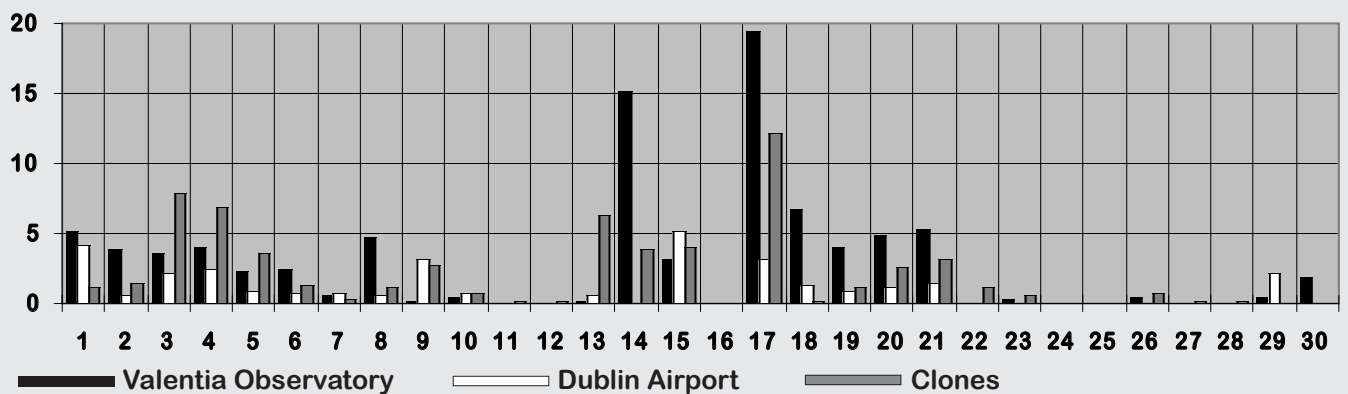
Total rainfall (mm)



Percentage of normal rainfall



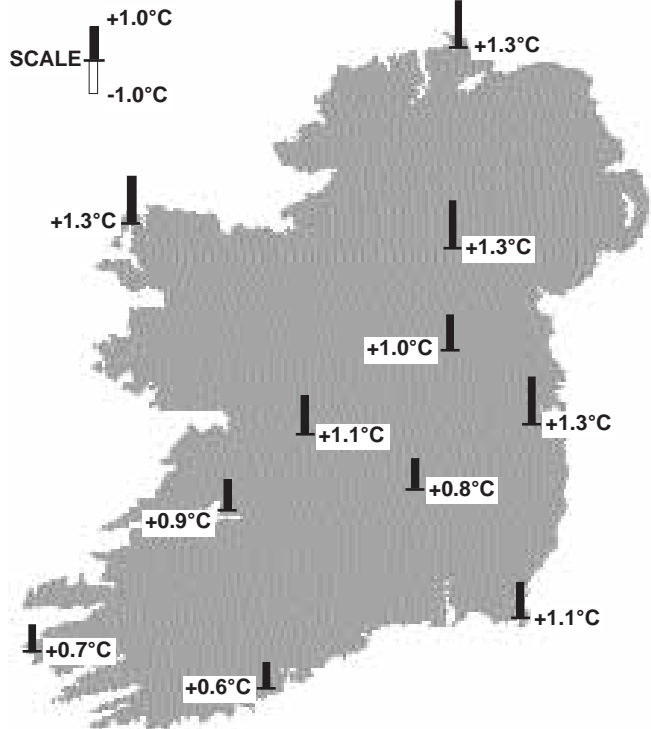
Daily 0-24h rainfall values (mm)



Mild throughout most of month

After relatively cool weather during the first week of April, much of the remainder of the month was mild. Mean air temperatures overall were above normal everywhere, by between one and two degrees at most stations, although means were less than a degree higher than normal at many Munster stations. Mean temperatures ranged from 7.7°C at Connacht Airport to 10.1°C at Sherkin Island (Co. Cork).

