



Exceptional weather events

Type of event:

Heavy rain and strong winds

Date:

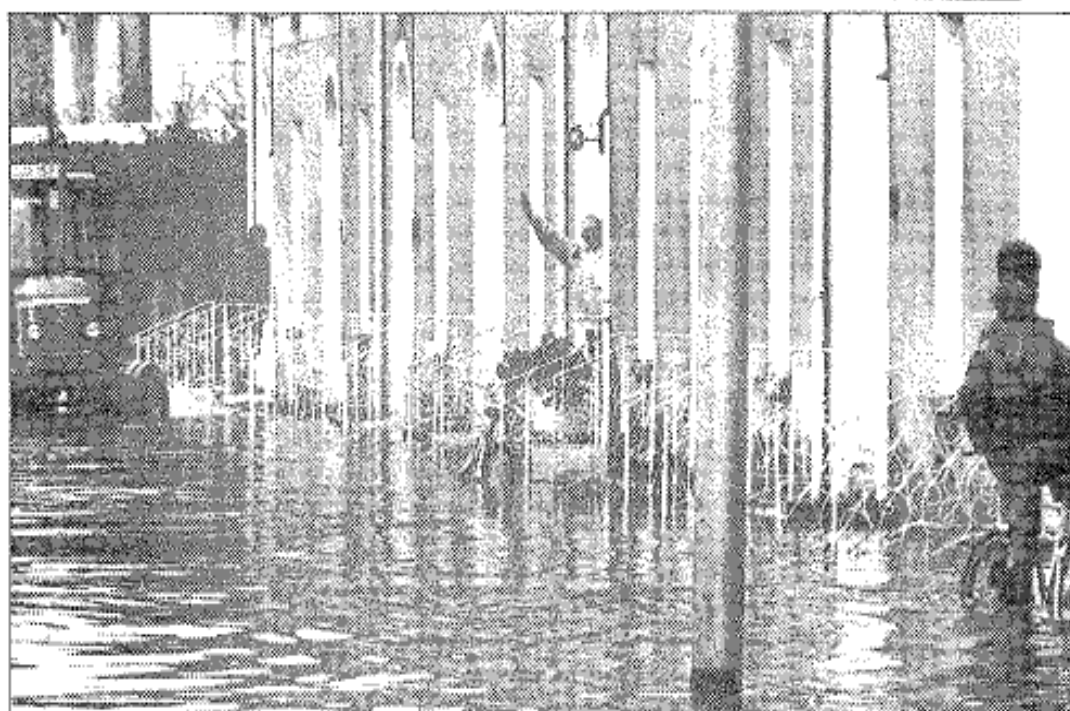
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A street under water in Clonmel on Wednesday the 7th (photo: Irish Independent)

Stormy February Wettest Ever

It was one of the worst Februaries ever, both in Ireland and across much of Northern Europe. A succession of Atlantic storms swept across the country, making it the wettest on record almost everywhere and the windiest February in many places too. On the brighter side, however, although the month ended on a very cold, wintry note, overall it was quite mild.

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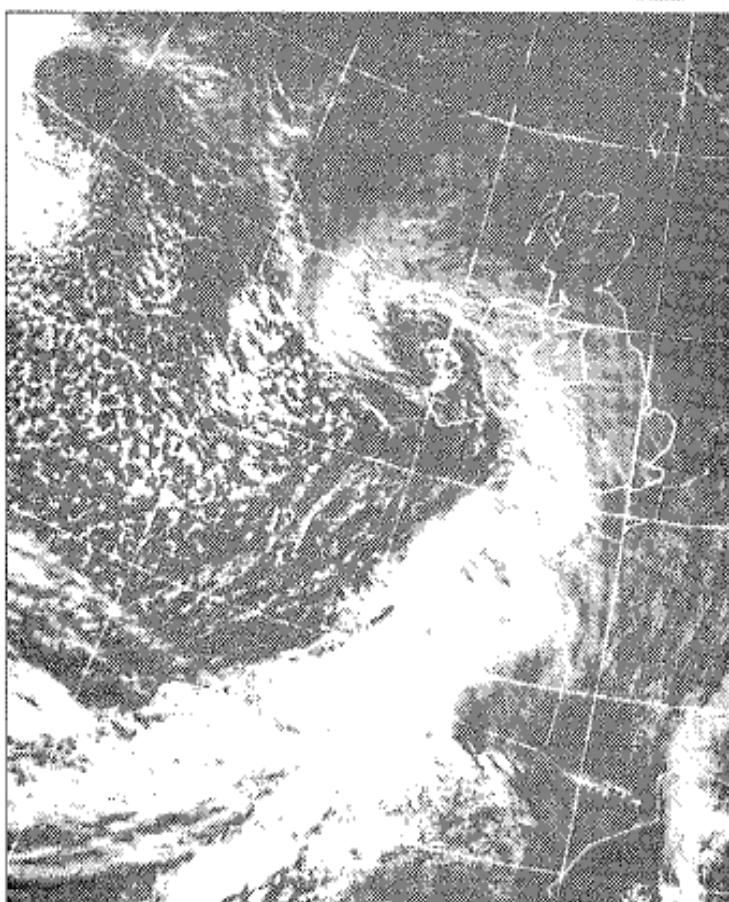
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Very windy, very wet

