

WINDS OF CHANGE

Richard O Smith meets Storm Force author Andrew Beattie

Oxford-educated Andrew Beattie has written a book about something invisible that has shaped Britain's landscape – literally as well as socially, economically and metaphorically.

Storm Force describes how the wind has affected these isles.

"I have always been interested in meteorology and the effects of weather on people and landscape," says Beattie.

"No other aspect of the weather can have such a wide-ranging influence on human activity. The influence of wind ranges from energy generation to the sculpting of the physical landscape (eg sea cliffs) to destruction in the form of storms and tornadoes."

Then there's the science behind the causes of air movements – covered in *Storm Force* in highly readable detail.

"It's fascinating, as is the place of wind and storms in our popular culture, from the Shipping Forecast with its iconic opening words "warnings of gales". And it's the possibilities that a discussion of wind lends to a variety of topics – economics, culture, landscape evolution, war and the history of science – that led me to write the book," he says.

The wind blows through British history. A storm is referenced in every single Shakespeare play.

Entire Scottish villages have

been buried by sand storms.

The reason homes are usually more expensive on the western rather than eastern side of a city is due to the wind (west to east being the predominate wind flow direction of factory chimney stacks).

Cardinal Wolsey deliberately located Hampton Court to the South West of London to inhale fresh air rather than wafted city stink.

And *Storm Force* reveals both the windiest and least windiest places in Britain.

Oxfordshire features a lot: for starters there's the Bicester Twister.

"The Bicester Twister is a tornado that swept across a swathe of countryside to the west and north of Oxford on May 7, 2012," says Beattie. "It affected a number of towns, including Kidlington and Witney."

As for the terminology? "We know 'twisters' as 'tornadoes' on this side of the Atlantic because of the increasing migration of American usage to Britain – not least through the 1996 film *Twister*," he explains.

There are plenty more Oxfordshire connections with historical weather firsts.

It seems likely that the first Englishman to log a daily journal recording the weather was Merton College fellow William Merle.

He started keeping a daily record in Oxford in 1337 and continued until 1344 by which time he had become a rector in Lincolnshire. Pioneering Oxford physicist Robert Hooke formalised an approach to collecting metrological data in his 1663 work *Method for Making a History of Weather*.

But it was the great storm of 1703 that prompted first-hand accounts of the destructive violence contained within the winds unleashed on an Oxford church and college.

"Several sheets of lead curled off the roof of a new building at The Queen's College and were hurled across Queen's Lane where they smashed through the west window of the church of St Peter-in-the-East, breaking an iron bar in the process," says Beattie.

Such was the defenceless bombardment England suffered on November 27, 1703 that a young writer yet to establish his reputation called Daniel Defoe decided to publish *The Storm* – a book of reportage recounting the events of that fateful day.

It was a boldly original concept. Tracking down eyewitnesses to the storm damage, interviewing them and transcribing their testimony may all be standard journalistic techniques today, but they were innovative at the time.

Beattie has a strong Oxford connection



Seven sisters

too: he read geography at Mansfield College. Since 1992 he has split his time between teaching geography at a London school and various writing projects – authoring travel and historical guides and contributing to the Rough Guides series.

“I have also written a number of children’s plays, one of which, *Arthur: Boy King of Britain*, was performed last year at Christ Church Cathedral School in Oxford,” he says.

Beattie arranged a year’s sabbatical from teaching to write and research *Storm Force*, travelling extensively in the process.

The book reveals the windiest places in the UK.

Cairn Gorm and the Butt of Lewis make a joint claim to be the UK’s breeziest spot, although both are uninhabited.

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DID YOU KNOW?

Weather forecasts have been around for a surprising amount of time, but the first to formalise them into scientifically analysed bulletins was ship’s captain Robert Fitzroy.

In 1860, Fitzroy – who attended that year’s famous Darwin debate at Oxford’s Natural History Museum armed with a large Bible for whacking, rather than quoting, in case matters turned violent – initiated the world’s first weather forecast.

Six months later he issued the first ever storm warning to mariners.

Nowadays the Shipping Forecast is broadcast on Radio 4. Is it under threat in the age of modern communication?

“The Shipping Forecast was actually broadcast on Radio 2 until 1978, as it needs to be broadcast on long wave as these signals go furthest. It needs to be picked up across a vast swathe of the Atlantic stretching from the seas off Iceland to those off Portugal,” says author Andrew Beattie.

“In 1978 the BBC reorganised its frequencies so the Shipping Forecast was transferred to Radio 4. It is arguable, with modern technology, whether the forecast still needs to be broadcast, as ships can pick up information via the internet. But internet connections at sea are less reliable than long wave radio.”

The current Master of St Peter’s College, Oxford and former controller of BBC Radio 4 Mark Damazer refused to remove the station’s four daily forecasts, citing “one day the broadcasts may save someone’s life”.



A storm hits Oxford

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So where is the windiest place in Britain where people (obviously of the very hardy variety) actually live?

The answer is the 750 dwellers who live on – or, more accurately, cling onto – Tìree in the Western Isles.

“I visited the island of Tìree,” says Andrew. “It’s the windiest inhabited place in Britain.”

Tìree is a small island between Mull and Barra off Scotland’s west coast. Plans for a vast wind farm just off the coastline – which seemed as logical as building a coal mine above Britain’s richest seam (only without the resultant CO2 emissions) – were inexplicably dropped recently. Yet the wind’s power has been harnessed for centuries in the UK.