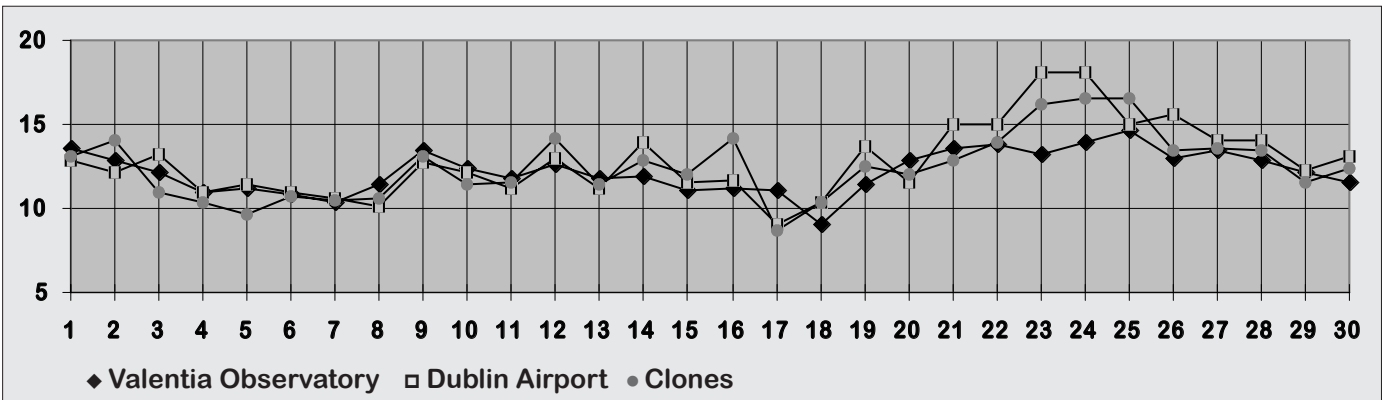
The warmest weather at almost every station was in the period 23rd to 25th, which was the only time during the month when maxima rose above 15°C generally. The highest temperature of the month, 19.9°C, was recorded at Dublin (Merrion Square) on the 24th. While there were no very high maximum temperatures measured during the month, there was also an absence of very low values at any time during April and at the majority of stations there was no air frost recorded. The lowest air temperature of the month, -1.6°C, was measured at both Ballinamore, Co. Leitrim, on the 16th and at Ballincurrig (Peafield), Co. Cork, on the 19th. The



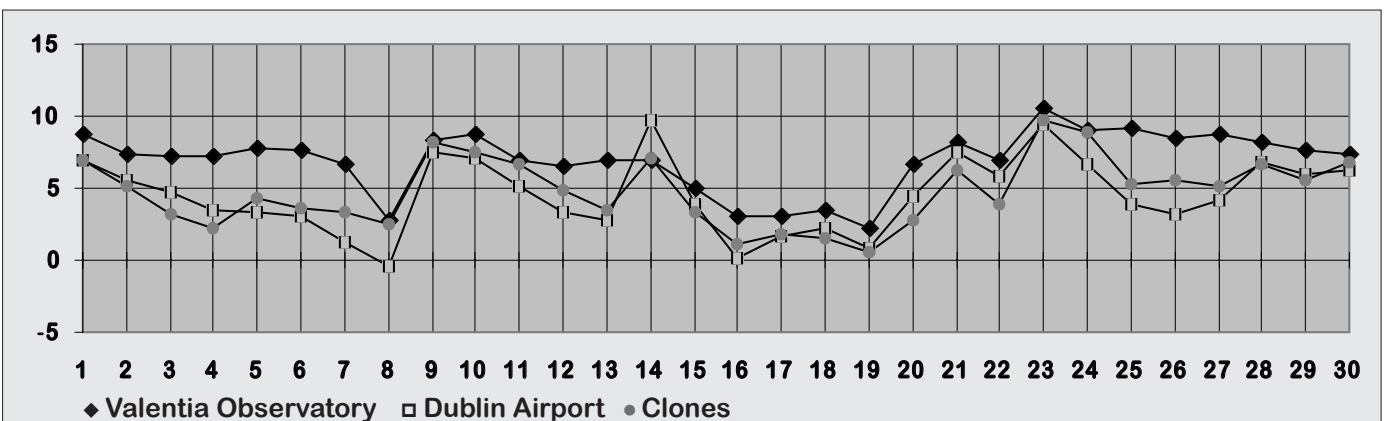
Mean Temperature
(difference from 1961-90 normals)

lowest grass minimum value, -8.9°C, was recorded at Kilkenny on the 19th.