The wind rarely relented throughout the month of February. A seemingly unending series of vigorous Atlantic depressions affected the country, tracking closer to Ireland than usual, and bringing prolonged periods of heavy rain that caused widespread flooding at times. The worst windstorms were associated with deepening low pressure areas passing close to the north of Ireland on the 1st and on the 26th, and right over the north of Ireland on the 11th.

We spent much of the month in mild but cloudy airmasses but there were some colder periods with squally showers, such as on 2nd, 10th, 21st and the period 26th -27th. On the 21st a trough crossing the country caused thundery showers which produced vicious squalls in a situation where the pressure gradient was relatively slack. From the 4th to the 7th, on the 19th and on the 23rd and 24th, frontal rain belts became slow-moving over the country and developing wave depressions on the fronts gave heavy rain over a fairly wide area as they moved northeastwards. The strong and gusty winds of the 4th/5th, the 13th and the 18th-21st occurred when the low centres followed a track more to the north of Ireland. On the 28th, after a few days in a cold, showery westerly, a depression moved east across the centre of the country bringing the most prolonged snowfalls of the winter to the north and west. A cold northwesterly wind



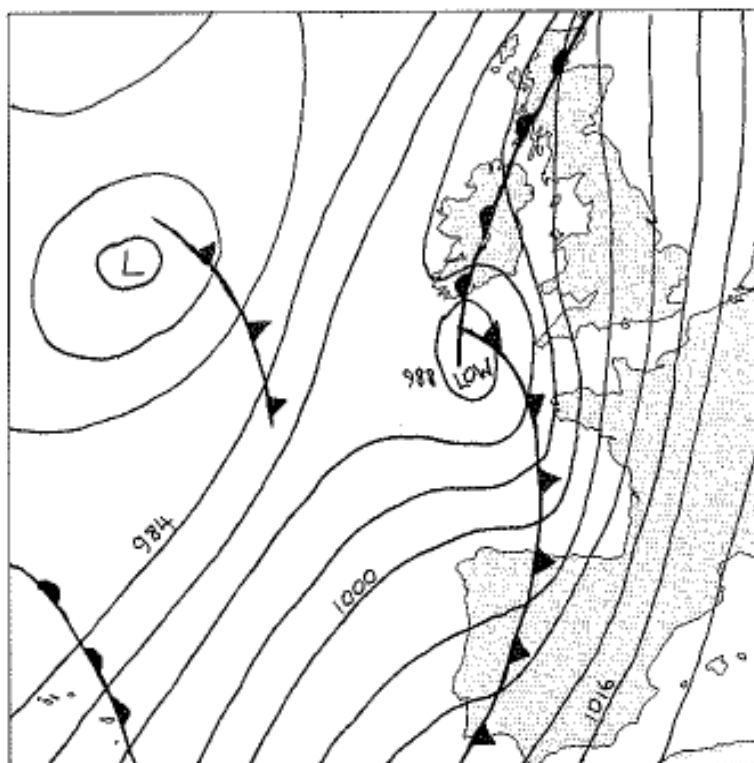
Satellite picture taken on the 1st. The high winds associated with the low pressure area over Ireland, setting the trend for the month. (photo: University of Dundee)

followed the passage of the depression, providing a very wintry end to an otherwise mild month.

