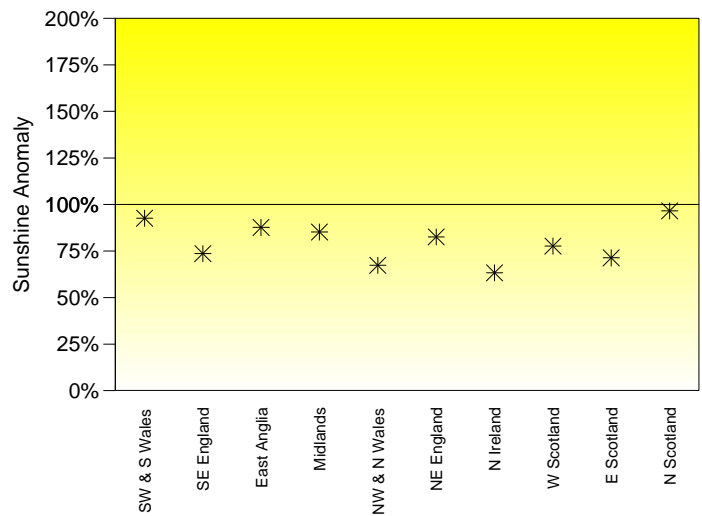
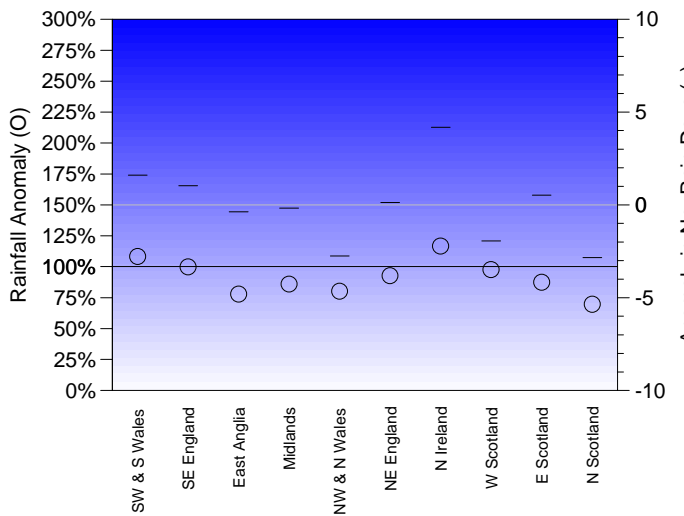


Extremes for January 2013	
Hottest:	15.0°C Doncaster Airport, South Yorkshire, 29th
Coldest:	-13.9°C Pulham St. Mary, Norfolk, 16th
Most Rain:	54.0mm Cassley, Sutherland, 30th
Most Sun:	7.7hrs Blaenau Ffestiniog, Gwynedd, 9th
Windiest:	83mph Fair Isle, Shetland, 30th
Warmest:	8.6°C Scilly St. Mary's SAWS, Cornwall
Coolest:	1.7°C Copley, Durham
Wettest:	267.8mm Cluanie Inn No 3, Ross & Cromarty
Driest:	23.2mm Cranwell, Lincolnshire
Sunniest:	65.7hrs Calthorpe, Norfolk
Dullest:	10.0hrs Bala, Clwyd



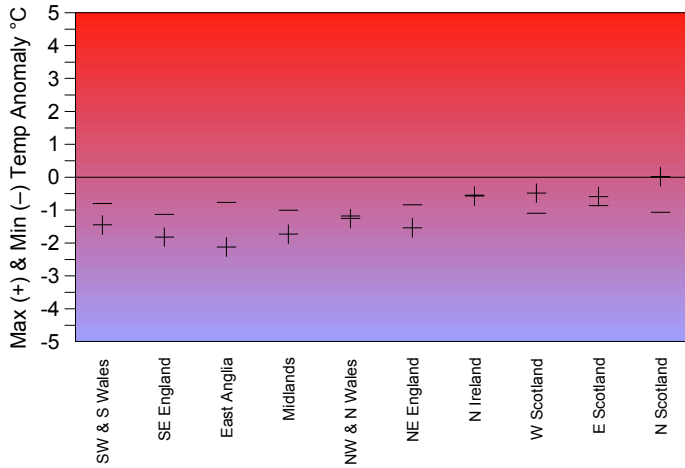
January is statistically both the coldest and the windiest month. Despite being well past the winter solstice, mornings are at their darkest and the days remain short, lengthening perceptibly only after the first fortnight.

After the December deluges, 2013 opened with a bright, chilly day for most, but a warm front brought cloud and light rain eastward by the 2nd. There followed a week of very mild weather with maxima widely exceeding 10°C (50°F) but plenty of cloud - especially on west-facing coasts and hills. Light winds meant fog often persisted during mornings, but where and when the sun broke through, it felt positively spring like. There is a saying "a February spring isn't worth a pin" - and the same is true of a January one! Pressure began to build over Scandinavia from the 10th and temperatures across the UK plummeted. Snow flurries affected some southern, central and eastern areas on the 12th and 13th, before a more organised band of sleet and snow slid south-east on the 14th. Three days of mainly dry, cold weather with patchy freezing fog were followed by a classic snow situation on the 18th with a combination of a Scandinavian high and fronts pushing in from the south-west. There were heavy falls up to 25cm over Wales, western and central England. 10,000 households were left without power and many roads blocked. Birmingham, Cardiff, Bristol and Southampton airports were closed for part of the day, and at Heathrow, almost one third of 1300 flights were cancelled. There followed a blisteringly cold night with temperatures in East Anglia as low as -10°C (14°F). The snow, while disruptive, was helpful in unexpected ways; in the west Midlands, police arrested two suspected metal thieves after following them home by tracking their pet dog's paw-prints in the snow! The fronts weakened overnight and the 19th brought a temporary respite - before more snow advanced northwards across eastern England on the 20th and 21st. One in six schools across England was shut due to concerns about icy playgrounds. Minimum temperatures over snow cover in the East were again minus double digit cold. On the 25th, the North Atlantic fronts made a come-back and milder air won through - but not before there had been another dumping of snow across Scotland and northern England. As the month drew to a close it became windy and unsettled but very mild at times. On the 29th - just a week after the deepest of the freeze, the mercury reached 14°C (57°F) at several places across Central England. The rapid thaw and heavy rain caused flooding in some areas - notably Wales and Lincolnshire. Thunderstorms and hail affected Wales and north western England during the early hours of the 31st.

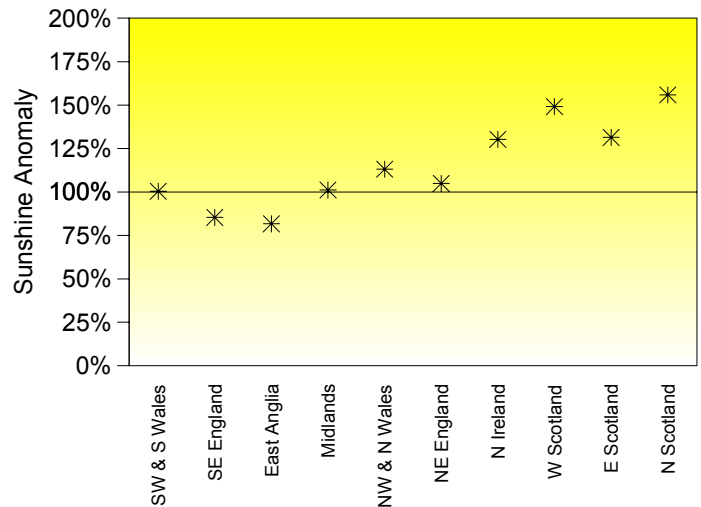
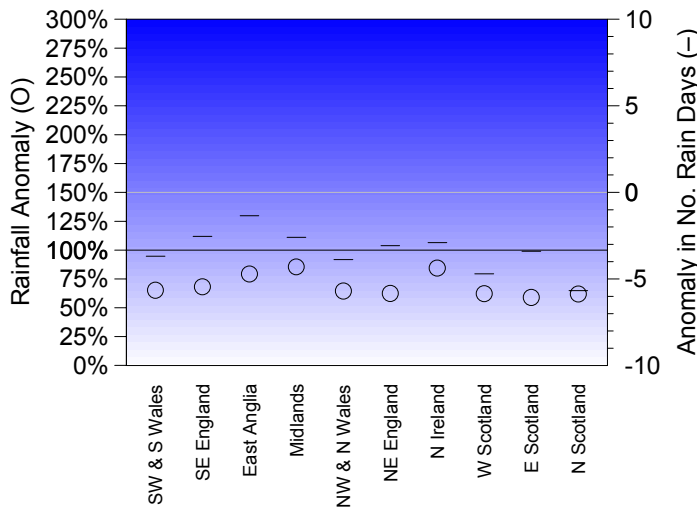
Despite the notable cold snap, a mild start and end meant that mean temperatures across the UK were close to normal. Scotland was slightly milder than average and England and Wales slightly cooler. With the exception of Northern Ireland, most places were a little drier than average, but it was a gloomy month for all, especially the north-west.

Blistering heat affected Australia in the first three weeks of 2013. By the 7th, bushfires were ablaze in five of Australia's six states, with 90 fires in the most populous state - New South Wales. In Western Australia, Eucla recorded 48.2°C (119°F) on the 3rd - its hottest day since records began in 1957. By the 4th, northerly winds directed very hot air into southeast Australia - and Hobart, at 41.8°C (107°F) experienced its all time high for any month in 130 years of records. The area of intense heat moved northeast on the 5th, with Marree in South Australia recording 48.4°C (119°F) and Hay in New South Wales recording 47.7°C (118°F) - breaking its all time temperature record. On the 12th, Moomba, South Australia, peaked at 49.6 °C (122°F). While Australia sizzled, the India capital New Delhi saw a maximum temperature of 9.8°C (49.6°F) on the 2nd - the lowest since records began in 1969! Fog forced cancellation of flights and trains. On the 30th, tropical Cyclone Felling became the strongest cyclone of the South Indian 2012-2013 storm season. Highest sustained winds rose to an estimated 132mph - equivalent to a Category 4 hurricane.

Tornadoes ripped through four American states (Mississippi, Georgia, Indiana and Tennessee) on the 9th and 10th killing at least two people. Behind the severe weather, an Arctic front brought heavy snowfall to the Central Plains. Further north and east, blizzards swept through eastern Newfoundland on the 11th. Wind speeds topped 75 mph and 50cm of snow accumulated in some parts leading to cancelled flights, closed schools, docked ferries and the shutdown of public services. On the 19th, much of Russia was blanketed in a deep layer of snow. This season's snow events have been dubbed a "snowpocalypse" and caused unrelenting travel chaos. 28cm of snow in Moscow gave picture postcard scenery but left a 13km long traffic jam along one of the capital's main highways. Rather less commonplace - but no less dramatic was the rare snowfall that occurred in parts of Lebanon on the 10th with accumulations of up to 150cm in the north of the country.



Extremes for February 2013	
Hottest:	13.4°C Kinlochewe, Highland, 17th
Coldest:	-9.7°C Altnaharra SAWS, Highland, 22nd
Most Rain:	50.0mm Capel Curig SAWS, Gwynedd, 13th
Most Sun:	10.4hrs Monifieth, Tayside, 26th
Windiest:	78mph Culdrose, Cornwall, 4th
Warmest:	7.5°C Scilly St. Mary's SAWS, Cornwall
Coolest:	1.2°C Dalwhinnie No 2, Tayside
Wettest:	142.8mm Capel Curig SAWS, Gwynedd
Driest:	13.0mm Cambridge University, Cambridgeshire
Sunniest:	109.3hrs Jersey St Helier, Channel Islands
Dullest:	41.1hrs Swaffham, Norfolk



Although still a winter month, February is very different in character to January. The period of midwinter storminess in Lamb's calendar of singularities is past, and February often ushers in drier weather; statistically it stands as the driest month of the year. Cold spells are common, since the seas around our shores are continuing to cool, but if you happen to be awake just before dawn, songbirds tell that spring is on its way.