Daily 0-24h maximum temperatures (°C)



Daily 0-24h minimum temperatures (°C)



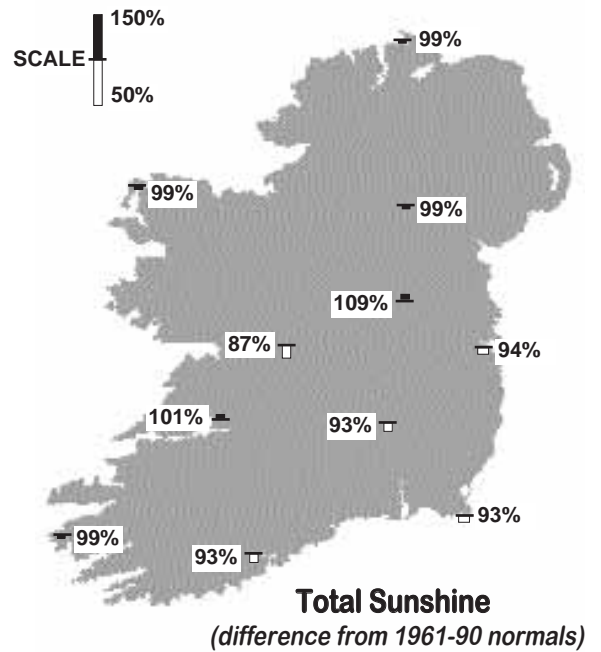
County/ Station	°C											
	Mean max.	Mean min.	Mean/ deviation from 1961-90 average		Highest max./date		Lowest min./date		Lowest grass min./date		Days with air frost ground frost	
CO. CLARE												
SHANNON AIRPORT	13.2	6.3	9.8	0.9	16.8	23 24	1.5	19	-2.8	19	0	3
CARRON	12.2	5.3	8.8	1.1	16.3	23	0.4	16	-5.7	19	0	10
CO. CORK												
FERMOY (MOORE PARK)	12.7	5.0	8.9	0.9	16.0	25	-0.5	20	-4.6	19	1	8
CORK AIRPORT	11.5	5.4	8.5	0.6	14.2	12 28	0.8	19	-0.2	16 19	0	2
SHERKIN ISLAND	12.8	7.4	10.1	1.3	15.6	25	3.8	8 19	0.0	8	0	0
BALLINCURRIG (PEAFIELD)	12.1	4.4	8.3		15.0	22 25	-1.6	19	-5.0	19	1	8
CO. DONEGAL												
MALIN HEAD	11.4	6.8	9.1	1.3	15.8	23	2.8	16	0.1	16	0	0
BALLYSHANNON (CATHLEEN'S FALL)	12.3	6.2	9.3	1.4	17.6	24	2.1	16			0	
GLENTIES	12.6	5.0	8.8	1.3	17.7	25	-0.5	16	-2.3	16	1	8
CO. DUBLIN												
DUBLIN (PHOENIX PARK)	13.4	5.6	9.5	1.6	18.8	24	0.6	8	-2.9	8	0	6
DUBLIN AIRPORT	12.9	5.0	9.0		18.1	23 24	-0.4	8	-3.0	8 16	1	6
CASEMENT AERODROME	12.9	5.0	9.0	1.3	17.8	24	-1.5	8	-4.5	8	1	9
DUBLIN (MERRION SQUARE)	12.2	6.9	9.6	0.7	19.9	24	3.0	8			0	
CO. GALWAY												
GALWAY (UNIV. COLL.)	13.4	5.9	9.7	1.0	16.3	26	0.3	16	-3.1	19	0	6
MAAM VALLEY	12.6	6.5	9.6		15.4	25	1.4	16 18	-2.9	16	0	2
CONNEMARA NATIONAL PARK	12.5	5.6	9.1		15.7	1	0.6	18			0	
BALLYGAR	13.3	4.8	9.1		18.0	23	-1.0	19	-3.5	19	3	6
CO. KERRY												
VALENTIA OBSERVATORY	12.2	7.1	9.7	0.7	14.6	25	2.2	19	-1.3	8	0	4
