

## How Britain has been Shaped by the Wind

Records are all very well: but they are not, by definition, typical. Yet average wind speeds measured around Britain tell the same story as the extremes: they reveal that even as far as averages are concerned, these islands are the windiest in Europe. The meteorological situation in which our islands find themselves has been both a blessing and a curse, and has helped shape the country's history, geography, economy, culture and natural heritage in ways that are as surprising as they are innumerable: and it is to a discussion of these effects that this book is dedicated.

It is easy to focus on the negative aspects of our breezy location: gales batter Britain with notorious regularity, steered in our direction by high-altitude winds known as jet streams—and if the usually erratic jet stream becomes “stuck” in the same position, then places underneath it can end up with a serious soaking, as the inhabitants of the Somerset Levels discovered during the miserable, rain-lashed January of 2014. Yet the gales that characterized the winter of 2013-14—which were also responsible for tipping cliffside houses into the sea in Norfolk, sweeping away railway lines that hug the coast at Dawlish on the Devon coast, and drenching coastal settlements from Cornwall to the Western Isles with seawater thrown ashore by tremendous waves—were in no way the most serious to have afflicted our islands. It is the stories of the storms that were even more deadly than these that lie at the heart of this book: specifically, subsequent chapters look at the destruction wrought by the storm of 1703, which was chronicled in detail by the writer Daniel Defoe; the storm of 1953, which swept a wall of water over the coastline of eastern England, causing more deaths than any other peacetime event during the twentieth century; and the “Great Storm” of 1987, recent enough to be within living memory of many people living in Britain, whose destructive power remains apparent in the still-recovering woodlands of England's southern counties. All these storms wreaked havoc: but the havoc in each case was very different, because each storm left behind its own unique meteorological footprint, and each affected Britain during very different eras of its history. As the chapters of this book devoted to these storms demonstrate, each event came replete with individual stories of triumph and tragedy that arose from the very worst weather that has ever been thrown at these islands.

It is tempting to think that gales can only bring misery in their wake: yet this is not always the case. In sixteenth-century England God was thanked for the “Protestant Wind” that blew the ships of the Spanish Armada into the North Sea and smashed them to matchwood on the gale-lashed coast of western Ireland. But as Chapter Eight of this book recalls, the wind has not always been as kind to this country's military fortunes, and other ventures, most particularly the D-Day landings, have been cursed by unfavourable winds.

Even when there are no gales, the wind continues to blow: periods of complete calm are fairly rare in Britain, and the incessant, hour-by-hour, day-by-day blowing of the wind influences our islands in many ways. On the coast the wind (through its creation of waves) is responsible for the formation of cliffs and beaches, and for the

development of sand dunes that support a unique ecology: that all these landforms are in a constant state of flux is due solely to the fact that the wind rarely stops blowing, constantly shaping and reshaping these landforms. In fact much of the drama of our coastline is the result of wind-blown waves, whose impacts on coastal scenery are examined in detail in the third and fourth chapters of this book. And it is not just our coastal landscape that has been sculpted by the wind: inland, in very different locations in Kent and Yorkshire, the wind has left rock formations that are reminders of a much colder, windier, tundra past, while across the country constant erosion of soil by the wind causes farmers millions of pounds of losses each year.

These losses are just one example of the wind's negative impact on the British economy. Because costs can involve much more than farmers losing the fertile topsoil from their fields: to pick a much more potent example, a representative of Plymouth's Chamber of Commerce estimated in April 2014 that the damage to the rail lines at Dawlish had cost that city's economy some £1 million for each day that trains were unable to link Devon's main business hub with the rest of Britain. Then there is the loss of cliffside homes and businesses to coastal erosion, and of course the structural damage wrought by gales. Yet these losses are balanced by the positive impacts of our windy location: tourists flock to see the dramatic scenery of England's southwest coast, the geological end-result of millennia of storms, while wind has been a major source of power since medieval times—harnessed first by the corn millers of southern and eastern England, and later on by the farmers of the Fens and the Somerset Levels, who drained their land with wind-driven pumping machines. Later still early industrialists utilized wind power to operate every conceivable type of machine, from those that manufactured chemical dyes for the textile industry to pumps that drained the water from the tunnels of mines. In more recent times the energy-creating propensity of wind has been used in electricity generation—and, as the last chapter of the book makes clear, the smothering of large areas of moorland with wind turbines has become one of the great environmental controversies of our age.

It is with all these aspects of how Britain has been shaped by the wind that this book is concerned: from damage caused by gales to the harnessing of power and energy; from literature (and even operas) inspired by the havoc of storms to the journalistic tradition that Daniel Defoe founded through his *reportage* of the 1703 storm; and from the ripples on beaches created by waves to landforms such as the great sea stack on the Orkney coast known as the Old Man of Hoy. Indeed, it is this book's contention that a surprising amount of our history and geography is the direct result of the wind that blows constantly around our coast, across our hill ranges and even through the streets of our cities. But before a thorough examination of this can take place, it is necessary to understand what causes the wind to blow to such good or ill effect in the first place.