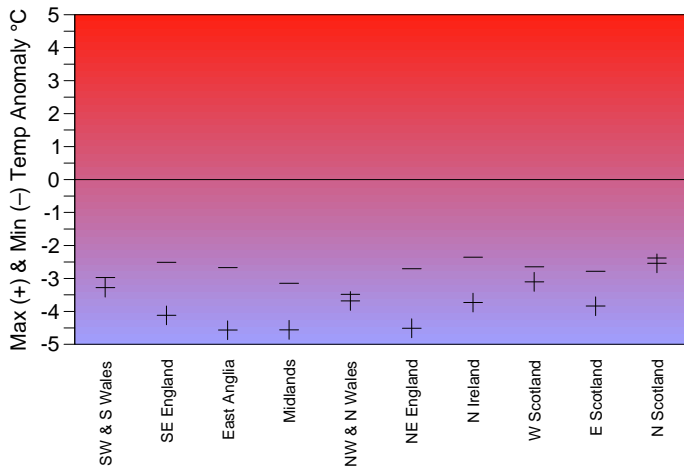
The month began unsettled, and after a chilly, bright day on the 2nd, a deep depression moving south-east across Shetland brought severe gales to the north on the 4th with squally showers of snow and sleet. A very heavy swell and giant waves off western Scotland, caused disruption to ferry services. Eskdalemuir notched up 14cm of lying snow by 1000 GMT on the 5th. Keen northerly winds straight from the Arctic affected all areas on the 6th with further wintry showers and a weak ridge then brought a sharp overnight frost. A few days of rather cloudy, cold weather were followed by rain on the 10th which turned to wet snow across a wide area of the Midlands, East Anglia and eastern England, as fronts encountered the dominant cold air. High Wycombe (Bucks) reported 12cm of lying snow by the early hours of the 11th, but the snow quickly died out during the day. A few days of dull, raw weather were followed by milder conditions on the 14th and 15th as Atlantic fronts made a breakthrough. Winds turned south-easterly on the 17th wafting very mild air in from the continent and bringing a first glimpse of spring. Kinlochewe, (Ross and Cromarty) recorded 13.9°C (57°F). The warm spell was short lived however and by the 21st it was decidedly cold once more with leaden skies and snow flurries in the east. Aviemore (Inverness-shire) recorded a frigid minimum of -10.0°C (14°F) and the air was remarkably dry, accentuating the chill. At noon on the 22nd, the temperature in central London was 2°C (36°F) but the dew point -6°C (21°F)! Snow flurries turned into more substantial showers in parts of the east on the 23rd, giving a slight covering in places, but sheltered parts of the west and north-west saw abundant sunshine. Temperatures rose gradually through the last four days of the month but although high pressure remained dominant, there was little cheer and "anticyclonic gloom" (the phenomenon where low cloud becomes trapped in the lower levels of the atmosphere) widespread.

For the month as a whole, temperatures were generally below average. It was also a dry month everywhere. In terms of sunshine, a rather dull month for south-east England contrasted with a sunny northern and western Scotland, reflecting the preponderance of easterly winds.

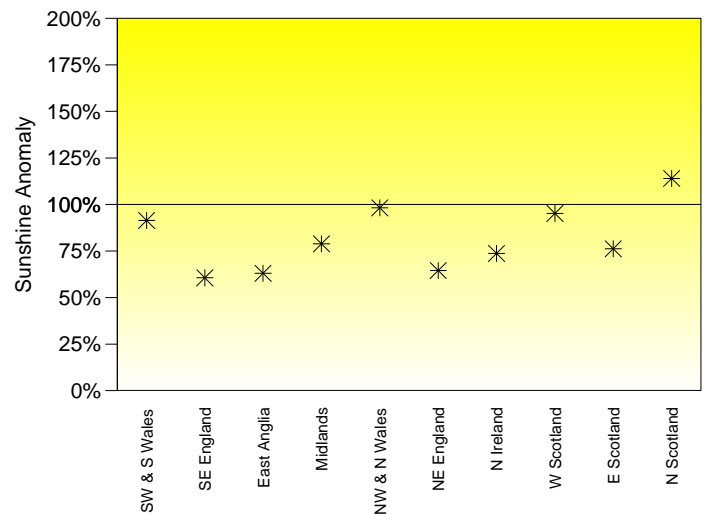
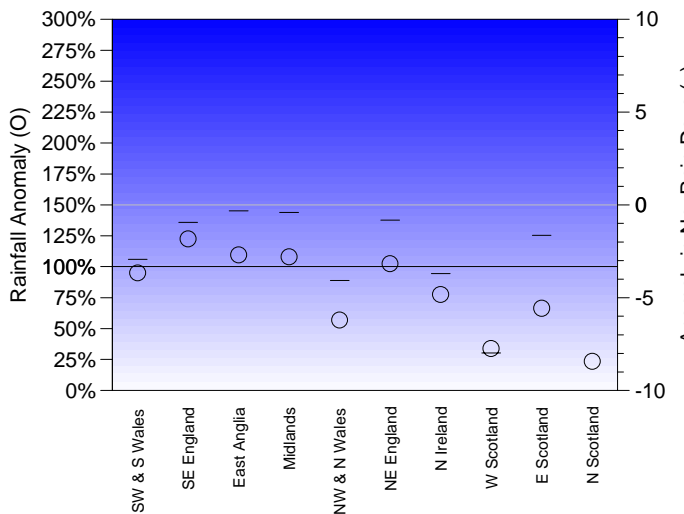
Europe also experienced some wintry weather during February, and on the 11th snowstorms swept over northern and central Italy. In Liguria, blizzards damaged national landmarks, including the medieval walled town of Urbino and the ancient Coliseum in Rome. Later in the month, southern Europe was hit by flash flooding. On the 22nd, several hours of torrential rain and thunderstorms swamped the Greek capital, Athens, causing major disruption to the road, train and tram network. The deluge swept away cars and left occupants stranded waist-deep. Torrents of debris laden flood water also scoured the Sicilian city of Catania on the 23rd.

In North America, a gargantuan blizzard enveloped New England on the 8th and 9th. Hamden, Connecticut, recorded over 1m of snow! Other snow depths included Gorham (Maine) 90cm, Portland (Maine) 81cm (an all-time record), Milford (Connecticut) 96cm and Medford (New York) 86cm. Winds gusts peaked at 81mph over Portland and a storm surge breached sea walls and caused severe flooding along the Massachusetts coast where some 345,000 homes and businesses lost power. In New York's Suffolk County, police rescued hundreds of motorists stuck in snow on the Long Island Expressway. On the 25th an equally extreme winter storm hit the southern Mid-west. Whiteout conditions made virtually all Texas Panhandle roads impassable; and blizzard conditions in Amarillo culminated in gusts of 75mph and 43cm of lying snow. The weight of the snow buckled power lines and cut electricity to more than 100,000 homes and businesses.

Torrential rain brought devastation to northern parts of India and Pakistan on the 7th. At Saidu Sharif, 174mm fell in 48 hours in a deluge that led to mudslides, avalanches, road blockages and disruption to communication and power lines. In Japan, 5.6m of lying snow accumulated in Aomori city (along the Hakkoda mountain range) by the 25th - a new all time record. Category four Cyclone Rusty hit the coast of Western Australia on the 26th-27th depositing a colossal 500mm of rain at Pardoo.



Extremes for March 2013	
Hottest:	17.5°C Trawscoed SAWS, Dyfed, 5th
Coldest:	-12.9°C Aboyne, Grampian, 11th
Most Rain:	62.0mm Katesbridge, County Down, 22nd
Most Sun:	12.2hrs Stornoway, Western Isles, 29th
Windiest:	77mph Orlock Head, County Down, 22nd
Warmest:	6.9°C Scilly St. Mary's SAWS, Cornwall
Coolest:	0.5°C Shap SAWS, Cumbria
Wettest:	156.6mm Murlough, County Down
Driest:	14.9mm Fair Isle, Shetland
Sunniest:	167.5hrs Radstock, Somerset
Dullest:	24.7hrs Yeovilton, Somerset



March marks the start of the meteorological spring, but is a notoriously capricious month - and snow falls as frequently as in February. As JRR Tolkien commented in 1944, "Still very cold. Snow last night. But there is no mistaking the growing power of a March sun. Clumps of yellow crocuses are out and the white-mauve ones beginning; green buds are appearing..." Last year unusual warmth brought on the green buds, but this year, frost and snow kept them very firmly dormant.

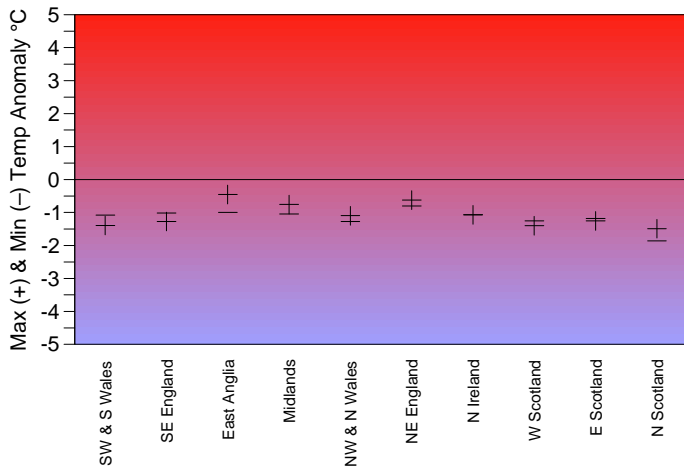
The month began quietly beneath high pressure. Winds turned south-easterly on the 4th and 5th and it briefly became warm. Temperatures rose above 16°C (61°F) for the first time in 2013 and Gravesend (Kent) achieved 17.1°C (63°F) on the 5th. This glimpse of spring was short-lived and the only one of the month. The weather subsequently turned unsettled before very cold easterlies chilled northern areas on the 9th and reached most other parts the following day. By the 11th, temperatures were struggling to rise above freezing. Conditions were especially harsh in the Channel Islands where blizzards disrupted transport and 200 houses in Jersey were left without power after flying debris, falling trees and ice on cables brought down overhead lines. There were also fears for the Island's famous potato crop after the snowfalls and followed an unusually damp winter. On the mainland, Sussex and Kent were worst affected and hundreds of motorists were left stranded by drifts and forced to overnight in their cars. By the 13th, the bitter continental influence had relaxed as winds turned northerly, but there were still snow showers and hard night frosts. An Atlantic depression brought slightly milder if disturbed weather 15th - 19th but heavy showers still fell as snow over the higher ground. By the 20th very cold easterlies had returned with a vengeance as a huge belt of high pressure (in excess of 1050hpa), stretched from northern Scandinavia to Greenland. Atlantic fronts also pushed in from the south-west, and at their interface heavy and persistent rain caused flooding across Devon and Cornwall on the 21st and 22nd. A classic snow situation followed as the fronts stagnated - and North Wales, northern England, the east of Northern Ireland and south-west Scotland bore the brunt of the wintry blast. Thousands of homes and businesses were left without power as ice felled power lines, and the Isle of Arran was cut off by the worst conditions in living memory. Heavy snow combined with strong winds created enormous drifts on high ground, burying livestock to the anguish of hill farmers. From the 24th it became drier, but very cold east-north-easterly winds prevailed until month end with further snow flurries in the east.

Overall, it was the coldest March since 1962, and the joint second coldest since records began in 1910. Unusually, it was a colder month than the December, January or February that preceded it - the first time this has happened since 1975. Easter was the coldest on record. The north and west were relatively dry but rainfall totals were near or above average elsewhere. It was a very dull month in eastern and south-eastern areas, reflecting the dominance of easterly winds.

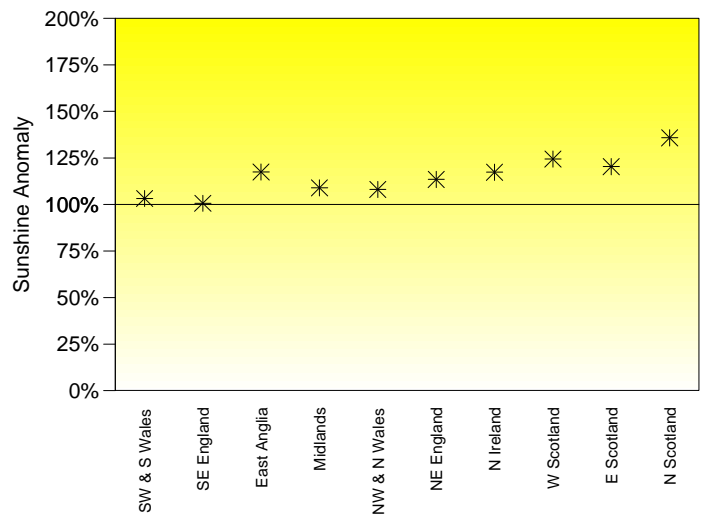
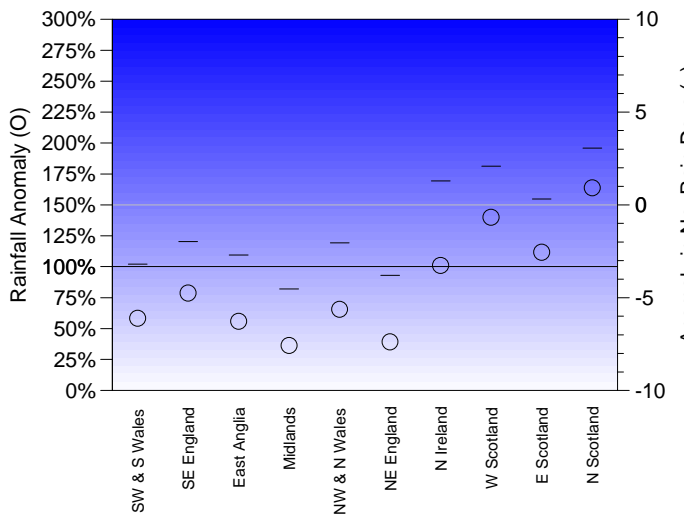
Severe late season snowstorms also affected Europe during March. Blizzards struck northern France 11th-12th dumping 25-30cm of snow and packing gusts of over 60mph. More than 100,000 homes were left without power. In Belgium, drifting caused massive traffic disruption with buses and trains cancelled in Brussels and other major towns - and international services on the Eurostar suspended. Colossal snowfalls affected western Russia and the Ukraine 24th-25th. The total snow depth at Moscow airport reached 76cm by the 26th - the highest for March for more than 20 years. In the Ukraine, amidst a state of emergency, the army was deployed and tanks used to drag buses and other vehicles out of massive snowdrifts after 50cm of fresh snow blanketed the capital, Kiev. The blizzard conditions led to power cuts in 600 towns, caused traffic chaos and prompted many residents to take to skis. Heavy snow also blanketed regions of Romania.