ARDFERT (LISCAHANE)	13.8	5.6	9.7	1.3	18.6	24	-0.6	8	-5.3	8	1	10
CO. KILKENNY												
KILKENNY	13.2	4.6	8.9	0.8	17.6	25	-0.6	17 19	-8.9	19	3	13
CO. LEITRIM												
BALLINAMORE	12.4	4.9	8.7	1.0	16.7	24	-1.6	16	-4.4	8	2	9
CO. LIMERICK												
MOUNT RUSSELL	11.9	5.4	8.7		16.9	25	0.6	8	-3.8	8	0	4
CO. LOUTH												
ARDEE (BOHARNAMOE)	13.5	5.4	9.5	2.0	18.5	24 25	0.4	19	-2.4	8	0	4
CO. MAYO												
BELMULLET	12.4	6.9	9.7	1.3	16.0	1	1.1	16	-2.3	16	0	3
STRAIDE	12.6	5.1	8.9	0.8	16.0	25	-0.4	16	-5.0	19	3	9
CONNACHT AIRPORT	10.8	4.6	7.7		14.6	25	-0.3	19	-3.0	16 17	1	5
CO. MEATH												
WARRENTOWN	12.9	5.4	9.2	1.5	17.9	24	0.8	16	-2.4	16	0	7
CO. MONAGHAN												
CLONES	12.5	5.2	8.9	1.3	16.6	24	0.5	19	-3.3	16	0	11
CO. OFFALY												
BIRR	12.9	5.2	9.1	1.1	16.9	25	-0.2	18	-7.4	8	1	11
DERRYGREENAGH	13.3	4.6	9.0	1.6	18.2	25	-0.2	19	-4.9	17	1	11
CO. SLIGO												
ARDTARMON	12.7	6.5	9.6		17.2	25	2.6	18	-1.1	18	0	2
CO. TIPPERARY												
FETHARD (PARSONSHILL)	12.1	3.8	8.0		16.9	25	-1.0	19	-3.4	19	3	7
CO. WATERFORD												
WATERFORD (TYCOR)	13.5	5.6	9.6	1.2	16.4	13 26	0.9	19			0	
DUNGARVAN (CARRIGLEA)	13.1	5.8	9.5	1.0	16.0	25 26	0.4	17	-0.8	17	0	3
CO. WESTMEATH												
MULLINGAR II	12.6	4.6	8.6	1.0	17.4	25	-0.5	16	-5.0	16	2	12
CO. WEXFORD												
JOHNSTOWN CASTLE	13.1	5.9	9.5	1.6	16.2	26	0.4	19	-1.4	19	0	2
ROSSLARE	12.2	6.7	9.5	1.1	16.0	26	1.1	19	0.0	19	0	0
JOHN F. KENNEDY PARK	12.5	5.2	8.9	0.7	15.9	26	-0.1	19	-3.9	19	1	7
CLONROCHE (KNOXTOWN)	12.3	5.0	8.7		16.6	25	0.9	16	-1.5	17	0	8

