

The 'Great Snow' of winter 1614/1615 in England

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Extreme weather in England's parish registers

In an essay on the use of archives for meteorological research (and in which he referenced the 1614/1615 snow), Gordon Manley expressed his *fear that many who work on collections of papers may not be aware of the value of regular or detailed notes on the weather at the place in question, more particularly anything that helps towards quantitative assessment of intensity as well as frequency of extreme events in the context of the time* (Manley, 1981, p. 8). Parish registers are a unique source of these place-based weather narratives. They contribute to our understanding of the impact that those conditions had on the local populace and as such have a role as 'community records' of weather and weather-recording (Veale et al., 2017, p. 136). The publication of guides to parish registers (see Cox, 1910) and published versions of the registers themselves have drawn attention to particular weather narratives (Tufnell, 1991). Online and paper archive catalogues also sometimes note their presence among the lists of baptisms, marriages and burials. Register narratives are of particular value for the early modern period, when other sources are few in number (Tufnell, 1991). They detail the effects of extreme weather on locally important customary and communal arrangements, often including references to particularly local landmarks, giving a clear sense of place (Morgan, 2015, p. 45).

As part of a broader research project exploring archival sources for extreme weather history and the parallel construction of a searchable database of extreme weather event narratives, the 1614/1615 snow event, and the weather that followed, emerged as particularly extreme, as recorded in parish registers and other

archival documents and literary sources. This paper uses these archival narratives to provide a detailed picture of the 1614/1615 snow event, including its temporal and geographical extent, societal and environmental effects and subsequent inscription into the cultural memory.

The great snow of 1614/1615: magnitude, extent and duration

Heavy snows have been a spectacular yet disruptive meteorological force through history, with the subsequent effects of such events, and responses to them, varying through time and place (Table 1). In Britain, snow is capable of giving a remarkable amount of trouble in this normally mild country (Manley, 1955, p. 209). However, aside from Manley's contributions (1955, 1963, 1969), the study of historic snows in Britain is rather limited (Tufnell, 1991).¹ Writing during the snowy winter of 1962/1963, Manley (1963, p. 68) states that *Of all the major elements that make up the British climate the frequency of snow falling, and even more that of snow lying, is capable of the widest variations. Snow makes its mark upon our consciousness especially when it either lies thick, or drifts, or falls out of season.*²

Heavy snow fell across much of England between 16 and 22 January 1615.³ In many places it accumulated to a great depth and lay continuously for 7 or 8 weeks, until the middle of March, with patches lasting into May (Table 2).

¹A popular history and science of snow is English C. 2009. *The Snow Tourist*. Portobello Books: London

²1615 is not mentioned here but was an event that Manley wrote about elsewhere. Manley did not claim that his 1969 paper included a comprehensive listing of notable snows, and his focus is on the period 1669–1969.

³Until September 1752 the New Year began on 25 March (Lady Day). However, dual dating was commonplace for many years before adding a further layer of complication to events that took place from 1 January to 24 March. Scotland had changed the start of the year to 1 January in 1600. Many of the accounts date the snow to January 1614/1615.

The Archbishop of York, Tobie Matthew, *conscientiously trying to keep his preaching engagements around York and noting the circumstances in his journal* (Manley, 1981, p. 8), recorded 7 weeks of frost and snow, *never the like Seen in England, with exceeding great Fluddes of Water by the Thawe* (in Loxley et al., 2014, p. 55). The register for Almondbury in West Yorkshire supports Matthew's account, recording snow *far exceeding that in 1540 in magnitude and duration* (in Cox, 1910, p. 206). Deaths attributed to the snow in the registers for Almondbury, Elland, Halifax, Kirklington, Monk Fryston, and Otley indicate *that the weather in Yorkshire must have been very severe* at the end of January and beginning of February, before a slight ease in the severity of conditions (Tufnell, 1991, p. 225). The most detailed account of the snow comes from identical entries in the registers of the neighbouring parishes of Winster and Youlgreave, in the Derbyshire Peak District (Figure 1). The 'memorial' details multiple heavy falls of snow from 16 January until 12 March, followed by several lesser falls in April. Thomas Short's published weather chronology of 1749 (see Lawrence, 1997), referencing the 'Yolgrave Register', notes that *On the 19th of the Calends of February, fell such a Storm of Snow in the Peak of Derbyshire, and all over the West of England, as was a full yard deep on a Level; and withal such a high Wind, as blew it in vast Drifts, so as Travellers, as well on Horseback as foot, went over Hedges, Fences, stone Walls, & c. It laid long, destroyed much Cattle and Sheep. A great Scarcity of hay followed. Corn next Summer very good and cheap* (Short, 1749, p. 297). There was little let up in the extreme weather as the year progressed, as some areas were inundated with floods as the thaw set in, and summer 1615 was very dry.