A severe blizzard swept over northern Japan on 1st and 2nd. Worst affected was the island of Hokkaido where more than 30cm of fresh snow fell at the Wakkanai Airport. A hill town in northern Honshu, Sukayu, recorded a momentous snow depth of 550cm (5.5m!), with houses literally buried beneath the snow. A high-speed Japanese bullet train was derailed in the storm in Akita prefecture.

Meanwhile in the USA, several southern states were hit by powerful winds and massive hail on 18th -19th. Much damage occurred in the Jackson area, where hail as big as baseballs was observed. One tornado was confirmed in Georgia and two more in Alabama. Easter Sunday (31st) saw severe thunderstorms accompanied by more baseball sized hail - this time across the Deep South and Texas. In South America, landslides triggered by heavy rains killed at least 24 people in the mountains above Rio de Janeiro, Brazil on the 15th. Worst hit was Quitandinha, a suburb of Petropolis, where dozens of homes were demolished by landslides. The trigger was 420mm of rain which fell on the mountainous region in just 24 hours - double the rainfall average for the month.



Extremes for April 2013	
Hottest:	23.3°C Leigh-on-Sea 2, Essex, 25th
Coldest:	-9.9°C Aviemore, Highland, 2nd
Most Rain:	63.0mm Cluanie Inn No 3, Ross & Cromarty, 14th
Most Sun:	14.2hrs Morecambe, Lancashire, 30th
Windiest:	81mph Capel Curig SAWS, Gwynedd, 17th
Warmest:	9.5°C St James Park, Greater London
Coolest:	3.7°C Loch Glascarnoch, Highland
Wettest:	331.8mm Cluanie Inn No 3, Ross & Cromarty
Driest:	1.0mm Scarborough, North Yorkshire
Sunniest:	271.3hrs Radstock, Somerset
Dullest:	99.8hrs Eskdalemuir, Dumfries and Galloway



April is the longed-for time when the garden bursts into life, but the advance of spring frequently suffers many set-backs. Cold weather - and even snow - during April is not as uncommon as might be expected. By contrast, some recent April's, such as those of 2003, 2007 and 2011, have boasted temperatures that would have been very respectable even in the height of summer.

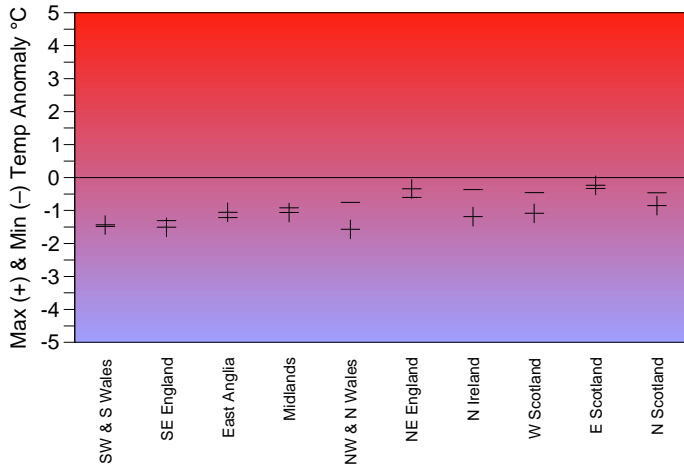
The month started cold (Braemar, Aberdeenshire recorded a minimum of -11.2°C (12°F) early on the 2nd), with chilly north-easterly winds throughout the first week. There was plenty of dry and bright weather but with frosts at night and frequent snow showers in the east. Some longer spells of snow affected the south-east on the 4th - which resembled a typical mid-winter day as temperatures struggled to just 2 or 3°C (36-38°F). From the 8th, the situation began to change. Fronts slowly pushed in from the south-west and these brought milder conditions and rain or showers to most of England, Wales and Northern Ireland over the next four days. Much of Scotland stayed dry and cold with the odd wintry shower before Atlantic south-westerlies made a more decisive breakthrough from the 14th. The 15th was very windy everywhere - but the warmest day of the year so far with 21°C (70°F) recorded in a few places. It remained warm throughout the following week, but was more changeable everywhere with spells of rain interspersed with April showers. The 18th was another unusually windy day for April with many stations reporting gusts in excess of 50mph, and Aberdaron (Gwynedd) notching up 84mph. A mobile anticyclone gave a sunny interlude on the 19th/20th but there were sharp frosts at night. Early on the 21st, temperatures were -5°C (23°F) in parts of East Anglia but as high as 8°C (46°F) under cloud in Moray. A few days of warmer weather preceded an abrupt change on the 26th - as a polar air-mass invaded. Heavy showers were widely accompanied by hail and thunder - and there was snow over northern hills. The month ended with pressure building to give lengthy spells of sunshine - although it was still chilly with frosts at night.

Despite the warmer weather of the second half, overall mean temperatures for April were still below average everywhere. Most areas were sunnier than normal and it was also a relatively dry month for most of England and Wales - although across northern and western Scotland rainfall significantly exceeded the April average.

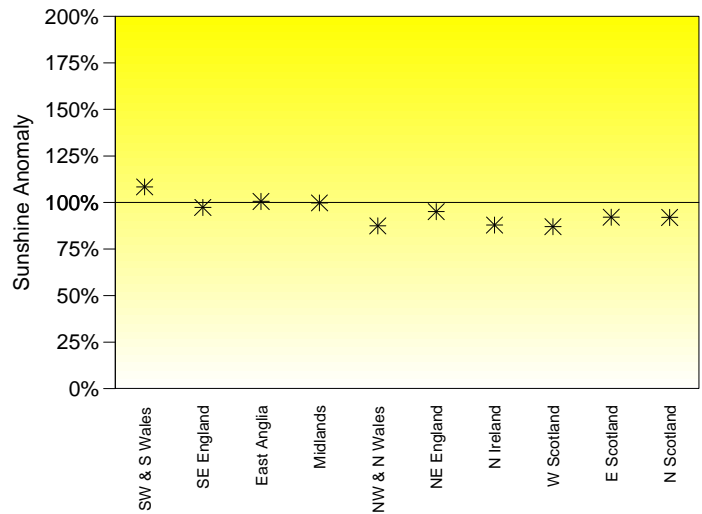
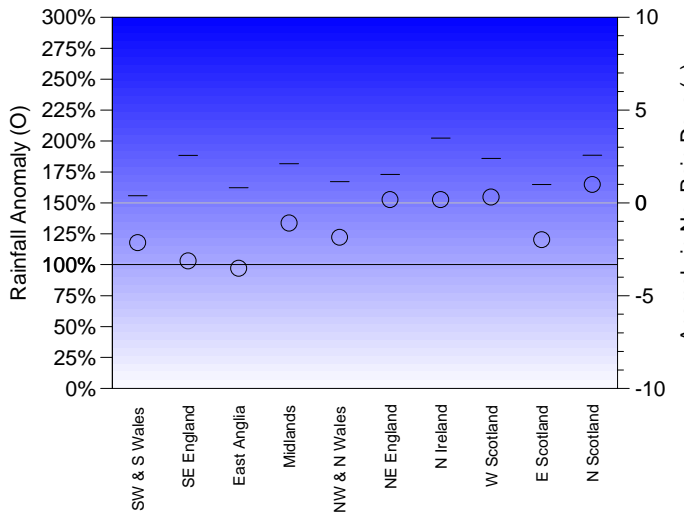
In Europe, the great chill of March continued into April. In Ireland minima of -5.6°C (22°F) at Dublin Airport and -6.6°C (20°F) at Mullingar on the 6th represented the coldest ever April nights - in series stretching back to 1942 and 1950 respectively. 30cm of snow fell over central and eastern Poland on the 1st, blocking many roads, disrupting flights and cutting electricity to more than 100,000 homes. In Russia, Moscow had its snowiest start to April on record with parts of the city lying 65cm deep. At the opposite end of Europe (and April!) Spain was struck by unseasonal weather on the 29th with late snowfalls blanketing inland areas and blocking roads. A snow depth of 18cm was reported at Navacerrada, northwest of Madrid.

Meanwhile in North America, on the 24th, the Illinois River in central Illinois rose to 9m - a new 70 year record. Roads and buildings in Peoria Heights were flooded and riverfront structures inundated. At the same time, a series of heavy April snowstorms and extreme temperature swings swept the prairies from Colorado to Minnesota. 92% of the Upper Midwest was covered by snow on the 25th - remarkable for this late in the year. In Duluth, April was actually the snowiest month ever with a total fall of 130cm. Rapid City, South Dakota received a total of 110cm of snow in April, more snow than the city typically receives during the entire cold season! Snow and cold made it all the way down into Texas. Childress, Texas, had a high of 33.5°C (92°F) on the 22nd before temperatures plunged close to 0°C (32°F) by the following morning - and were accompanied by snow!

In Argentina, 400mm of rain fell on the city of La Plata in just three hours on the 3rd. Thousands of people were evacuated from their homes and dozens were left stranded on rooftops, treetops and atop city buses. The evening storm also dumped 150mm of rainfall on the capital, Buenos Aires. More than 50 people were killed and more than 3,000 residents had to leave their homes. 80,000 homes also lost power. At least nine people died in Angola's capital, Luanda on the 8th, after torrential rain led to flooding. Four people were left missing and landslides forced the closure of some roads. Between the 26th and the 30th at least 13 people died in flash floods in Saudi Arabia. The rain was the heaviest experienced in the kingdom for more than 25 years.



Extremes for May 2013	
Hottest:	24.7°C Totterdown, Bristol, 7th
Coldest:	-4.8°C Tulloch Bridge SAWS, Highland, 2nd
Most Rain:	69.8mm Pembrey Sands, Dyfed, 14th
Most Sun:	16.2hrs Tiree, Strathclyde, 29th
Windiest:	71mph Mumbles Head, West Glamorgan, 9th
Warmest:	12.4°C St James Park, Greater London
Coolest:	7.5°C Fair Isle, Shetland
Wettest:	275.4mm Achnagart, Highland
Driest:	21.2mm Nantwich Reaseheath Hall, Cheshire
Sunniest:	311.3hrs Radstock, Somerset
Dullest:	118.8hrs Eskdalemuir, Dumfries and Galloway



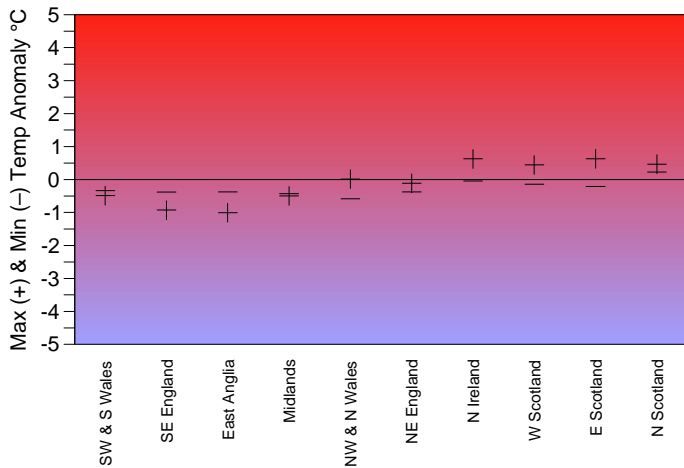
May is the month when spring gathers pace and the countryside continues to bloom, but like April, it can often surprise with a wintery twist. Night frosts remain a risk - as many a gardener will lament. Also characteristic of May is the tendency for anticyclones to build and to persist in the north-east Atlantic - and this often brings sunshine and dry, settled weather to Northern Ireland and north-west Scotland.

This year, the month began settled in the south - and the early spring Bank Holiday saw a surge of warmth with temperatures exceeding 21°C (70°F) on the 6th. The warm weather extended northward on the 7th as south-easterly winds developed. By the 8th, pressure was falling everywhere and a period of very disturbed weather commenced. There were showers or longer spells of sometimes heavy rain over the next four days and temperatures were depressed. On the 13th an unusually deep depression to the north of Scotland brought conditions more typical of March with strong winds and squally showers - which were wintry over northern hills. A further depression running north-east across England and Wales on the 14th/15th gave more rain and also, remarkably (just 5 weeks before the summer solstice) widespread snow over high ground in south-west England, Wales and northern England. Snow lay on the summit of Cross Fell, Cumbria for several days with drifting around the summit shelter as winds remained cool and from the northerly sector. Arctic air extended to all areas again on the 22nd and 23rd with sharp showers of rain and hail as well as thunder and further snow over northern hills. The 24th was a very cold and wet day for England and Wales as a depression over the North Sea extended its influence south-westwards. Maxima were widely below 10°C (50°F) over England, with a mere 6°C (43°F) reported from High Wycombe, Bucks. The Bank Holiday weekend saw a little improvement with sunshine more abundant under a ridge of high pressure, but further wind and rain reached western districts on the 27th heralding three days of damp and gloomy weather for much of England and Wales. Once again, western Scotland and Northern Ireland fared rather better, before brighter, warmer weather and sunshine extended to all areas on the 31st.