County/ Station	Daily mean (hours/day)	% of average	% of possible	Most in a day/date	
CO. CLARE					
SHANNON AIRPORT	4.96	101	36	13.5	29
CO. CORK					
CORK AIRPORT	4.87	93	35	13.4	28
SHERKIN ISLAND	5.45	110	38	13.0	28
BALLINCURRIG (PEAFIELD)	4.55			12.0	25
CO. DONEGAL					
MALIN HEAD	5.03	99	36	13.1	16
BALLYSHANNON (CATHLEEN'S FALL)	4.63	98	33	12.3	16
CO. DUBLIN					
DUBLIN AIRPORT	5.67	109	41	13.2	25
CASEMENT AERODROME	4.58	94	33	13.2	25
CO. GALWAY					
GALWAY (UNIV.COLL.)	5.26	106	35	13.2	29
CO. KERRY					
VALENTIA OBSERVATORY	4.93	99	36	12.2	29
ARDFERT (LISCAHANE)	4.76		37	11.7	28
CO. KILKENNY					
KILKENNY	4.51	93	32	11.9	28
CO. LEITRIM					
BALLINAMORE	4.50	101	38	12.2	29
CO. MAYO					
BELMULLET	5.23	99	37	12.2	25
STRAIDE	4.52			10.2	27
CONNACHT AIRPORT	4.65			10.6	27
CO. MONAGHAN					
CLONES	4.49	99	32	12.1	28
CO. OFFALY					
BIRR	4.01	87	29	10.9	28
CO. WATERFORD					
DUNGARVAN (CARRIGLEA)	4.57	91	37	11.7	29
CO. WESTMEATH					
MULLINGAR II	5.27	109	38	13.2	28
CO. WEXFORD					
JOHNSTOWN CASTLE	4.17	78	36	11.7	25
ROSSLARE	5.32	93	38	12.1	22
JOHN F. KENNEDY PARK	4.99	101	35	10.6	25
CLONROCHE (KNOXTOWN)	4.97			11.7	27

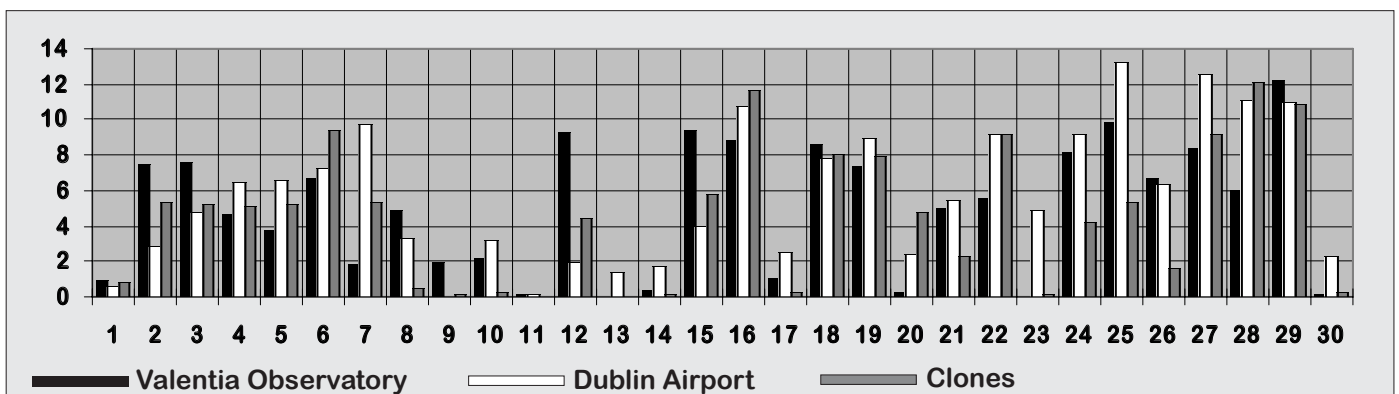
Near normal sunshine in most places

Much of April was relatively dull, particularly the period between the 9th and 14th, but some high daily values during the final week brought totals close to the monthly normal at almost every station. These ranged from 120 hours at Birr to 170 hours at Dublin Airport, with percentage of normal values between 78% of normal at Johnstown Castle, Co. Wexford and 110% at Sherkin Island, Co. Cork. It was the dulllest April for between 6 and 8 years at several stations.