The great snow of 1614/1615: impacts

In the Winster and Youlgreave registers (Figure 1 and transcription below)⁴ we are

⁴Original spellings and phrasing are used throughout.

Table 1*Notable snows mentioned by Manley (1969), in chronological order.*

<i>Date</i>	<i>Location</i>	<i>Notable because...</i>
February 1579	London	Notable (depth 2 feet (0.61m) according to Stow)
Winter 1695	London	Notably snowy
13 May 1698	London	Late spring snowfall
13 June 1749	Pennines	Summer snowfall
1751	Lower Swaledale	Notable depth (about 30 inches (0.76m))
January 1767	Westmorland	Notable depth
Winter 1784	London	Notably snowy
12 June 1791	London	Possible summer snowfall
1814	Somerset	Notable depth
January 1814	Dublin	Exceptional depth
Winter 1814	London	Notably snowy
27 May 1821	Not specified	Latest reliable record of snowfall in year
February 1823	Westmorland	Notable depth
5 June 1823	Pennines	Summer snowfall
7 October 1829	London	Early autumn snowfall
1836	Cambridgeshire	Approximately 2 feet of snow (0.61m) in lowland area
Christmas 1836	Edinburgh Sussex	Notable depth (Lewes avalanche)
January 1854	Lancashire	Notable depth
Winter 1879	London	Notably snowy
18 January 1881 (Black Tuesday)	Cobham	18 foot (5.49m) drifts
25 September 1885		Earliest reliable record of snowfall in season
March 1886	Durham	Notable depth
March 1891	Dartmoor	Notable depth
1892	Caithness	Notable depth
Winter 1917	London	Notably snowy
April 1919	Suffolk	18 inches (0.46m) depth
20 September 1919	Pennines	Early autumn snowfall
1933	Teesdale	About 30 inches (0.76m)
February 1933	Durham Upper Teesdale	6 inches (0.15m) of wet snow 30 inches (0.76m) of dry powder
16 May 1935	Blackburn/Leeds	12 inches (0.3m) depth
1940	Eastbourne Lancashire	16 inches (0.4m) depth Approximately 2 feet (0.6m) of snow in lowland areas
January 1940	Lancashire	Snowstorm (severe disruption to railways)
February 1941	Durham	Snow falling for over 50 hours giving measured depth of 42 inches (33 inches Tyneside, 4 feet at Consett) (1.1m, 0.84m and 1.22m respectively)
1945	Cardiff	About 30 inches (0.76m) depth
Winter 1947	London	Notably snowy
February 1947	Above 1000 feet in Denbighshire and Teesdale	Accumulated snow reaching 60 inches (1.52m) depth
March 1947	Bedfordshire Cumberland	20 inches (0.51m) depth Excessive drifting
February 1954	St Just	14 foot (4.27m) drifts
February 1955	Banff, Sutherland and Caithness	Notable accumulation
Winter 1963	London	Notably snowy
January 1963	Birmingham Somerset	Heavy falls Notable depth
November 1965	West Durham	22 inches (0.56m) depth
December 1968	Cleveland and Norfolk	Notable accumulation
19–21 February 1969	Pennines	Gale and severe drifting

Table 2

Dates of the heavy snowfall and subsequent thaw of 1614/15, observations of linked flooding, drought and other impacts, as recorded in English Parish Registers.