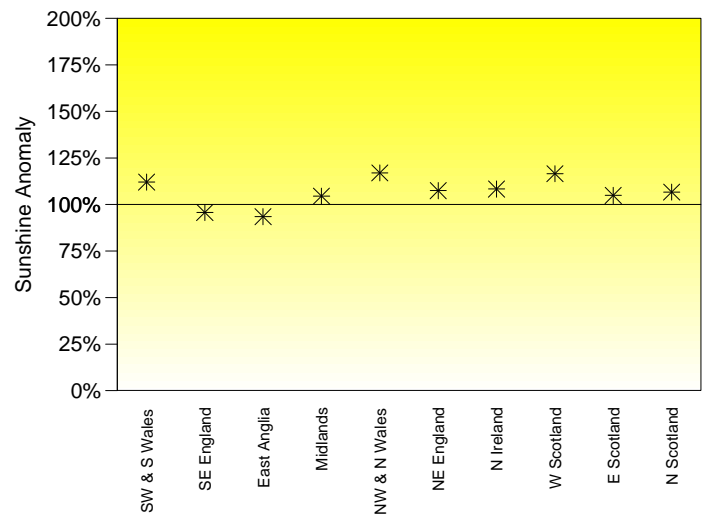
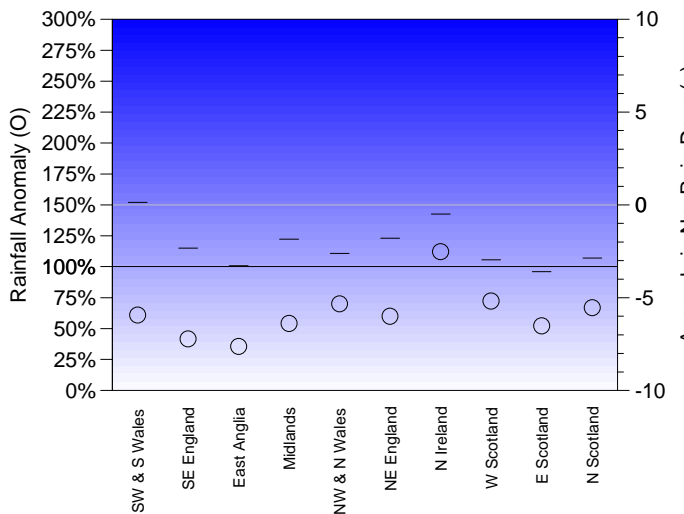
Another month of below average temperatures rounded off what has been the coldest spring across the UK for over fifty years - although this was mainly a function of the exceptionally cool March. Rainfall totals for May were close to their long-term averages over south-east England and East Anglia, but it was a wet month elsewhere else. Despite this, interestingly, sunshine amounts were close to normal for most places reflecting the general mobility of the weather regime.

Cold, unsettled weather also affected many parts of Europe during May. In Norway, hundreds of people were evacuated from their homes on the 22nd after heavy rain caused flooding in the south-east of the country. In Nesbyen, a mudslide filled basements with water, and in Kvam, a river burst its banks sending water surging through the centre of the village. In Canada, a record May snowstorm 18th/19th buried parts of Newfoundland under 60cm of snow. Gander logged a depth of 69cm. Meanwhile in the USA, schoolchildren in Minnesota and Wisconsin got a rare May snow day off school on the 2nd as 40cm of sticky snow blocked highways and cut power to tens of thousands of homes. The 28cm recorded at Forest City and Britt, Iowa, was the state's deepest snow ever recorded in May. Intense storm activity in the mid-western USA led to flooding and several fatalities just after mid month. San Antonio, Texas, received 250mm of rain on the 18th - making it the second wettest 24 hours for the city on record. The following day, tornadoes and baseball-sized hail brought destruction to a mobile home park in Shawnee, a suburb of Oklahoma City. On the 20th, a devastating tornado hit Moore, just south of Oklahoma City, flattening neighbourhoods and causing widespread fires. Homes and buildings were reduced to rubble, cars were strewn across roadways and entire blocks were flattened. 24 people died and at least 237 were injured. The tornado was an EF5 - the highest rating with winds exceeding 200mph. Damage assessment teams confirmed the huge tornado cut a path 17 miles long by 1.3 miles wide. Incredibly, another EF5 tornado struck Oklahoma on the 31st. It was responsible for several more fatalities - including five people sucked out of their cars. In Alaska's interior, a river Yukon ice jam caused major flooding, washed out roads and submerged homes and other buildings. The town of Galena was mostly underwater on the 21st - with an estimated 90% of the community's roads flooded and impassable.

In Chile, east of Santiago, 100cm of snow fell during the last week, while simultaneously flooding hit coastal and valley cities of central Chile. The latter was caused by a two-day rainstorm, during which 150mm of rain fell. Coastal roads were also inundated by a heavy storm surge. On the 29th, hurricane Barbara hit Mexico's southern Pacific coast, flooding roads, toppling trees and leading to at least 2 fatalities. Western Uganda experienced its worst flooding since 1976 on the 7th. Over 130km of main roads in Kibuku district were destroyed by torrential rains and 57 bridges washed away. Movement across the district became increasingly difficult as roads became flooded and hundreds of motorists (and cyclists!) were left stranded. A tropical storm packing winds of 70 mph and torrential rain lashed coastal areas of Bangladesh on the 16th. In the worst hit Patuakhali district, 12 people were killed, thousands of huts destroyed and up to a million people forced to flee.



Extremes for June 2013	
Hottest:	27.7°C Leigh-on-Sea 2, Essex, 30th
Coldest:	-1.1°C Tulloch Bridge SAWS, Highland, 1st
Most Rain:	38.4mm Ballypatrick Forest SAWS, County Antrim, 15th
Most Sun:	17.0hrs Tiree, Strathclyde, 6th
Windiest:	68mph Capel Curig SAWS, Gwynedd, 23rd
Warmest:	15.8°C St James Park, Greater London
Coolest:	10.2°C Fair Isle, Shetland
Wettest:	134.9mm Capel Curig SAWS, Gwynedd
Driest:	11.2mm Faversham, Kent
Sunniest:	277.4hrs Monifieth, Tayside
Dullest:	100.4hrs Kirkwall, Orkney



June brings the promise of long, light evenings as the solstice approaches, and hopes of barbecues and cricket on the green. It often disappoints however - and wet weather is commonplace especially during the final fortnight as Atlantic westerlies reassert. Rain frequently interrupts the early rounds at Wimbledon and a mud bath at Glastonbury has become a tradition of recent years.

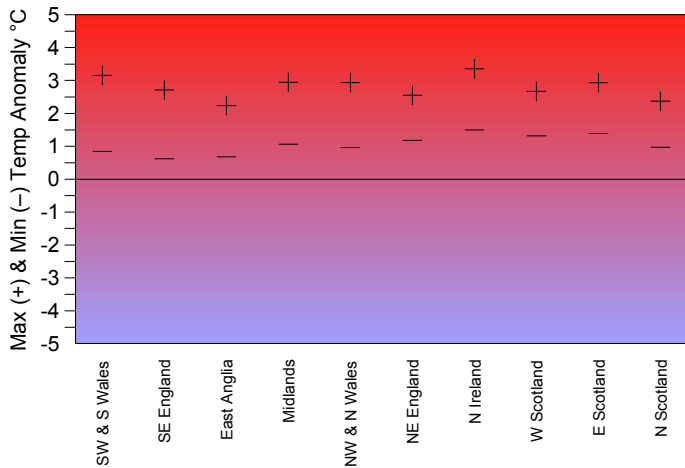
Following the grey weather of late May, a rise in pressure brought an improvement and June started settled as an anticyclone extended north-east. Many places basked in sunshine and warmth although eastern coasts were plagued by low cloud which often extended westwards overnight and depressed temperatures. Thundery downpours in west Cornwall on the night of 7th/8th led to some local flash flooding before more generally unsettled conditions spread from the south-west around the 11th. Most places saw rain at times with blustery winds, especially on the 13th when thunderstorms with large hail and squalls affected eastern and north-east England. The 15th was also a disturbed day with heavy showers across England and Wales. From the 17th-20th, the UK was on the periphery of some exceptionally warm and thundery weather centred over the Continent. Most places were humid with maxima widely exceeding 24°C (75°F) on the 19th - and thunder in the south and east on the 20th. The midsummer solstice on the 21st saw fresher conditions extend from the west - only to be followed by a deep depression settling over Scotland the following day. This gave unusually strong winds on the 22nd and 23rd, heavy showers and a generally autumnal feel. Pressure subsequently rose, leading to a quieter final week - although western coasts remained damp, drizzly and misty under warm sector conditions. Brighter, milder weather was often to be found inland - and the month ended with a taste of summer as temperatures climbed to 27.2°C (81°F) at Heathrow (Greater London).

Mean temperatures across the UK were just a little below the 1981-2010 average, but that still made it rather warmer than either of the previous two Junes. Away from Northern Ireland, it was a generally dry month with the south-east and East Anglia receiving only one third of their normal rainfall. Sunshine was a little above average for much of the UK.

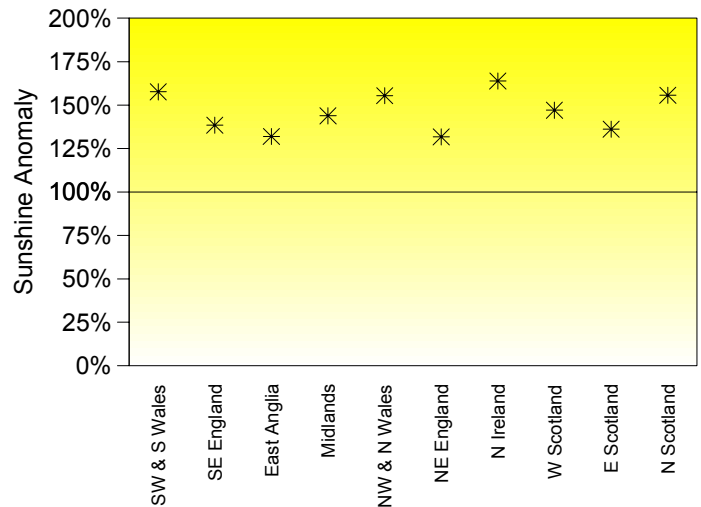
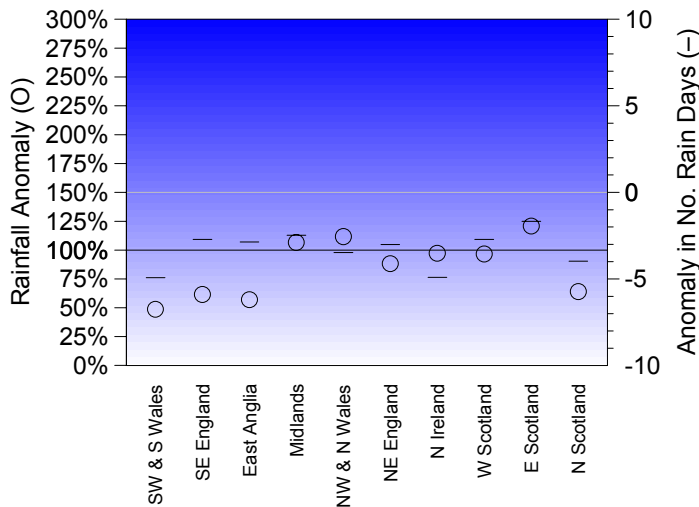
Central Europe was hit first by devastating floods and then by intense heat during June. Tens of thousands of people were evacuated due to flooding in Germany and the Czech Republic between the 3rd and 5th. Near Deggendorf, two levees broke along the Danube and Isar rivers and their raging waters engulfed nearby homes. In the eastern German city of Halle, 30,000 residents were inundated as the Saale River reached its highest level in 400 years. More than 19,000 people were evacuated as torrential rainfall caused rivers to swell and burst their banks in the Czech Republic. A blistering early summer heatwave then sent temperatures soaring 17th-19th. Mulhouse in France, and Hohenems, Austria, reached 36°C (97°F) on the 17th and Sion, Switzerland, 36°C (97°F) the following day. On the 19th, visitors climbing Paris' Eiffel Tower had a spectacular but terrifying experience when a violent thunderstorm broke overhead. For a wide area surrounding the Alps, the 19th was the third successive day where temperatures topped 30°C (86°F). Frankfurt in Germany and Salzburg (Austria), recorded over 35°C (95°F) - and Ajaccio in Corsica 38.5°C (101°F). A supercell thunderstorm on the 20th closed Geneva Airport before moving northeast along the Jura ridge and hitting Bienne - where violent winds injured 39 people.