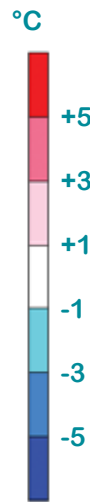
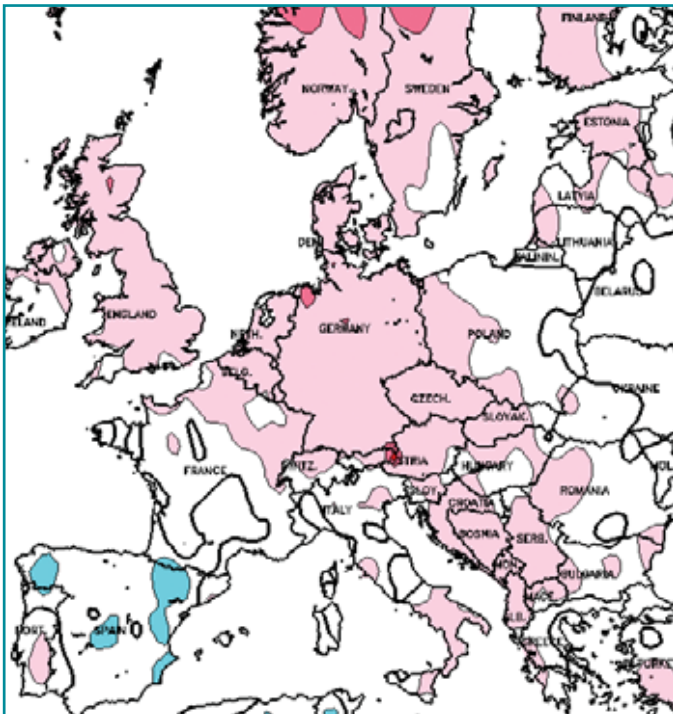
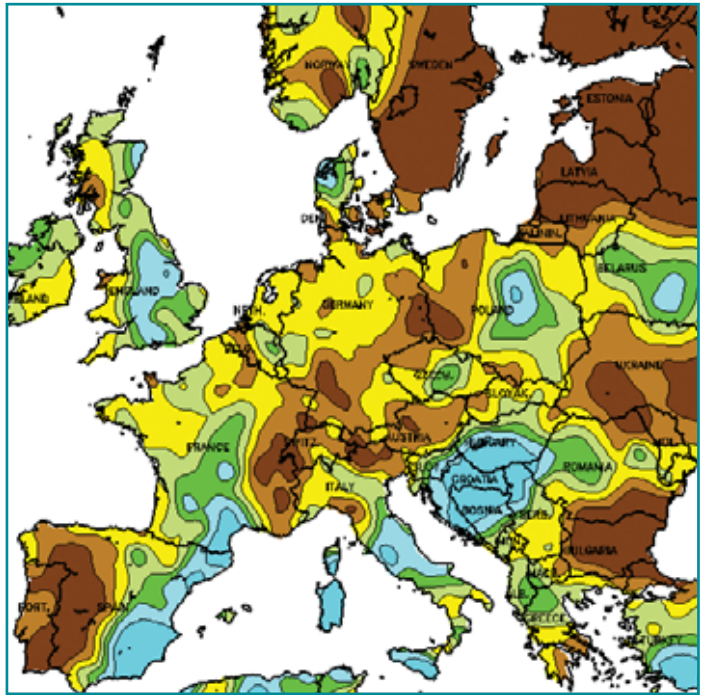
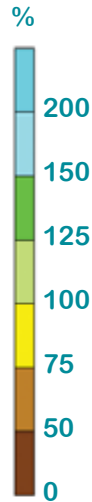
Almost all stations measured their highest daily sunshine values in the period between the 25th and 29th, with the highest value, 13.5 hours, recorded at Shannon Airport on the 29th. Global solar radiation totals ranged from 92% of normal at Clones to 104% at Dublin Airport.