<i>Location and reference details*</i>	<i>Snow/frost start date</i>	<i>Thaw date</i>	<i>Observed flooding</i>	<i>Observed drought</i>	<i>Impacts</i>
Central England					
DERBYSHIRE					
Darley Dale DRO, D1978/A/PI/3	Christmas 1614	Spring 1615			
Morley DRO, D1797/A/PI/1/1	7 weeks prior to thaw	12 March 1615		Continued most of summer.	
Winster DRO, D776/A/PI/A/1	16 January 1615	12 March 1615 (some new heavy falls in April, snow lasting in some places until 28 May 1615)	Great though not many. Snow said to have vanished without rain.	No rain 25 March – 2 May and from 3 May – 10 June and from 11 June – 4 August.	Snow hindered planting, resulting in shortages of fodder and fuel. Deaths of some cattle and some lives lost. Land severely burnt up in summer.
Youlgreave DRO, D3644/42/1	As Winster				
NORTHAMPTONSHIRE					
Stamford Baron Cox (1910, p. 135)					John Madisonne perished on Spittelhill in the great snow, buried March 10.
STAFFORDSHIRE					
Alstonefield SRO, D922/2	20 January 1615 (heavy fall on 25 February 1615)	12 March 1615			
Mucklestone Staffordshire Parish Registers Society (1929, p. 84)	18 December 1614	11 March 1615			Snow dangerous by reason of its depth.
East of England					
NORFOLK					
Beeston-next-Mileham NRO, PD 377/1 Cox (1910, p. 206)	21 January 1615	16 March 1615			Long entry detailing the snow. Great difficulties travelling. Three men found dead in open fields.
SUFFOLK					
Framlingham Cox (1910, p. 206)	22 January 1615	7 weeks following	Only preceding the snow		
North of England					
YORKSHIRE					
Almondbury Cox (1910, p. 206) Tufnell (1991, pp. 223–224) Taylor (1975)					More snow than ever before in living memory. Travellers and inhabitants perished. Exceeding snow of 1540 in magnitude and duration. Also records 1634/1635 hard winter. On 23 January a man buried who had been overcome by snow and wind.
Elland Tufnell (1991, p. 225) Clay (1897)					Burial of person who died in snow which was being blown by a strong wind (likely between 9 and 11 February, though no date is given).
Halifax (St John the Baptist) YRO, D53/1/4 Tufnell (1991, p. 225)					On 24 January the burial of Anthony Maude of Sowerby, a pernicious, blasphemous, incorrigible, drunken rogue, who had died drunk in a drift of the great snow the previous day. Death of Michael Leroyd, of Sowerby, who perished in the snow, having violated the Sabbath.

Table 2 Continued

Hepstonstall Tufnell (1991, p. 225) Horsfall (1925)	A great snow at the beginning of March		
Kirklington Tufnell (1991, p. 225) McCall (1909)		Elizabeth... Blacburne of Balderbye was here baptized by cause they could not get to Topcliffe for water the sixth of March.	A widow who perished in the snow and was found... the xjth.
Monk Fryston Tufnell (1991, p. 225) Hemsworth (1896)			Margaret downyn... perished in the snow... as she came from Pomfret [Pontefract] and xxjth day [of January] and was buried xxij die.
Otley Tufnell (1991, p. 225) Brigg (1908)			Person buried on 9 February after being lost in the snow frozen to death. Burial on 20 March – two people lost in the snow the 8 of Februarie & not found till then.
Rylstone (St Peter's) Tufnell (1991) Lowe (1870)	Very snowy		
South of England BEDFORDSHIRE			
Goldington BARS, BOR B/L2/4/8 (extracts only, copied into a notebook)	Severe frost and snow		

*BARS = Bedfordshire Archives and Records Service, DRO = Derbyshire Record Office, NRO = Norfolk Record Office, NoRo = Northamptonshire Record Office, SRO = Staffordshire Record Office, YRO = Yorkshire Record Office.

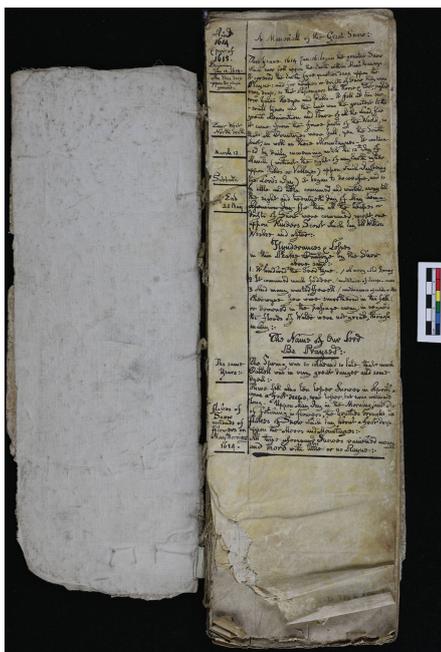


Figure 1. A Memoriall of the Great Snow – register of baptisms and marriages (1674–1724) for the parish of Winster, Derbyshire (Derbyshire Record Office (DRO), D776/A/PI/A/1). (Source: DRO and the Parish of Winster).

also told something of how the vast quantity of snow (and the subsequent drought) affected the Peak District: the planting of seed was hindered, enormous quantities of fodder were consumed, and many people were left short of fuel, before a very poor harvest.