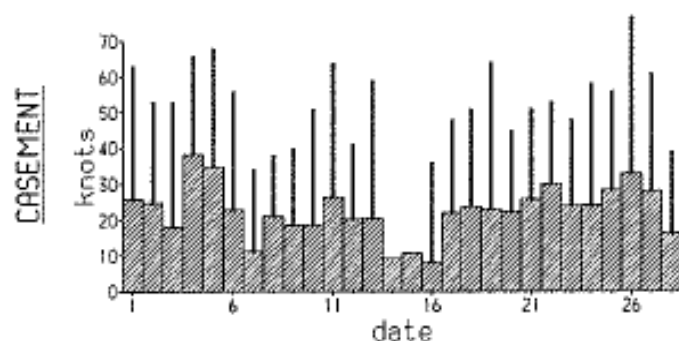
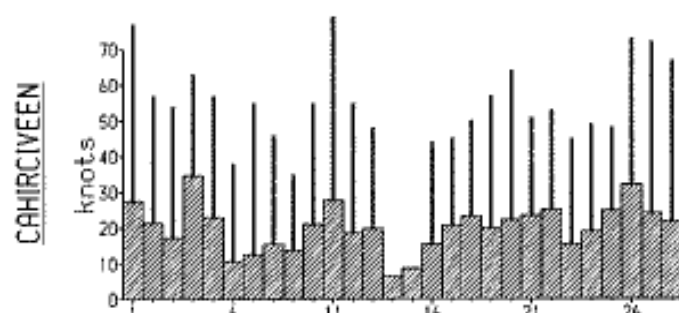
Apart from the heavy rain and consequent flooding, it was the frequency and duration of strong winds that was the most notable feature of the month. The number of days with gales has been way in excess of the February averages and at some stations the highest on record. The number of days with gale gusts has also been very high. Malin Head had gale gusts every day of the month, Belmullet on all but one day. Most stations had between 20 and 26 days with gale gusts. A further indication of the severity of the month's

winds is the number of days with gusts of 60 knots or more, which set all-time records at a number of stations. Belmullet and Malin Head had 14 such days. Cahirciveen, Cork Airport, Casement Aerodrome and Roche's Point had between 6 and 9 days, while the remaining stations had gusts equal to or in excess of 60 knots on between 1 and 4 days during the month.

All stations reported gale gusts in the periods 1st - 2nd, 4th - 5th, 10th - 13th, 17th - 21st and 25th - 28th. On Sunday the 4th, winds of gale force and above blew for long periods at a number of stations; gale force winds blew for 22 consecutive hours at Cork Airport. The 6th and the 7th



The above synoptic chart shows the situation at 0600 on Tuesday the 8th. A wave depression on a slow-moving frontal rainbelt moved north-eastwards over the country, causing flooding in many areas.



WIND SPEEDS : Daily mean speed and maximum gusts in knots

were, relatively speaking, less windy, and on the 9th a majority of stations escaped without gale gusts. The period from the 14th to the 16th was the least windy.

The highest gust of the month, 81 knots, was recorded at Clones on the 26th, setting a new record there for the month of February. Particularly strong winds were also recorded in the Dublin area on the night of the 25th/26th. The mean 10-minute wind speed of 54 knots (storm force 10)



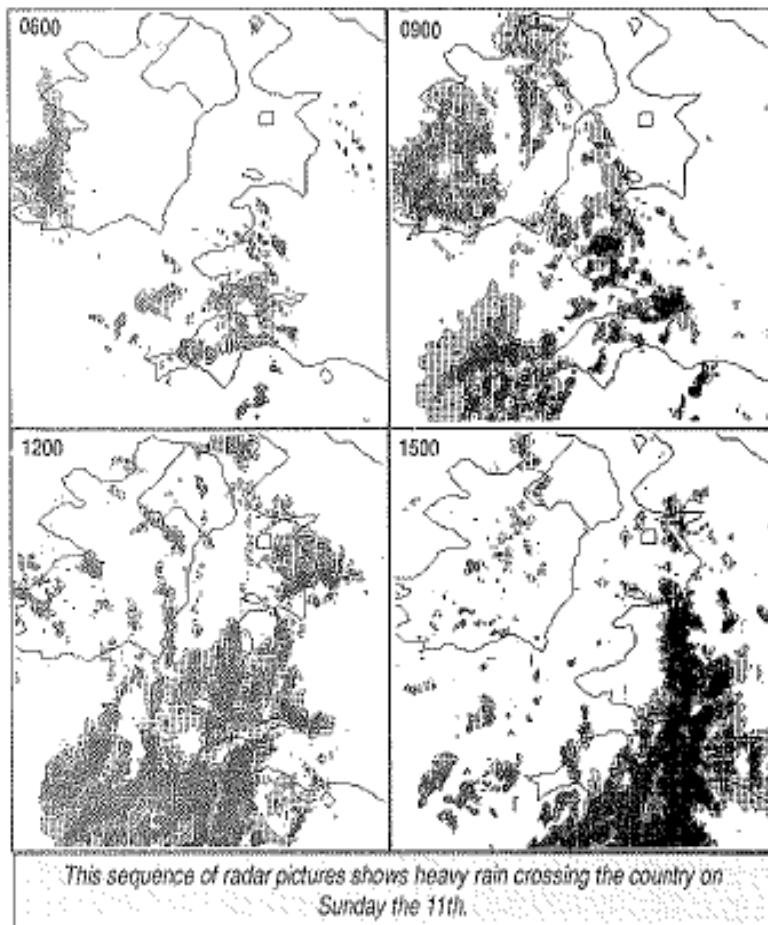
Sunshine and showers, midday on the 8th (photo: University of Dundee)