Severe thunderstorms across the central and eastern United States spawned two derecho windstorms 12th-13th. The initial derecho formed on the afternoon of the 12th and tracked across a large section of the Midwestern States, the central Appalachians, and the Mid-Atlantic states. A second, more widespread and intense event occurred on the 13th across the Southeastern States, and caused major wind damage across North Carolina, Virginia, and Maryland. There were at least three deaths and extensive property damage from Iowa to the Carolinas as 24 tornadoes touched down in Iowa, Illinois, Ohio, Georgia, and Maryland. Excessive heat scorched the western states later in June. Las Vegas equalled its all time temperature record of 49.4°C (117°F) and Global 'hot pole' Death Valley reached 54 °C (129 °F) on the 30th. Even in Alaska, remarkable heat occurred with Fairbanks reaching 31°C (88°F) on the 16th - just 1°F shy of its all time record. Talkeetna, Alaska, climbed to a scorching 36°C (96°F) on the 17th shattering the previous highest ever reading of 33°C (91°F) set in 1953.

Early monsoon rains in India were the heaviest in 80 years and swollen rivers swept away entire villages. From the 15th to 24th, over 250mm rain caused flooding and landslides in the northern Indian state of Uttarakhand. Some 75,000 pilgrims on their way to shrines in the region were left stranded, more than 800 people were killed, and 97,000 evacuated. A severe winter storm powered by a cold Antarctic outbreak lashed New Zealand on 19th-20th. Travel was disrupted on the south island as snow blocked passes and gusts of >80mph halted airport operations at Wellington. On the 27th, Australia's southeast coast was buffeted causing closure of the Blue Mountains National Park and soaking Sydney's international airport with 127mm of rain.



Extremes for July 2013	
Hottest:	33.5°C Northolt, Greater London, 22nd
Coldest:	3.2°C Altnaharra SAWS, Highland, 21st
Most Rain:	83.8mm Carlisle SAWS, Cumbria, 28th
Most Sun:	16.7hrs Monifieth, Tayside, 19th
Windiest:	53mph Sule Skerry MAWS, Orkney, 6th
Warmest:	21.1°C Heathrow, Greater London
Coolest:	12.2°C Fair Isle, Shetland
Wettest:	170.4mm Carlisle SAWS, Cumbria
Driest:	6.0mm Norwich Airport, Norfolk
Sunniest:	344.1hrs Radstock, Somerset
Dullest:	92.8hrs Lerwick, Shetland



July marks high summer and is usually the warmest month of the year. It also ties with August as the least windy, but this does not mean that fine weather can be relied upon. In fact, there has been a recent run of cool, cloudy and damp Julys. This year however bucked the trend and was remarkably warm....

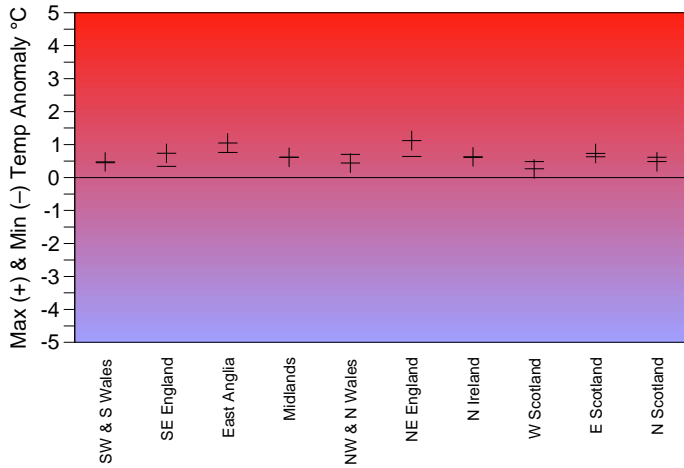
Weakening fronts gave a little rain during the first four days, but by the 5th high pressure was dominant and remained so until the 23rd, giving an exceptionally long spell of warm and dry weather. Cloud occasionally affected northern Scotland and the east coast of England, but otherwise there were few interruptions to the abundant sunshine. 28°C (82°F) was exceeded somewhere in England every day from the 6th to the 23rd and 30°C (86°F) was exceeded for seven successive days from the 13th to the 19th. Interestingly, the warmth was not confined to England; Porthmadog, Gwynedd, achieved 31.4°C (88°F) on the 19th and Glenlee, Kirkcubrightshire, notched up 30.5°C (87°F) on the same day, with 30.1°C (86°F) at Castledearg, County Tyrone. More cloud in some areas made it somewhat cooler on the 20th and 21st, but the heat soon returned, culminating in 33.5°C (92°F) at both Northolt and Heathrow on the 22nd - the month's highest recorded temperature. The ground in many areas became tinder dry and wild fires were sparked off across southern England. One such fire led to major traffic delays on the M25 near St Albans on the evening of the 22nd. By this point in the month, the anticyclone had retreated to Scandinavia and thundery troughs approached the UK. Vivid displays of altocumulus castellanus (some by moonlight) on the evening of the 22nd set the stage for the heat to end with a bang - and the 23rd was marked by widespread showers and thunderstorms. Train and tram services suffered disruption from lightning strikes in Birmingham, Manchester and Edinburgh, and there was some damage to property. A deluge in Nottingham gave 36mm in one hour in the late afternoon and caused localised flooding, while at Pershore (Worcs.) a gargantuan 56.4mm fell in 12 hours - just short of the monthly average of 61mm! The weather was less settled during the final week, although it remained warm. Heavy rain late on the 27th led to localised flooding in parts of northern England e.g. in Carlisle (Cumbria) which recorded a colossal 83.8mm in 24 hours to 0900 UTC on the 28th. A band of thundery showers reached the Pembrokeshire coast shortly after 0500 UTC on the 29th and tracked eastwards giving torrential downpours, squalls, lightning and hail. 21mm or rain fell in a late-morning thunderstorm at Lyneham (Wiltshire), and there was a gust of 52mph at the Needles Old Battery (Isle of Wight). On the 31st, a warm front moved erratically northwards, bringing another surge of very warm and humid air behind it.

Both sunshine amounts and temperatures were well above normal everywhere, and over the UK as a whole, it was the third sunniest July in a series from 1929, and the third warmest in a series from 1910, beaten only by 2006 and 1983. While it was a dry month overall with little rain in the first three weeks, the subsequent thundery downpours meant that rainfall in some central areas was near or above average.

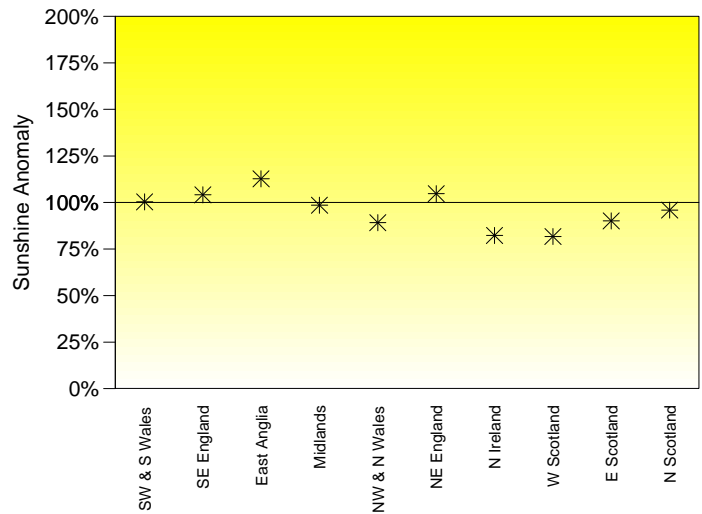
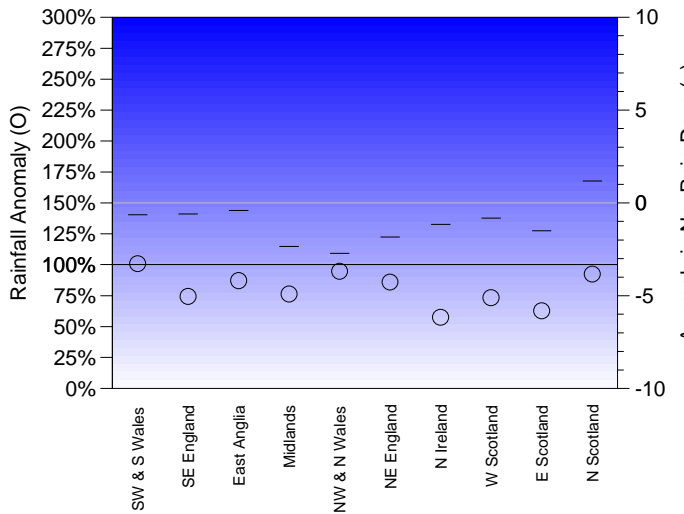
The UK was not alone in experiencing hot, thundery weather during July. Following a two week heat wave, violent thunderstorms swept Europe in the last ten days of the month. In Germany, hailstones as large as tennis balls bombarded the village of Wassel in Sehnte on the 27th causing millions of Euros of damage to roofs, windows, garden furniture and vehicles. Devastating hailstorms also lacerated vineyards in the Burgundy wine region of France on the 23rd, causing catastrophic damage over a 20km stretch of the Beaune region. Some vineyards lost 90% of their vintage within minutes as hail tore grapes from vines & pitted the remainder. Further southwest, on the 26th, Bordeaux was pummelled by a massive thunderstorm which dumped 63mm of rain in under an hour and was accompanied by winds of over 100mph which uprooted trees throughout the Medoc region. Power outages were widespread and a trail of felled trees and debris extended from as far south as Margaux, all the way north to Pauillac. The storm also unleashed a torrent of hail around Libourne.

In Canada, about 50,000 people lost power on the 8th after a severe thunderstorm flooded Toronto. 106 mm rain was recorded at Toronto Pearson Airport and several major roads and subway stations were flooded causing thousands of passengers to become stranded and traffic chaos. In the northeast USA, multiple days and nights of heat, high humidity and light winds produced sauna-like conditions. Overnight 18th-19th temperatures did not drop below 27°C (81°F) in New York City, Philadelphia, Baltimore and Washington. In Traverse City, Michigan, the overnight 'low' was 28°C (82°F)! In Washington, D.C., temperatures failed to drop below 26.5°C (80°F) for four nights in a row. Bergenfield, New Jersey, recorded a high of 37.8°C (100°F) on the 19th.

After days of torrential rainfall in western China, flooding and landslides killed 31 people on the 12th. Over 300 mm of rain fell across Wenjiang between the 8th and the 11th. In Zhongxing, homes and bridges were destroyed by the deluge and in Sichuan Province, flooding killed 86 people. In the coastal provinces of Fujian and Zhejiang, flights and train services were cancelled and fishing boats recalled to shore as waves as high as 10 metres lashed the coast. Seoul, the capital city of South Korea was also inundated, collecting 475mm of rain during the first 18 days of July - more than 200% of normal.



Extremes for August 2013	
Hottest:	34.1°C Heathrow, Greater London, 1st
Coldest:	1.6°C Loch Glascarnoch, Highland, 28th
Most Rain:	79.5mm Leigh-on-Sea 2, Essex, 25th
Most Sun:	14.8hrs Calthorpe, Norfolk, 1st
Windiest:	61mph Sule Skerry MAWS, Orkney, 31st
Warmest:	19.4°C St James Park, Greater London
Coollest:	12.7°C Fair Isle, Shetland
Wettest:	208.9mm Blaenau Ffestiniog, Gwynedd
Driest:	14.6mm Wiggonholt, West Sussex
Sunniest:	288.6hrs Radstock, Somerset
Dullest:	72.4hrs Eskdalemuir, Dumfries and Galloway



Summer begins to wane by late August, but since our seas are slow to gain their heat, it is often a better time for a dip than June or July, providing that the weather does not disappoint. In fact, August has a reputation for being a rather dull, humid and thundery month and the last few Augusts have brought very mixed fortunes. A particular landmark is St. Bartholomew's Day on the 24th, exactly 40 days after St. Swithun's. It is the subject of many weather saws such as 'St. Bartlemy's mantle wipes dry all the tears Swithin can cry.' This reflects a tradition that the day marks a change to a period of drier and more settled weather, with the first chilly dawns and mists of autumn.