A Memoriall of the Great Snow:-

This year 1614 Jan: 16: began the greatest Snow which was fell upon the Earth within Man's memorye. It covered the Earth fyve quarters⁵ deep upon the Playne: and for heapes or drifts of Snow they were very deep, so that Passengers both Horse & Foot, passed over gates Hedges and Walls - It fell at ? severall tymes and the last was the greatest to the great admiration and Feare of all the Land, ffor it came from the foure parts of the World, so that all countryes were full, ? the South part, as well as these Mountaynes – It continued by daily increasing until the 12th Day of March (without the sight of any Earth eyther upon Hilles or Valleyes) upon which Day (being the Lord's Day) it began to decrease, and so

by little and little consumed and wasted away till the eight and twentyeth day of May being Ascension Day ffor then all the heapes or drifts of Snow were consumed, except one upon Kinders Scout which lay till Witson Weeke⁶ and after:-

Hinderances & Losses

in this Peake Countrye by the snow above sayd:-

1. It hindered the seed tyme/A very cold Spring
2. It consumed much fodder/multitude of sheep ?
3. And many wanted ffewell/continuance of cold weather

? few were smothered in the fall: or drowned in the passage away, in regard the floods of water were not great though many

⁶Whitsun marks the Christian festival of Pentecost, the eighth Sunday after Easter. The week following was traditionally a time for celebration and holidays. Online historical calendars give Pentecost 1615 as 28 May, indicating that patches of snow lasted until sometime the week following, possibly as late as 4 June.

⁵A quarter was one quarter of a yard.

The Name of Our Lord Be Prayed:

The Spring was so cold and so late, that much Cattell was in very greate danger and some dyed:-

There fell also ten larger Snowes in April, some a foot deep, some larger, but none continued long. Uppon May day in the Morning, instead of fetching in flowers, the youthes brought in flakes of Snow which lay about a foot deep uppon the Moors and Moutaynes:-

All these aforesayd Snowes vanished away and thord with little or no Rayne:-

Here the parish clerk(s) of Winster and Youlgreave called into his mind an image of the region he inhabited... The bad weather had touched the 'south ptes' beyond the Peak, but a quite different pattern had prevailed in 'Lankshyre & Cheshyre' that winter. It was only upon leaving or entering the Peak Country that its identity became apparent... Its geography marked the place as distinct. In the winter time, people could easily die while crossing the moors which separated the region from Scarsdale Hundred, Staffordshire and the north-west (Wood, 1999, p. 36). Tufnell (1991, p. 225) did not expect that a search of the many published Lancashire registers would fail to contain a single mention of this harsh winter, but this absence perhaps clarifies the geographical extent of the event and emphasises the sharp regional differences that are often present in experiences of extreme weather events.

Stow (1618, p. 544) also refers to shortages of fodder and to people experimenting with alternative types of fodder at this time, as well as the difficulties travelling. At Belvoir Castle, two men were paid for their work collecting fodder for the Duke of Rutland's deer, again implying that fodder was short (in Loxley *et al.*, 2014, p. 55). The dangerous nature of the depth of the snow is echoed in the Beeston-next-Mileham register from Norfolk where, during the most intense snowfall days, *people could not pass from towne to towne nor in the same towne from one streets unto another.*

In Scotland, by the middle of February, the Tay was *frozen over so strongly as to admit of passage for both horse and man*; this was inconvenient for the ferrymen, who are said to have broken the ice during the night of 21 February. The *Domestic Annals of Scotland* also refer to an enormous fall of snow in early March, enough to stop all travel and cover the food sources relied upon by horses, cattle and sheep. The Privy Council, viewing the *universal death, destruction, and wrack of the beasts and goods throughout all parts of the country*, apprehended that, without some extraordinary care, there would not be enough lambs

left to replenish the farms with sheep for future use and issued a decree forbidding their consumption.⁷