Daily sunshine values (hours)



APRIL RAINFALL
(percentage of 1961-1990 normal)



APRIL MEAN TEMPERATURE
(difference from 1961-1990 normal)

Data supplied by NOAA
Climate Prediction Centre,
US Department of Commerce

New temperature records for April were set across parts of California in the period 26th/27th. Sacramento recorded 37.2°C on the 26th, while 37.8°C was measured at Yorba Linda on the 26th and 27th.

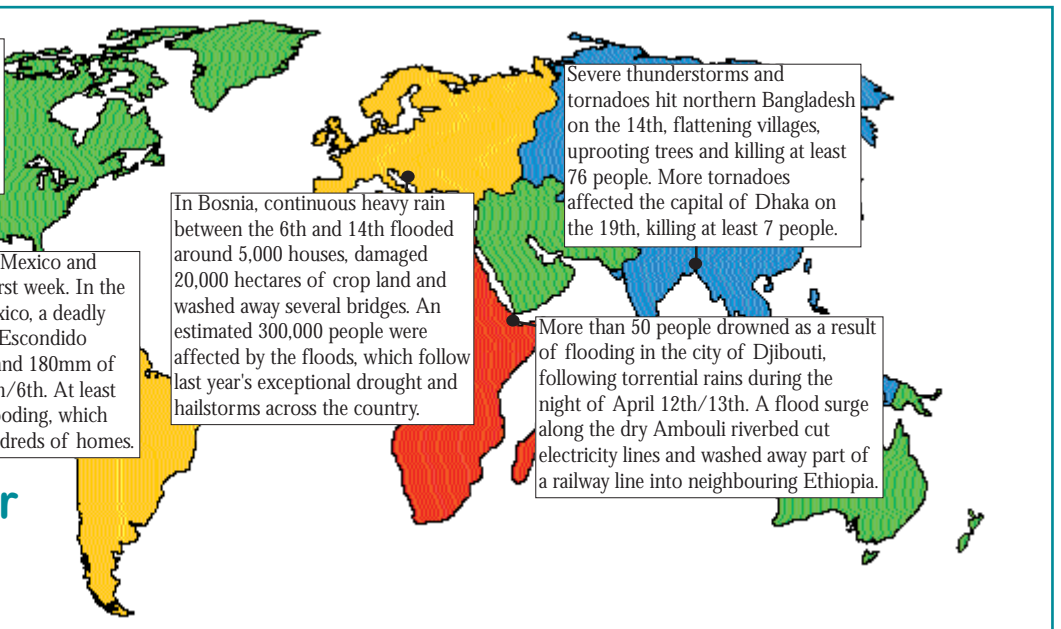
Severe thunderstorms affected Mexico and southwestern U.S. during the first week. In the Coahuila state of northern Mexico, a deadly flash flood occurred along the Escondido River, where between 125mm and 180mm of rain fell locally in the period 5th/6th. At least 36 people were killed by the flooding, which also damaged or destroyed hundreds of homes.

In Bosnia, continuous heavy rain between the 6th and 14th flooded around 5,000 houses, damaged 20,000 hectares of crop land and washed away several bridges. An estimated 300,000 people were affected by the floods, which follow last year's exceptional drought and hailstorms across the country.