recorded that night at Casement Aerodrome, sets another new wind record for February.

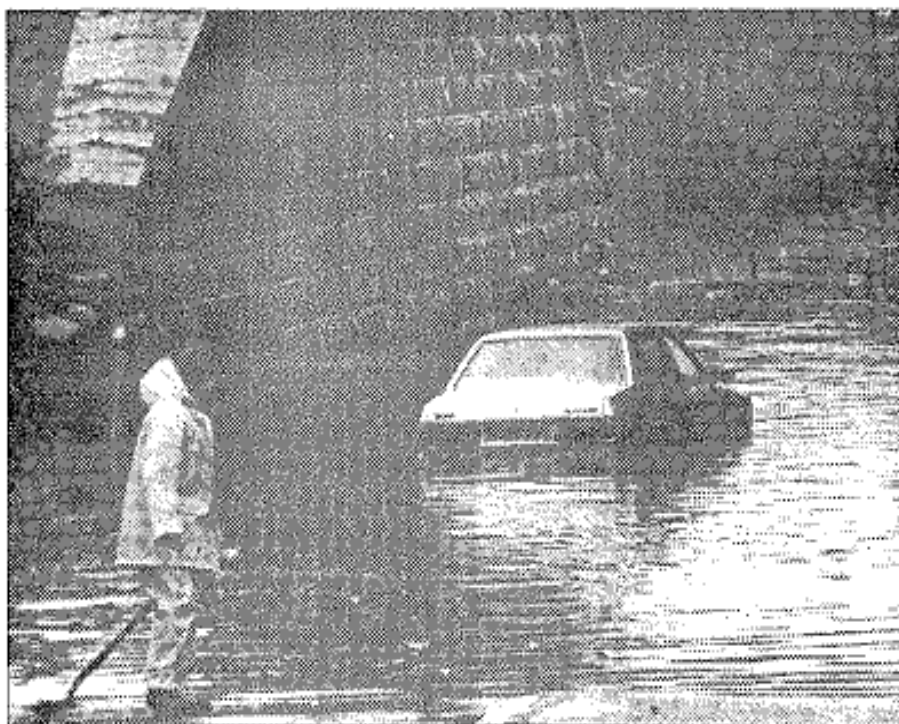
The significant point about last month's winds, however, is not so much the absolute records that were broken but rather the fact that such strong winds blew without much let-up for such a long period. The maximum gust for the month of February 1989 was higher at 86 knots, but the numbers of days with gales, gale gusts and gusts of 60 knots or more was much less. Major windstorms also occurred on the 1st and 9th of February 1988, during which many areas had 20 to 24 hours with mean speeds

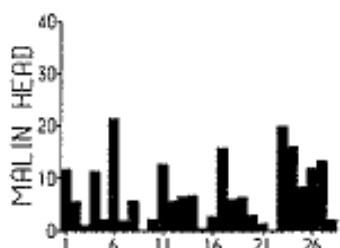
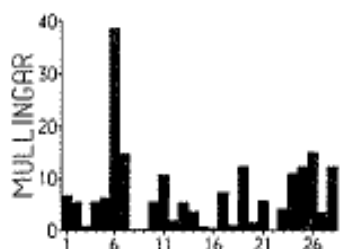
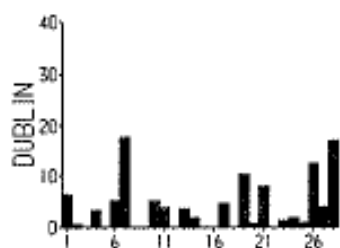
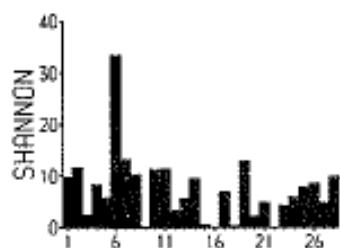
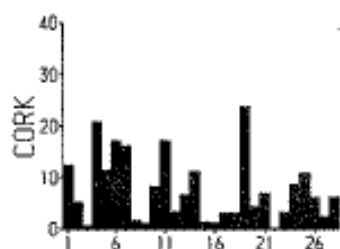
of at least gale force and Belmullet had 8 hours of storm force winds. The maximum gust was 93 knots.