Although in the Derbyshire Peak the floods that followed the thaw were described as being *not great though many* (Figure 1), elsewhere snowmelt caused significant damage: on the Ouse at York, where the flood disrupted the business of the assizes, inhabitants of several streets were forced to leave their houses, and *many bridges were driven down... and much land overflown... Ten days this inundation continued at the height... After... followed... Fair and dry weather* (Drake's account from 1736, quoted in Tufnell, 1991, p. 225); in Calderdale where the Elland bridge was destroyed (replaced in 1617 at a cost of £495; Rinder and Moody, 2014); in the East of England (Norfolk Record Office (NRO), MC 64/11; unpublished); and on the England-Wales border at Tenbury Wells, where a great stone bridge and a wooden bridge over the river Teme were damaged, cutting off the main route from Wales to the city of London (Worcestershire Record Office (WRO), WQS 1/1/22/83; unpublished). A few miles north at Shrewsbury Abbey, the churchwarden's accounts detail the costs of keeping floodwater out of the church and for re-paving work following the flood (Shropshire Archives (SA), P250/C/1/1; unpublished).

Drought conditions during summer resulted in *a such a scarcity of hay, beans, and barley, that the former was sold at York for 30s. and 40s. a wainload.*⁸ Hay was scarce and consequently expensive in the Derbyshire Peak District too (Figure 1).

The Great Snow of 1614/1615: literary accounts

Frosts, floods and storms captured the imagination and were popular topics for printed pamphlets (Jankovic, 2000). *The Cold Yere 1614⁹: A deep snow: in which men and cattell have perished* (1615), attributed to Thomas Dekker (1572–1632)¹⁰ and printed in 1615 for Thomas Langley (with some passages derived from an earlier work also attributed to Dekker, *The Great Frost* (1608)), is a piece of early modern drama – a play – presented as a dialogue between a London shopkeeper and a North-Country man.¹¹ The pamphlet, like Dekker's earlier

example and others of its time, *offers its readers news, opinion, and a bit of sensation* (Harris, 2015, p. 150) and highlights the contrasts and connections between the capital and the rural north, in terms of wealth, food and fuel production. The two men exchange dramatic stories of the impact of the great snow on the localities with which they are familiar, concluding it to be the worst calamity ever known.

London shopkeeper

To increase which, I pray good Father, tell me what of your selfe you know, or have heard from others touching the effects of this wenderfull Snow, in those Countries Northward, through which you have tra|uelled?

North-Country man

[...] And vpon mine owne knowledge I can assure you, that at other times, when Winter hath but shewen his ordinarie tyrannie, the Countries of Cumberland, Northumberland, York|shire, Lancashire, and all those adioyning, have been so hid in Snow, that a man would haue thought, there was no more possibly to be found in the world.

London shopkeeper

So then you must conclude, that the heapes of Snow in those former times, being this yeare doubled and trebled, the miserie that falles with it, must by conse|quence, be multiplied.

North-Country man

Multiplied! I haue met with some that haue come from the Peake in Darbyshire, others (since my comming to Towne) that haue been in Nottingham, Cambridge-shire, and the Ile of Ely; who verily beleuee (vpon the daily cryes of poore people, not onely there, but in many other Countries besides) that neuer any Calamitie did happen to them so full of terrour, and so sodainely to vndoe them, their Wiues and Children, as this Snow.

The play also contains references to London, Newmarket Heath (Cambridgeshire, where three men are found dead in a pit of snow), York, Cumberland, Northumberland and various locations in Europe. Nearing the end of the dialogue, the London shopkeeper asks the North Country Man what he supposes will follow, giving Dekker the opportunity to detail the floods and drought that many in the country had recently lived through:

⁷*Domestic Annals of Scotland, 1603–1625.*

⁸History of York, 1785, i. 256 in *Domestic Annals of Scotland.*

⁹See 2. Dekker's pamphlet thus dates the snow to 1614 rather than 1615.

¹⁰For a detailed study of Dekker's pamphlets see **Bayman A.** 2014. *Thomas Dekker and the Culture of Pamphleteering in Early Modern London.* Ashgate: Farnham, UK.

¹¹The play is available online through Early English Books Online: <http://eebo.chadwyck.com> (subscription required).