The Somerset Levels and the Fens of Lincolnshire, Cambridge and Norfolk were initially drained by wind power.

In the 16th century Queen Elizabeth I was petitioned by several landowners expressing their intention to dig drainage ditches. Windmills were built as power pumps drawing water from the land into those newly dug drainage channels. The enterprising Earl of Bedford devised an interconnecting drainage network, designed by the Dutch and powered by the English wind.

“No other country has had such a long history of harnessing the power of wind to grind corn, drive industrial machinery, pump water or generate electricity – with the arguable exception of Denmark, which pioneered the generation of electricity by the wind,” Beattie states.

Windmills remained the cutting edge technology for centuries after their introduction to Britain in 12th century made bringing us our daily bread a significantly easier task. Before windmills, the expression “the daily grind” was literally just that: you tediously ground your bread flour by hand every day.

The wind may have unleashed its fully destructive force on the UK on numerous charted occasions. Yet those same howling winds have sometimes been (storm) forces for good.

Where it not for a strong gale one afternoon in 1588 – subsequently christened the Protestant Wind – then there’s a more



The island of Tìree in the Inner Hebrides is the windiest inhabited place in Britain

than reasonably chance the inhabitants of Blighty would be conversing in Spanish today.

The far superior Spanish Armada, regardless of whether Drake’s bowls fixation is likely apocryphal or not, meant the English fleet would not have stood a chance were it not for a wind blowing the entire 130 Spanish ships so much off course they ended up in the North Sea. The Spanish fleet sustained such damage bobbling along the swirling seas that many ships were smashed to matchwood. Remember it is the wind, not the sea, that creates its waves.

However, on other occasions the wind has not favoured Britain militarily – the D-day landings being a case against.

Elsewhere Beattie recounts how Britain’s landscapes – especially that defining trademark of Britain the white cliffs of Dover – were formed by the wind, the driving force behind the sea.

“Much of the drama of our coastline is the result of windblown waves’ impacts on coastal scenery,” says Beattie.

Each year the Shetland Islands records over fifty gales.

In order to constitute the description of a gale, the wind must blow at a velocity of 64kph (35 knots) or greater.

But that’s not the only qualifying criteria. This wind speed must be maintained for a minimum of ten minutes.

It is not the only pleasingly abstract method for delineating wind speed. There’s a whole scale of them – the Beaufort scale to be exact.

Using the pleasingly eccentric and unswervingly British measurements for registering wind strength, the Beaufort scale deploys umbrellas, dislodged dust

and rustling paper as scientific units of measurement. Beaufort’s coherent illustrative descriptions, devised in 1805 by naval officer Francis Beaufort and still used today, grades wind levels that include: “Dust and loose paper raised” (no. 4) and “umbrella use becomes difficult” (no. 6).

What place does Beaufort’s scale have in modern forecasting: quaint and archaic or provides jargon-busting clarity?

“Both. This sort of description provided early weather observers with something specific to record on tables: a figure, rather than a wordy description,” answers Beattie. “They could observe the weather conditions that were current and then judge the appropriate wind level. This might be useful if they did not have a reliable instrument that could measure wind velocity.”

As for the UK’s least windiest spot? Well, the book names two places, though their status as Britain’s least breeziest place is not official.

Unsurprisingly neither are seaside locations, it’s a probable dead heat between Stockport and Chesterfield.

“That both locations are a fair distance inland is telling,” says Beattie. “Wind velocities always decline as distance from the coast increases.”

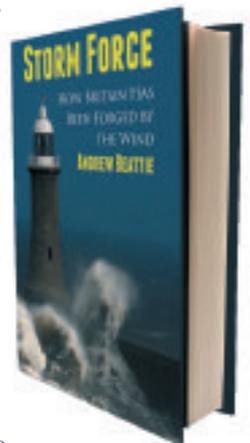
Does that make Oxfordshire one of the least windiest places in the UK?

“Oxfordshire is a long way from the sea and is not particularly high, so the county has low wind speeds as a result,” says Beattie.

“Although there are plenty of other flat, inland places in Britain, as you go north these places are more and more influenced by the storm systems that cross the country.

So Oxfordshire, with its relatively flat, low-lying, non-coastal and southerly location, is inevitably going to be one of the least windy parts of Britain.”

Storm Force by Andrew Beattie, Signal Books, £14.99.



What does Beattie think of storms being named?

“It’s a good idea,” he says.

“The practice of naming Atlantic hurricanes dates back as far as 1953 (the names of these tropical storms are chosen by the National Hurricane Centre in Miami) and we have taken over sixty years to catch on.

“Naming storms gives them more of a personality than simply identifying them by the latitudes. Before the Met Office policy the Free University of Berlin was tasked with the naming storms that cross Britain. One such was the storm that crossed

Scotland in December 2011, which the Free University christened Cyclone Friedhelm.”

Storms christened by the Met Office as Abigail, Barney, Clodagh, Desmond, Eva, Frank, Gertrude and Henry have followed.

“On Radio 4’s The Now Show Steve Punt remarked that the list of named storms read ‘like morning registration in a middle class primary school’ which to my mind is very apt! Imogen, Jake and Katie have all passed over in recent months, doing nothing to dispel this notion.”