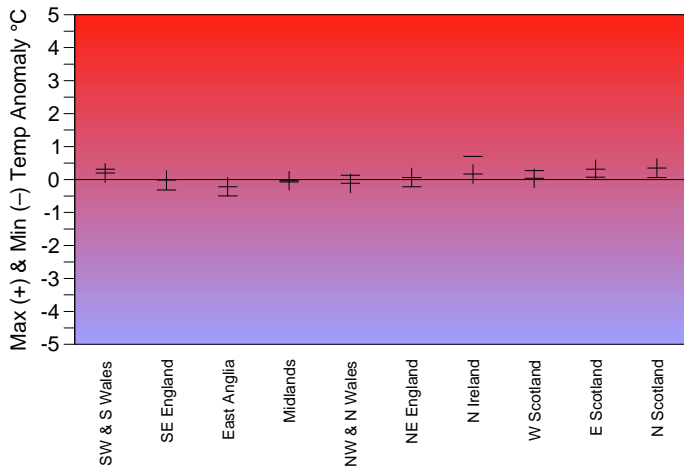
After the heavy rain and thunder of late July, August was a much quieter month. The 1st saw a surge of heat with 34.1°C (93°F) at Heathrow, the highest temperature recorded in the UK since July 2006. High dewpoints added to the sticky, uncomfortable feel in the south and east and after a very warm night, somewhat cooler conditions arrived on the 2nd behind a cold front. For the west and north, it was a very different story with outbreaks of rain and lower temperatures. The weekend of the 3rd-4th was rather breezy and showery, and an area of low pressure moving north-east across England and Wales gave some heavy showers or longer spells of rain on the 5th. It then became largely fine and warm until the 8th. Weak fronts subsequently affected parts of the UK from the 8th to the 16th, but amounts of rain were small and for many, the dry and pleasantly warm weather continued. The 17th-18th saw the first taste of autumn as a deep depression moved into the Norwegian Basin and strong winds and rainfall followed by showers, buffeted northern Britain. Rainfall amounts were much less in the south, but it was still sufficiently windy to cause a gust of 68mph at Needles Old Battery (Isle of Wight). Settled weather then returned (albeit with large cloud amounts), and it became very warm and humid by the 23rd in south-easterly winds. A depression near the Thames on the 24th put a dampener on the start of the Bank Holiday with downpours in some eastern areas. Flash flooding was reported in south Essex and rainwater (and sewage!) inundated hundreds of properties. At Shoeburyness, Essex 47.6mm of rain fell at in just four hours. There were a few residual showers the following day but the 26th was generally sunny and warm away from the far north. Month end saw a continuation of mainly dry conditions, but a deep depression near Iceland drove fronts south-east on the 30th, and much cooler and fresher north-west winds followed in its wake.

Overall it was another warm month for all of the UK - although not outstandingly so. It was also dry everywhere away from Essex, south-west England and Wales - where rainfall amounts were close to the average. For the UK as a whole, it was the driest August since 2003. Sunshine was generally close to average, but it was a little duller than normal in the north-west of the UK.

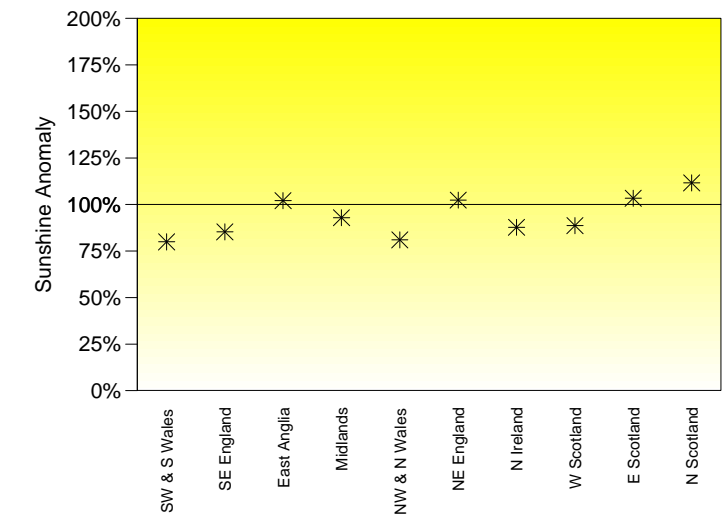
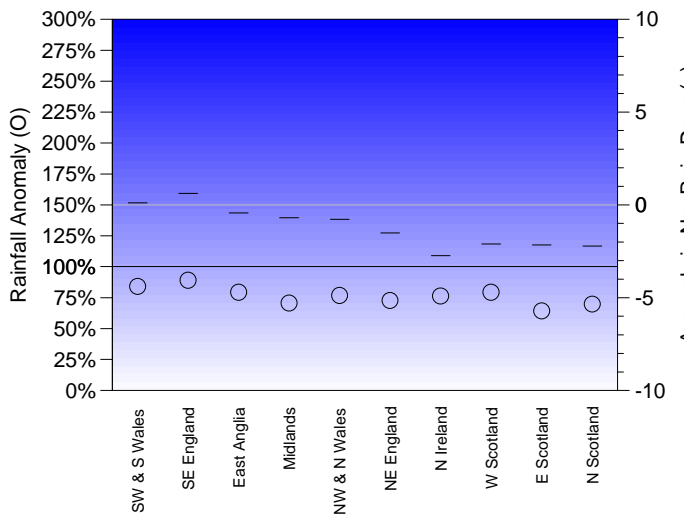
For much of central and western Europe, a blast of hot air on the 1st-2nd saw temperatures soar well into the 30s; 38°C (100°F) was reached in Madrid on the 1st while on the 2nd, Florence, Italy, climbed to 37°C (99°F) and Frankfurt in Germany reached 35°C (95°F). In eastern Europe, 38°C (100°F) was reached at Sandanski, Bulgaria, on the 4th. By the 6th however, conditions had deteriorated as violent thunderstorms brewed. In southern Germany a massive supercell hail storm developed in the Black Forest and pummelled Udingen, a municipality in the district of Reutlingen causing severe damage to buildings and cars. The largest recorded hailstones had a monstrous diameter of 14 cm - bigger the grapefruit! - and weighed over 360g.

Northern America also witnessed exceptional heat during early August. In Fairbanks, Alaska, the high soared to 28.5°C (83°F) on the 3rd, the 33rd day above 27°C (80°F) so far during the summer and a new record. However the following day, violent electrical storms sparked dozens of wildfires across the northern state. Torrential rains affected the USA's Midwestern states on the 8th, and the resulting flash flooding caused at least two fatalities, damaged homes and forced multiple water rescues. Up to 250mm of rain pounded southern Missouri overnight and some rain gauges around Waynesville (Missouri) recorded 370 mm of rain in a 48 hour period!

In China, the temperature climbed to 40.6°C (105°F) at Xujiahui Observatory, Shanghai on the 6th and then 40.8°C (105°F) the following day - setting a new all-time high temperature record there. Tropical Rainstorm Mangkhut brought torrential rainfall to Vietnam and Laos on the 8th after clipping Hainan Island, China. In the southern hemisphere, 28th -30th saw unusually cold weather - and deep snow affected Pacific South America. Peru experienced its heaviest falls in a decade and the "big freeze" killed at least seven people and thousands of livestock. The devastating cold wave also hit Bolivia and Paraguay. Schools were closed in 43 provinces and mining work - which forms a staple of their economies - had to be suspended because of the snow. One of the driest places on earth, the Chilean Atacama desert, experienced its heaviest snowfall for 30 years.



Extremes for September 2013	
Hottest:	32.0°C Leigh-on-Sea 2, Essex, 5th
Coldest:	-2.2°C Aviemore, Highland, 26th
Most Rain:	68.8mm Normanby, North Yorkshire, 6th
Most Sun:	13.8hrs Monifieth, Tayside, 2nd
Windiest:	67mph Aberdaron SAWS, Gwynedd, 15th
Warmest:	16.1°C Jersey Airport, Channel Islands
Coolest:	10.2°C Dalwhinnie No 2, Tayside
Wettest:	193.8mm Cluanie Inn No 3, Ross & Cromarty
Driest:	14.0mm Balmoral, Grampian
Sunniest:	214.5hrs Radstock, Somerset
Dullest:	63.8hrs Eskdalemuir, Dumfries and Galloway



'I saw old autumn in the misty morn
Stand shadowless like Silence, listening
To silence.....'

Such is the opening of Thomas Hood's poem on autumn. It illustrates the fact that by September, the sun's power is declining - with mist and fog taking longer to burn off. Despite this, September days can still be remarkably warm. Indeed, September contains the hottest day of the year around once in every decade. Greenland and the Canadian Arctic cool quickly from mid-month in the rapidly waning daylight and this makes for increasingly vigorous Atlantic depressions. Gales become ever more likely after the equinox on the 22nd.

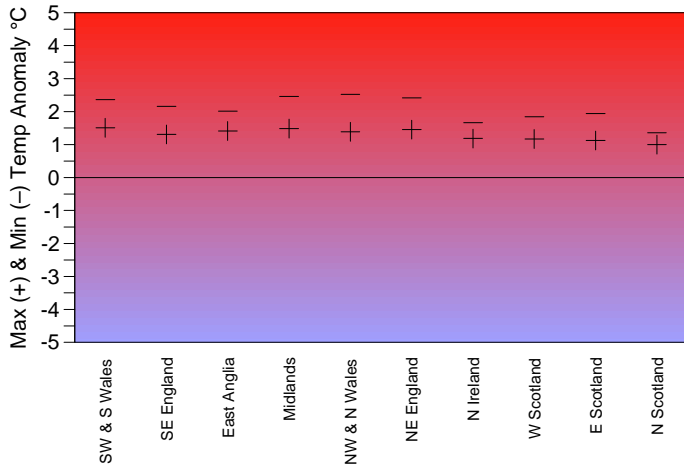
Spectacular lenticular clouds over the Pennines signalled warm fronts racing across northern areas on the 1st, but a persistent anticyclone over southern Britain gave a week of settled weather for many. It became steadily warmer by day, but with light winds, mist and fog were prevalent at night. Shortly after dawn on the 5th, fog caused a 100 car pile up on the A249 Isle of Sheppey crossing in Kent. Remarkably, no one was killed. A steamy day followed in the south and east with 30°C (86°F) exceeded in parts of Kent and Essex. By this time, a cold front was introducing much cooler air to Scotland and Northern Ireland, and as an area of low pressure developed along it the next day, there was prolonged heavy rain in the north-east. Nunraw Abbey (East Lothian) recorded 71.2mm in 24 hours, and maxima in some places were 10°C (18°F) lower than on the 5th! A notable hailstorm in Falmouth on the 6th led to wintry scenes as the ground was whitened, and drains struggled to cope with the melt water. After a couple of showery days on the 7th and 8th with further hail and thunder in places, the south had a cold, wet day on the 9th courtesy of a small depression. It then became changeable with large amounts of cloud and depressed temperatures. A small wave depression running east across southern England on the 13th gave some places their highest 24 hour rainfall total of the year so far with totals exceeding 15mm widespread. A weak ridge then brought a clear, cold night with ground frost in places. Further autumnal weather followed as the first really deep depression of the season spread wind and rain south-east to all areas by the end of the 14th. Needles Old Battery (Isle of Wight) recorded a gust of 75mph. A showery, blustery day on the 15th ushered in another cool week with more rain or showers in a north-westerly flow. A rise of pressure on the 20th/21st introduced a change as drier, more settled conditions prevailed except in the far north. It became humid and was often cloudy, but pleasantly warm when the sun broke through. Thunder storms formed along the south coast on the 28th, but for many the dry weather continued until month end.

For September as a whole, mean temperatures and sunshine were close to average. Rainfall was more variable, but many parts of the UK had a relatively dry month overall.

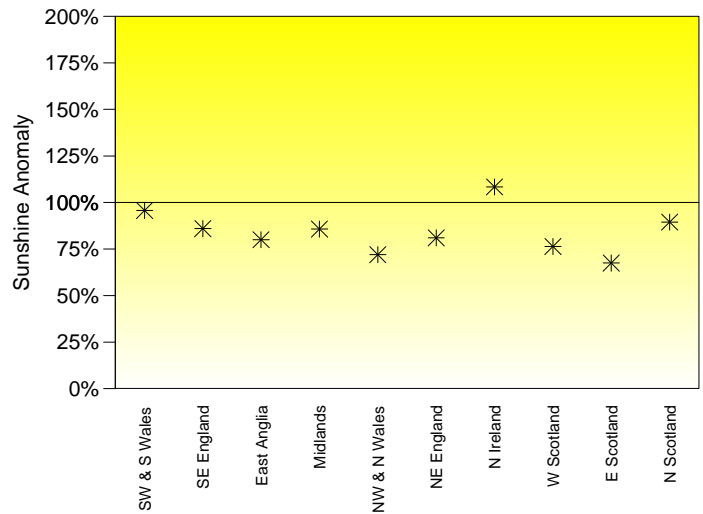
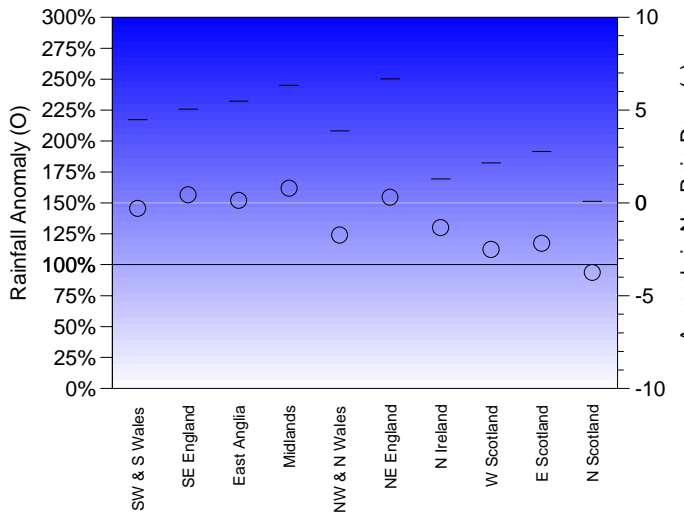
Plenty of wet weather was to be experienced by those venturing abroad during September. In the Russian city of Sochi, host to the 2014 Winter Olympics, a total of 241mm fell 23rd - 25th and caused severe flooding. In Moscow it was the wettest September since rainfall records began there in 1879. In stark contrast, Scandinavia was unusually dry and Jonkoping-Flahult (Sweden) had its driest September since 1875.