North-Country man

I shall doe my best to satisfie you. When these great Hilles of Snow, and these great Mountaines of Yee be digged downe, and be made leuell with the Wa|ters; when these hard Rockes shall melt into Riuiers, and these white Fethers of Heauen sticke vpon the backes of Floodes; and that sodaine Thawes shall shew, that the Anger of these Winter stormes are mollified: then it is to be feared, that the swift, violent, and vnresist|able Land-currents (or rather Torrents) will beare downe Bridges, beate downe Buildings, ouer-flow our Corne-fields, ouer-run the Pastures, drowne our Cat|tell, and endanger the liues both of Man and Beast, traual-ling on their way; And, vnlesse Gods hand of Plen|tie be held open, a Dearth, to strike the Land in the fol|lowing Sommer.

London shopkeeper

You say right. This Prognostication which your Iudgement thus lookes into, did alwayes fall out to be true.

As well as looking forward in time, the play also looks back to the *one deepe Snow onely* that is featured in the nation's chronicles, 34, 36 or 40 years previous. This is likely a reference to winter 1579/1580 or 1580/1581 (Stow, 1618; Manley, 1955; Tufnell, 1991).

The woodcut illustrating the play (Figure 2) shows some individuals enjoying themselves throwing snowballs – presumably the *wee silly Country clownes* featured in the text – whilst others are struggling through the snow on horseback or trying to



Figure 2. Frontispiece for *The cold yeare 1614: A deepe snow: in which men and cattell have perished...or of strange accidents in this great snow*, attributed to Thomas Dekker. (Source: Early English Books Online).

help cattle that have been buried. *The Cold Year 1614* was republished in 1816 (another well documented anomalously cold year), within *Miscellanea antiqua Anglicana: or, A select collection of curious tracts, illustrative of the history, literature, manners and biography, of the English nation*.

The Great Snow of 1614/1615: inscription

During the extreme winter of 1947, the *Derby Evening Telegraph* looked at *How history was made at Morley*, referencing the narrative of the great snowfall of the 1614/1615 winter within the parish register (Derbyshire Record Office (DRO), D1797/A/PZ/1; unpublished).

Although it has a much longer history, the seventeenth century popularisation of the practice of well dressing in the month of May at Tissington, near Ashbourne in Derbyshire, can also be linked to the weather of 1615. As the wells did not run dry during the severe drought, folklore suggests that garlands of flowers were hung at wells as a token of thanksgiving for providing the whole neighbourhood with water (see Buckton, 2012; Ditchfield, 1896).

Conclusion

Combining information from archival sources and contemporary publications allows us to build up a detailed picture of the 'Great Snow' of 1614/1615, its temporal and geographical coverage, and the associated effects on early modern society. For those who lived through the event, its severity (marked by its magnitude and prolonged nature) made it worth recording and remembering. The presence of the event in a number of documents, many of them parish registers, means that although the extreme volume of snow may have been surpassed as soon as winter 1634/1635, certainly in the north of England (Tufnell, 1991), the snow of 1614/1615 has continued to be referenced in the four hundred years since and particularly so during severe winters.

Harris (2015, p. 150) explains of the 'countryman' in Dekker's earlier pamphlet *The Great Frost* (1608), *he is enchanted by the ice; he can recite a whole history of frosts since the Conquest. This is his heritage, and part of his sense of England. But he comments, too, on the hardships of winter... Those mixed feelings speak across the centuries, attesting to the magic of winters which are often, also, times of sadness*. His later play indicates a continued interest in frosts and snows and their impacts on society (though he may also have been writing to popularise the message that rebellion need not accompany unpredictable weather (O'Brien, 2010)), as well as serving as a text by which memory of the great snow of 1614/1615 is kept alive. Yet Manley (1955,

p. 197) warned that as *the more impressive extremes of our winter weather occur with somewhat dangerous rarity*, their place in the national consciousness, and therefore provision for them, was inadequate. The great snow of 1615, and the drought that followed, are important events in our weather history that we might do well to remember.