Thunder was reported last month on the 2nd, 10th, 20th, 21st, 23rd and the 28th. It occurred mainly in the south and west of the country. Rosslare escaped without any snow at all during February but elsewhere there were from 1 to 13 days of snow or sleet, usually in the form of wintry showers, northern and western areas being the worst affected. Hail mainly affected the northwest, where there were between 15 and 19 days with hail. Elsewhere it ranged from 10 or 11 in the west to only 1 or 2 in the midlands, east and south. There was very little fog during the month. Cork Airport had 5 days with fog, while most other stations had no fog at all. The dates with some fog were the 7th, 14th, 16th, 23rd, 24th and 28th. At least the weather cleared on the evening of Friday the 9th to allow many of us a clear view of the lunar eclipse!



*A flood scene from the outskirts of Limerick on the 6th, typical of many parts of the country that day.
(photo: Press22)*





Rainfall amounts in millimetres

Wettest on record in many places

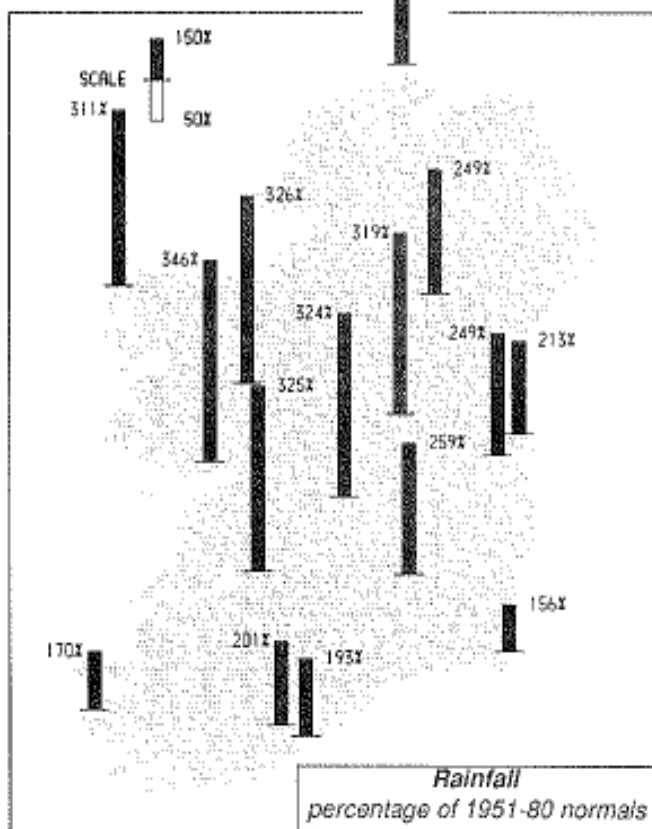
It was a very wet month, both in terms of the amounts of rain that fell and the duration of the rain. A number of stations in the midlands and west received more than three times their normal February rainfall.

Only along southern and southwestern coasts was there less than twice normal rainfall. It was the wettest February on record in much of the midlands, north and west. Elsewhere it was the wettest between 8 and 13 years. Claremorris was the wettest spot, measuring a total of 251 mm of rain. A number of other stations also exceeded 200mm. Over to the east however, Rosslare's total for the

month was only 107 mm, although that still amounts to 156% of the February normal there. A dry day was a rare event in most parts. Cork Airport had some rain every day of the month. Most stations only had from 1 to 5 dry days, although again the east did slightly better, with 7 dry days at Rosslare and 9 at Dublin Airport.

The 9th and the 22nd were the driest days; the wetter periods were the 1st, the 4th-7th, 10th-14th, 17th-19th and the 23rd to the 28th. Many stations recorded their heaviest daily falls on the 6th and 7th. Mullingar's total of 38.7 mm that day was the highest for the month and set a new record there for the month of February. Similar February

records were also set that day in Birr, Clones, Galway and Shannon.



Rainfall percentage of 1951-80 normals