In the United States, Colorado was hit by rainfall of epic proportions. Between 1800 on the 12th and 1800 on the 13th, a total of 231mm was measured at the official Boulder site - nearly double the previous all time daily record of 120mm. From 1800 9th to 1800 on the 13th, the total was even more prodigious. A colossal 436mm fell during the 96 hours - more than the previous record for any calendar month! The resulting floods were responsible for at least 8 deaths, 1,500 homes were destroyed and another 17,000 damaged. Towards month end intense low pressure brought a deluge to the Pacific Northwest. In Astoria (Oregon) 80mm fell on the 28th, and there, as elsewhere in Oregon, September 2013 became the wettest month in a record spanning 100 years. In Mexico, 170 people were killed when two tropical cyclones (Ingrid on the Atlantic and Manuel in the eastern Pacific) struck from different directions. Torrents of rain caused severe flooding and deadly mudslides. Sierra de Guerrero, on the west coast, received 987mm 11th - 18th with the rains isolating the popular resort of Acapulco.

In the Pacific, six tropical cyclones formed during the month. Usagi, on the 19th became the first tropical hurricane in 2013 to reach the highest level (category 5) Usagi passed just south of Taiwan and Jinfeng recorded 567mm of rainfall in 24 hours. A tornado ripped through parts of eastern Japan on the 2nd leaving 63 people injured and many properties damaged. Australia enjoyed its warmest ever September. Temperatures exceeded 40°C (104°F) somewhere in the country on more than half of days and Fitroy Crossing reported 41.6 °C (107°F) on the 26th and 27th. Despite this, and far to the south, Antarctica's ice shelf remained at its most expansive since 1979.



Extremes for October 2013	
Hottest:	24.1°C Leigh-on-Sea 2, Essex, 8th
Coldest:	-3.4°C Aviemore, Highland, 12th
Most Rain:	61.7mm Ebbw Vale, Gwent, 21st
Most Sun:	10.8hrs Monifieth, Tayside, 5th
Windiest:	82mph Pembrey Sands, Dyfed, 27th
Warmest:	15.0°C Jersey St Helier, Channel Islands
Coolest:	8.3°C Dalwhinnie No 2, Tayside
Wettest:	347.1mm Capel Curig SAWS, Gwynedd
Driest:	31.0mm Chillingham Barns, Northumberland
Sunniest:	161.7hrs Jersey St Helier, Channel Islands
Dullest:	30.5hrs Bala, Clwyd



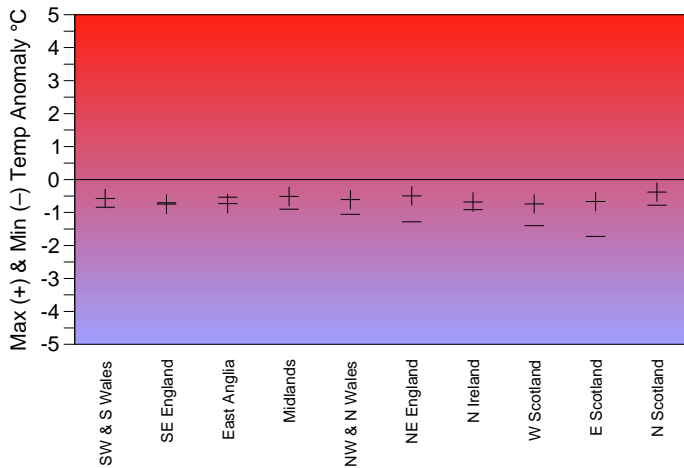
A variety of weather can grace October. A warm, dry spell after the first of the autumns frosts is not uncommon and termed an 'Indian summer', but equally, the first flurries of snow often buffet northern hills. According to the seasonal calendar of HH Lamb, the period from 24th October to 13th November can be a notably stormy one as depressions pass close to the UK, and this year provided a notable example of this.

October began with pressure high over Scandinavia and humid south easterlies across the UK. There were heavy rain showers in the west, but it became fine and warm in the south from the 5th. Fog was slow to clear in the mornings, especially on the 7th and in the north it remained unsettled. The 9th saw a dramatic change as the highest pressure transferred to the west of the UK and much colder northerlies plunged southwards. There were snow showers on the Scottish mountains and from the 11th, slow-moving depressions brought periods of cold, wet weather to England and Wales. Scotland and Northern Ireland were brighter but remained chilly with night frosts. A more general drier interlude on the 15th was followed by renewed bouts of rain from the 16th although it steadily became warmer by the 18th as winds veered southeast. Heavy showers were widespread on the 20th with hail and thunder reported widely. Tornadoes occurred at Hayling Island (Hampshire) and Walsall (West Midlands), the former causing damage to over 100 properties. Much of the following week saw further rain and strong winds and more tornadoes were reported at Bognor Regis, West Sussex on the 23rd and Huby, North Yorkshire on the 25th. Winds from a southerly or south-westerly direction meant a continuation of very mild conditions with maxima widely above 16°C (61°F) until the 26th. The interaction of a strong jet stream with the warm air then spawned an intense depression which moved rapidly northeast across England and Wales during the early hours of the 28th following the "feast of St Jude". South of the centre, severe gales brought extensive disruption to transport and communications from southwest England to East Anglia. Over £100M of property damage resulted - mostly concentrated in Essex, Suffolk and along the Sussex coast. The port of Dover was closed and more than 130 flights cancelled at Heathrow. At Luton, Devon a 27m tall wind turbine was blown down. More than 850,000 homes lost power in the UK and the storm was responsible for at least 5 deaths. The highest recorded gusts for the UK were 104mph at Sandettie Light Vessel, (English Channel), and 99mph at Needles lighthouse (Isle of Wight). Gusts of 150mph were measured high up the turbines at the Gunfleet Sands Offshore Wind Farm off the Essex coast. As month end approached, the weather became less boisterous, but it stayed windy with showers or longer spells of rain. It also became noticeably cooler, and there was a widespread ground frost early on the 30th. For the month as a whole, temperatures were well above normal for all of the UK - especially at night. In terms of rainfall and sunshine, it was a wet and a dull month everywhere, except for the extreme north of Scotland.

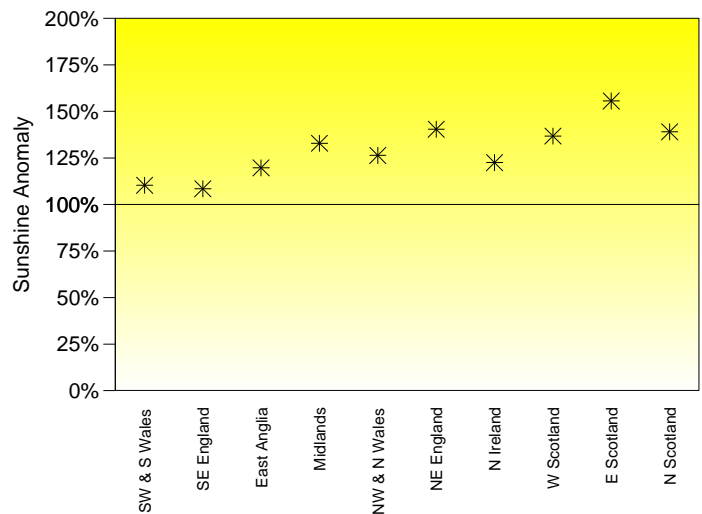
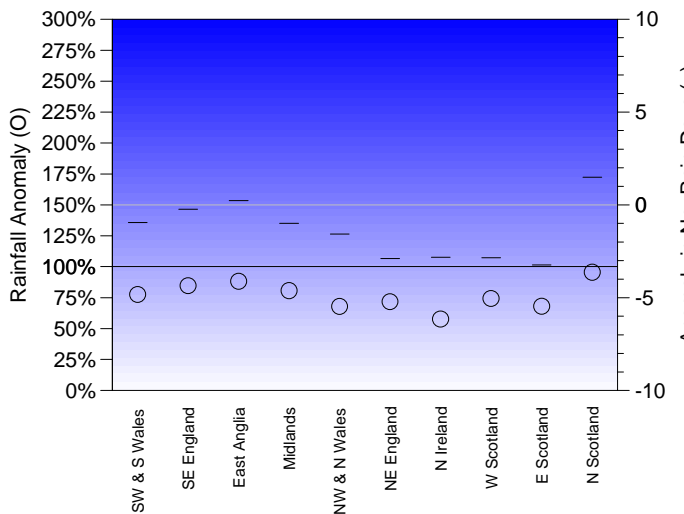
The unsettled weather also extended into Europe during October. Holland experienced prolonged rainfall on 12th-13th. Totals of over 75mm were widespread and some places in the southwest received more than 120 mm of rain - which caused considerable flooding. Windstorm "Jude" also battered northern Europe on the 28th - where it was more properly named windstorm "Christian". The Danish capital of Copenhagen saw record gusts up to 120 mph - causing 100,000 houses to lose power in Vejen, Kolding and southern Funen - and 2 fatalities. There were 8 more deaths across Germany as hundreds of trees were uprooted or split, blocking roads and crushing cars. Transport disruption was widespread and both Düsseldorf and Hamburg airports saw many flights cancelled, leaving hundreds of passengers stranded. In France, 65,000 houses lost power across Brittany, Normandy and Picardy and the storm was responsible for at least 1 death. In Holland Amsterdam's central railway station was closed due to falling masonry and wind gusts toppled trees into canals, rail and tram lines in the capital's historic centre - halting almost all public transport and causing 3 fatalities.

In north America, early blizzards swept large areas of South Dakota and Wyoming 4th- 6th closing airports and roads. The Black Hills in South Dakota resembled a Christmas card scene when they were coated with 110cm (1.1m!) of wet, heavy snow that fell in just 24 hours. In north eastern Nebraska and north-western Iowa, severe thunderstorms spawned devastating tornadoes.

Several destructive tropical storms affected the Pacific and Indian Oceans. On the 7th, Typhoon Fitow hit China's eastern coast packing winds of up to 100mph. The storm caused economic losses estimated at £2.1bn. Tropical Cyclone Phailin made landfall in north-eastern India on the 12th. The approach of the storm - among the most powerful ever known in the region - led to the evacuation of 1 million people. Phailin destroyed hundreds of millions of dollars' worth of crops and was equivalent to a Category 5 hurricane. A week later on the 16th, tens of millions of people in Japan felt the wrath of Typhoon Wipha. Oshima, an island south of Tokyo, reported 824 mm of rain from the storm in less than 24 hours. The deluge caused landslides responsible for at least 17 deaths. Winds of hurricane force and driving, torrential rain lashed parts of Tokyo causing 400 flights to be cancelled and 20,000 people to be evacuated from their homes. Typhoon Krosa hit the northern end of the main Philippine island of Luzon on 17th. 100 mph winds ravaged the coastal province of Caqayan, about 430 kilometres north of Manila.



Extremes for November 2013	
Hottest:	16.2°C Yeovilton, Somerset, 6th
Coldest:	-7.4°C Tulloch Bridge SAWS, Highland, 22nd
Most Rain:	46.8mm Lerwick, Shetland, 3rd
Most Sun:	8.6hrs Waddington, Lincolnshire, 4th
Windiest:	89mph Mumbles Head, West Glamorgan, 2nd
Warmest:	10.3°C Scilly St. Mary's SAWS, Cornwall
Coolest:	3.0°C Dalwhinnie No 2, Tayside
Wettest:	298.0mm Achnagart, Highland
Driest:	23.2mm Leuchars, Fife
Sunniest:	162.8hrs Monifieth, Tayside
Dullest:	33.8hrs Lerwick, Shetland



November is the month of dwindling daylight and depressing piles of damp autumn leaves which may have been brought down in the first widespread gale of the season. Whilst not a winter month, it is quite capable of delivering snowfall to northern hills, and night frosts usually become more widespread and severe. By contrast, we may also experience a 'St. Martin's summer', a short spell of very mild weather that is often a feature of mid month.