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References

- Brigg W.** 1908. *The Parish Registers of Otley, Co. York*. Part 1, Volume 33. Yorkshire Parish Register Society: Leeds, UK.
- Buckton H.** 2012. *Yesterday's Country Customs: A History of Folk Traditions*. The History Press: Stroud, UK.
- Clay JW.** 1897. *The Registers of Elland, Co. Yorkshire*, Volume 1. John Whitehead & Sons: Leeds, UK, pp 1559–1640.
- Cox JC.** 1910. *The Parish Registers of England*. Methuen: London.
- Dekker T.** 1608. *The Great Frost. Cold Doings in London, Except it be at the Lotterie. With Newes Out of the Country. A Familiar Talke betwene a Country-man and a Citizen Touching this Terrible Frost and the Great Lotterie, and the Effects of Them. The Description of the Thames Frozen Over*. Henry Gosson: London.
- Dekker T.** 1615. *The Cold Year 1614: A Deepe Snow: In Which Men and Cattell have Perished...Or of Strange Accidents in this Great Snow*. W.W. for Thomas Langley: London.
- Ditchfield PH.** 1896. *Old English Customs Extant at the Present Time*. George Redway: London.
- Domestic Annals of Scotland.** 1603–1625. *Reign of James VI. Part D*. <http://www.electricscotland.com/history/domestic/vol1ch9d.htm> (accessed 29 November 2017).
- Harris A.** 2015. *Weatherland. Writers and Artists under English Skies*. Thames and Hudson: London.
- Hemsworth JD.** 1896. *The Registers of Monk Fryston, in the West Riding of Yorkshire: 1538–1678*, Volume V. The Parish Register Society: London, UK.
- Horsfall E.** 1925. *The Parish Registers of Heptonstall, in the County of York*, Volumes 1 and 78. Yorkshire Parish Register Society: Leeds, UK, pp 1593–1660.

Jankovic V. 2000. *Reading the Skies: A Cultural History of English Weather*. Manchester University Press: Manchester, UK, pp 1650–1820.

Lawrence EN. 1997. Thomas Short's 300-year weather chronology. *Weather* **52**: 1468–1766.

Lowe EJ. 1870. *Natural Phenomena and Chronology of the Seasons*. Bell and Daldy: London.

Loxley J, Groundwater A, Sanders J. 2014. *Ben Johnson's Walk to Scotland: An Annotated Edition of the 'Foot Voyage'*. Cambridge University Press: Cambridge, UK.

Manley G. 1955. *Climate and the British Scene*. Collins: London.

Manley G. 1963. Snowfall in Britain. *New Sci.* **321**: 68–71.

Manley G. 1969. Snowfall in Britain over the past 300 years. *Weather* **24**: 428–437.

Manley G. 1981. The use of archives and written records in meteorological research. *Archives* **15**: 3–10.

McCall HB. 1909. *The Parish Registers of Kirklington, in the County of York*, Volume 35. Yorkshire Parish Register Society: Leeds, UK, pp 1568–1812.

Morgan JE. 2015. Understanding flooding in early modern England. *J. Hist. Geogr.* **50**: 37–50.

O'Brien M. 2010. Our frozen age and our destroying age: the great frost of 1608 and the midland revolt. *New Directions in Ecocriticism, Fall 2010*. https://www.ideals.illinois.edu/bitstream/handle/2142/25241/o'Brien_matthew_markup3.html (accessed 29 November 2017).

Rinder A, Moody A. 2014. *A Town History Trail*. Greater Elland Historical Society: Elland, UK. <http://www.gehs.org.uk/town%20history%20trail.htm> (accessed 29 November 2017).

Short T. 1749. *A General Chronological History of the Air, Weather, Seasons, Meteors &c in Sundry Places and Different Times*, Volume 1. T. Longman and A. Millar: London.

Staffordshire Parish Registers Society. 1929. Part 1 Parish of Mucklestone, in *Mucklestone Parish Register: Part 1 1555–1701*, Adams PWL (ed.). Staffordshire Parish Registers Society: Stafford, UK.

Stow J. 1618. *The Abridgement of the English Chronicle*. Edward Allde and Nicholas Okes for the Company of Stationers: London.

Taylor H. 1975. *The Parish Register of Almondbury*, Volume 140. Yorkshire Archaeological Society, Parish Register Section: Leeds, UK, pp 1598–1652.

Tufnell L. 1991. Severe snowstorms in Northern England 1600–1649. *J. Meteorol.* **16**: 223–233.

Veale L, Bowen J, Endfield G. 2017. 'Instead of fetching flowers, the youths brought in flakes of snow': exploring extreme weather history through English parish registers. *Arch. Rec.* **38**: 119–142.

Wood A. 1999. *The Politics of Social Conflict: The Peak Country, 1520–1770*. Cambridge University Press: Cambridge, UK.

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