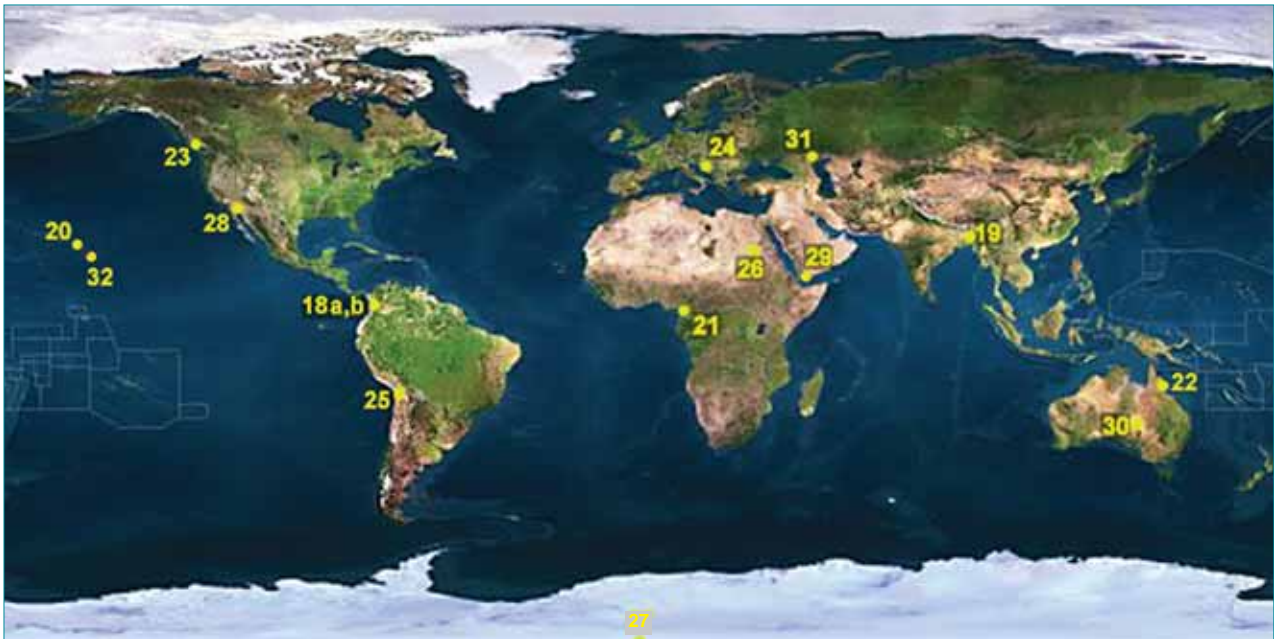
Severe thunderstorms and tornadoes hit northern Bangladesh on the 14th, flattening villages, uprooting trees and killing at least 76 people. More tornadoes affected the capital of Dhaka on the 19th, killing at least 7 people.

More than 50 people drowned as a result of flooding in the city of Djibouti, following torrential rains during the night of April 12th/13th. A flood surge along the dry Ambouli riverbed cut electricity lines and washed away part of a railway line into neighbouring Ethiopia.

Global weather highlights of the month



World records of extreme annual rainfall



Geographic Area	Average Annual Precipitation (mm)	Location	Height (m)	Years of record	Map reference
Highest Average Annual Precipitation Extremes					
South America*	13299	Lloro, Colombia	159	29	18a
Asia	11872	Mawsynram, India	1402	38	19
Oceania	11684	Mt. Waialeale, Hawaii	1570	30	20
Africa	10287	Debundscha, Cameroon	9	32	21
South America*	8992	Quibdo, Colombia	37	16	18b
Australia	8636	Bellenden Ker, Queensland	1555	9	22
North America	6502	Henderson Lake, British Columbia	4	14	23
Europe	4648	Crkvice, Bosnia-Herzegovina	1017	22	24

* The official greatest average annual precipitation for South America is 8992mm at Quibdo. The 13299mm value at Lloro is an estimated amount.

Lowest Average Annual Precipitation Extremes					
South America	0.8	Arica, Chile	29	59	25
Africa	2.5	Wadi Halfa, Sudan	125	39	26
Antarctica ⁺	20	Amundsen-Scott South Pole Station	2801	10	27
North America	30	Batagues, Mexico	5	14	28
Asia	46	Aden, Yemen	7	50	29
Australia	103	Mulka, South Australia	49	42	30
Europe	163	Astrakhan, Russia	14	25	31
Oceania	227	Puako, Hawaii	2	13	32

⁺ The value given is the average amount of solid snow accumulating in one year as indicated by snow markers. The liquid content of the snow is undetermined.
map and table courtesy NOAA / National Climatic Data Centre, US Department of Commerce