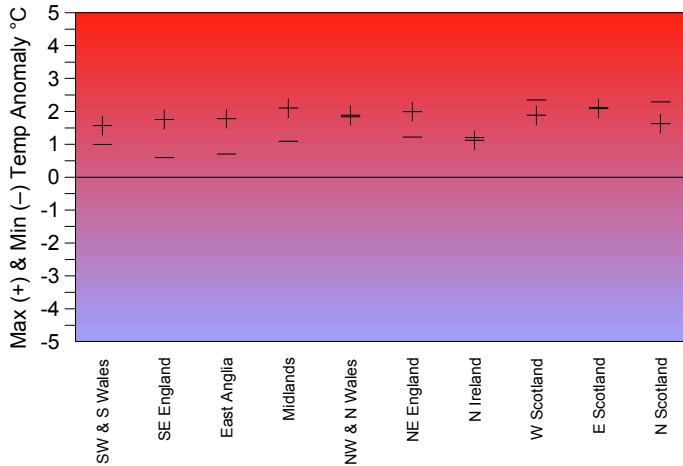
November opened on a boisterous note as a deep depression transferred across Scotland into Scandinavia on the 2nd/3rd. There were thundery showers in western districts on the 2nd - with hail carpeting the ground in places - and very severe gales affected Wales and Northern Ireland overnight. Mumbles (West Glamorgan) recorded a gust of 89mph. Winds moderated on the 3rd, but more rain reached southern areas later, before it cleared on the 4th to leave most places with a crisp, sunny day under a ridge of high pressure. Bonfire Night was unsettled and breezy, albeit relatively mild, and there followed four days of changeable conditions with thundery showers on the 8th. It was fine for the Remembrance Sunday parades on the 10th, but most places saw further rain during the following week - although with pressure relatively high - sunshine was plentiful in between the rain belts. After a quiet but dull weekend on the 16th/17th, the weather changed markedly from the 18th as an Arctic air mass invaded Scotland. On the 19th, everywhere became much colder - and snow showers in the north led to the first covering of the season for some places, with 5cm recorded at Altnaharra (Sutherland) and Tulloch Bridge (Highland). The following day, a vigorous cold front swept southwards across the entire UK and brought driving rain, hail and that rare meteorological phenomenon - simultaneous thunder and snow. There was one unconfirmed report of a tornado at Irthlingborough (Northants.) The weather subsequently stayed rather cold, and while large amounts of cloud limited frosts over England and Wales, there were some chilly nights for Scotland. Braemar, Aberdeenshire recorded -8.1°C (18F) early on the 25th. The dry but rather dull conditions lasted until the 29th, when another active cold front moved south-east. Strong winds and squally showers turned wintry on northern hills, but milder, damp weather soon returned to the north as the month drew to a close.

November overall was a little drier than on average for all of the UK. It was also distinctly sunnier - exceptionally so for Scotland - where it was the sunniest November in at least 80 years. Temperatures were a little below normal countrywide - mainly due to some early frosts.

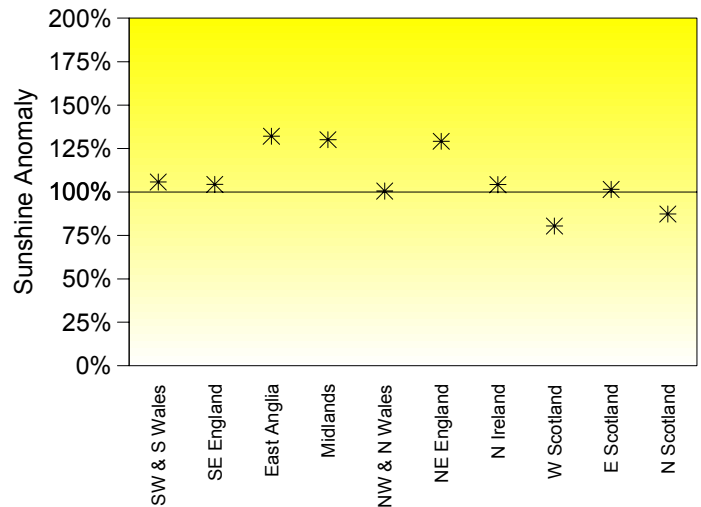
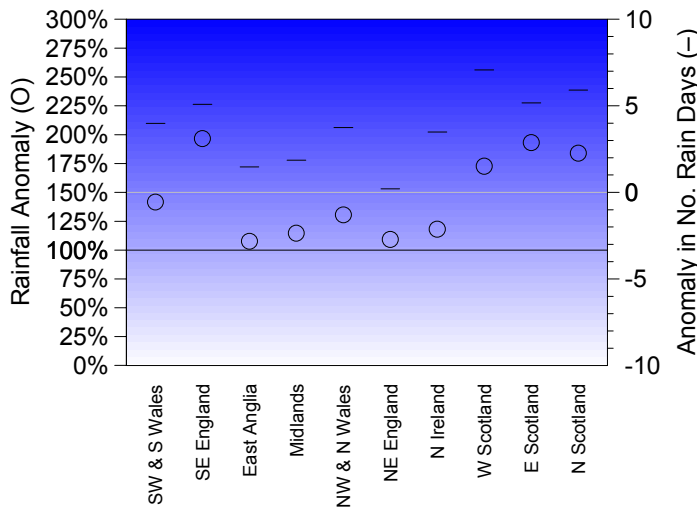
While the Atlantic hurricane season was the quietest since 1982, both the Pacific and Indian Oceans unleashed fearsome tropical storms during November. The full force of Pacific 'super' Typhoon Haiyan smashed into the Philippines on the 7th-8th. Upon landfall, the maximum sustained winds of this Category 5 storm were an astounding 195mph - with gusts up to 235mph. Hundreds of thousands of residents were displaced and 3600 people were killed across the islands. The winds flattened homes, schools and even the airport in Tacloban. A massive storm surge up to 10m high washed large ships ashore and swept away vehicles as it roared inland. Both Tacloban and the nearby town of Palo were left devastated. On the 11th, Haiyan made landfall in north Vietnam and it still carried destructive gusts of up to 100mph as it hit the Ha Long Bay tourist destination. Hot on its heels, a further tropical depression produced extreme rainfall and deadly flooding across central Vietnam 15th-17th. Over 500mm rain fell in Hue, and over 425mm in Da Nang. The National Floods and Storms Control Agency confirmed that 41 people died in the floods, with 80,000 more forced from their homes. An Indian Ocean tropical cyclone hit Somalia's semi-autonomous Puntland region on the 10th producing torrential rains which unleashed flash floods that led to 140 deaths and the loss of 100,000 livestock. Many fishing boats were swept away into the Indian Ocean. Meanwhile an early taste of winter reached parts of China at the month's end. On the 26th, nine people were reported killed after heavy snowfalls caused a building to collapse in Heilongjiang Province in north-east China. Elsewhere in the province the snow caused major traffic disruption, flight cancellations, and school closures.

Closer to home, 'Cyclone Cleopatra' struck the Italian island of Sardinia on the 18th-19th. The area around the north-eastern city of Olbia was worst-hit. 440 mm of rain in 24 hours led to flash flooding that killed at least 18 people, swept away cars and caused many bridges to collapse.

Meanwhile severe weather pounded the US Midwest on the 17th with tornadoes, intense thunderstorms and giant hail affecting 53 million people across 10 states, leaving tens of thousands without power and at least 6 people dead. 15 tornadoes hit the state of Illinois alone - with 65 more reported elsewhere across the country. Overnight 24th-25th a severe winter storm hit the central and southern USA. Hundreds of flights in Texas were cancelled amid freezing rain, Oklahoma was blanketed beneath 25cm of snow and the severe weather was responsible for hundreds of road traffic accidents and at least 10 deaths.



Extremes for December 2013	
Hottest:	15.6°C Achnagart, Highland, 11th
Coldest:	-4.9°C Hurn, Dorset, 5th
Most Rain:	89.4mm Cassley, Sutherland, 25th
Most Sun:	7.6hrs Guernsey Airport, Channel Islands, 9th
Windiest:	109mph Aberdaron SAWS, Gwynedd, 26th
Warmest:	9.8°C Scilly St. Mary's SAWS, Cornwall
Coolest:	3.9°C Braemar No 2, Avon
Wettest:	646.6mm Cluanie Inn No 3, Ross & Cromarty
Driest:	1.2mm Cromer, Norfolk
Sunniest:	93.8hrs Hull North, Humberside
Dullest:	7.7hrs Lerwick, Shetland



The popular imagination of Yuletide weather is one of sparkling frost and an icing sugar dusting of snow. Often the reality is one of battling with the Christmas shopping in the wind and rain, and it is comparatively rare for December to be the coldest of the three winter months.

December started quiet with high pressure over Ireland, but a rapidly deepening depression zipped east to Scandinavia 4th/5th. The combination of rapid drop in pressure, a north-westerly gale and a high spring tide led to a storm surge and inundation along the east coast - though thanks to improved sea defences - there was no repeat of the devastating floods of January 1953. Nevertheless, the thoroughfares of a number of coastal towns were left underwater, cliff falls led to several coastal properties collapsing into the sea, and the strong winds caused considerable property damage. There was a gust of 93mph at Altnaharra (Sutherland), and a lorry driver died after his HGV toppled onto several cars in West Lothian. A brief incursion of Arctic air led to snow showers in the north, but quiet weather soon resumed from the 7th - and fog caused flight delays at several airports on the 11th. As Continental high pressure gave way on the 13th, the weather became mild and increasingly stormy. It remained so all the way through to Christmas - with constant bands of rain, interspersed with brighter, showery conditions. This was merely the prelude to a remarkably deep depression which brought heavy rain and gales nation-wide on the 23rd and 24th. Thousands of homes in southern England were left without power through the Christmas holiday, as gusts of up to 90mph felled power lines and trees. Euston station was bought to a standstill late on the 23rd, as was Gatwick airport on the 24th when flooding from the nearby river Mole caused a power cut at the North Terminal. Ferries braving the Bay of Biscay ran into serious difficulties, and a passenger from Portsmouth to Bilbao was airlifted to hospital after suffering neck injuries resulting from a fall during the rough crossing. The central pressure of this low plunged more than 50mb in 24 hours as it tore across the Atlantic in a screaming jet stream, making it officially a 'bomb', according to meteorological terminology. The lowest pressure was 929mb off western Scotland early on Christmas Eve. Christmas Day and Boxing Day were quieter and colder for most, but some areas, especially Kent, were still affected by flooding from the storm with people having to rely on local pubs for Christmas lunch. Another deep depression gave further wind and rain early on the 27th, though this was less intense than its predecessor, and the weather remained very disturbed right through to year end. Dumfries and Galloway experienced severe flooding as the river Nith burst its banks.

The month as a whole was very mild for all of the UK, with daytime temperatures typically 2°C above normal. It was also very wet, with many places receiving double their average rainfall. It was the windiest December since records began (in 1969). Despite the rain and wind, paradoxically, all of England and Wales - and especially the Midlands and the east - enjoyed rather more sunshine than usual.

The hurricane-force storm "Xaver" hit northern Europe on the 5th, leaving tens of thousands of homes without power and causing the biggest tidal surge in decades. In Germany, residents of Hamburg woke up to find the historic fish market flooded. Two sailors were reportedly swept overboard from a ship off the southern Swedish coast. The Oeresund road and rail bridge which links the Danish capital Copenhagen with the Swedish city of Malmo, was closed and there was major disruption to flights and ferry services. Another wave of storms struck over the Christmas period. On the 26th families were forced from their homes as violent storms swept across Italy, causing avalanches and power cuts. In the Italian Alps, heavy snow stranded people in their cars, while hundreds of tourists were unable to reach their hotels in the Puster Valley after roads were blocked. Train travel between Italy and the Swiss Canton of Valais was also paralysed as blizzards felled trees over the railway tracks. In southern Italy, sea storms halted ferries, cutting off Sardinia and islands in the Bay of Naples. Further southwest, the Canary Islands experienced severe flash flooding 2nd-3rd. In the 24 hours ending 0600 GMT on the 3rd, 195 mm of rain fell at Valverde in Tenerife.

A winter storm dropped 23cm of snow across the northeast USA on the 17th, causing more than 600 flight cancellations at Newark and Boston airports. On Christmas Eve, 400,000 customers in eastern Canada and 390,000 in the US lost electricity after a severe ice storm. Most were still without power on Christmas Day, with Michigan worst hit. Trees were left encased in ice while many streets were blocked by fallen branches and festooned with yellow safety tape where live power lines collapsed. Flights suffered massive disruption. Then a blizzard on the 29th sent temperatures plummeting still further in central Canada. In Winnipeg, Manitoba, readings hovered around -31°C (-25°F) all afternoon, with wind chill making it feel like a bone-chilling -50°C! In South America, 14th-26th saw an intense heat wave in northern Argentina and Uruguay. Temperatures peaked at 38°C (100°F) on Boxing Day, prompting thousands of people to dive into rivers and lakes to cool off. Unfortunately a cluster of swimmers along the Parana River in Argentina, was met by a school of piranhas - which attacked - leaving at least 70 injured. The extended period of heat forced more energy usage, putting a strain on Argentina's power grid and resulting in numerous blackouts. In Western Australia 12th-16th, Perth experienced a run of five days with temperatures above 35°C (95°F). The 14th peaked at a sweltering 40°C (104°F) - providing punishing conditions for participants in the third Ashes test match.