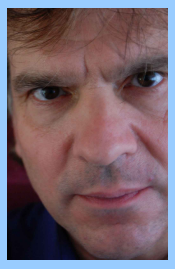
Prime Meridian

(1) July 20, 2012

2nd edition



Martin Heath, Editor:

This newsletter will follow global environmental issues alongside the unfolding cycle of the seasons in Southern England.

South East England is a definitive location on the globe, not only because the Prime Meridian passes through it, but because it was in S E England, at the old Royal Observatory at Greenwich, that the internationally-recognised long. 0º was established.

A succession of Astronomer Royals, working at the Observatory to map the stars, defined their own meridians for measuring the sky, each slightly different. The present Prime Meridian is that used by Sir George Biddell Airy (1801-1892). In 1894, it was accepted internationally for mapping and navigation.

The Meridian at Greenwich is a place where Earth and sky, space and time, meet in visitors' minds.

Whenever I visit Greenwich Park and look down from the higher ground on which perches the Observatory, I am reminded that we live on a vast globe whose daily rotation marks the passage of time and spins up the Earth's weather systems.

From this vantage point, one can take in the looping course of the River Thames, developed over geological time, and beside it, the stately buildings which are now occupied by Greenwich University. Here, there once stood England's principal palace, occupied over the centuries, by a succession of dynasties. The broad sweep of history that lies behind us encourages us to wonder how our world might change during the coming years, decades and centuries, and about what we may do individually and collectively to secure a positive future.

Running from pole to pole, the Prime Meridian reminds us also that South East England is part of a bigger, global picture. It calls to mind the environmentalist's call to "*think globally and act locally.*"

Northwards, one sees the serpentine coils of the River Thames, which, on sunny days, gleam here and there between the buildings crowding its banks. The meridian crosses the River and slices through London. Beyond the business section of the city, where the eye can no longer follow, it meets the residential suburbs before escaping into gently rolling English countryside. It leaves the shores of Britain behind on the windswept coast of East Yorkshire and continues, curving with the surface of our planet, aiming straight for the North Pole, across stormy seas and the pack ice. Southwards, the view is obscured by trees. The meridian runs through suburbs and the fields of southern England. It crosses the Channel, passes through France and the snowy Pyrenees into Spain. Across the Mediterranean, it travels through West Africa and after it leaves the warm shores of Ghana, lined by coconut palms, it does not meet land again until it hits ice-bound Antarctica.

What does the future hold for this little planet encircled by the Prime Meridian and its long. 180° counterpart? During the 20th and early 21st Centuries, our civilisation achieved much that would have astonished those of the 19th Century. It has brought beneficial revolutions in agriculture, medicine and communications to a large proportion of the world's inhabitants. At the same time, its negative impact upon planet Earth threatens to undermine its own security and progress.

This newsletter is produced as part of the outreach programme of the Ecospheres Project. In common with other eco-campaigners we argue that everyone must shoulder responsibility for stewardship of our planet's natural life support systems and of the beauty and biodiversity of our landscape.

One of *Prime Meridian*'s roles, however, will be to tackle an aspect of the environmental challenge that has been largely neglected. We shall emphasise the essential role that must be played by scientific research in monitoring and understanding global change, and so, in enabling us to better protect human communities around the world. "*Planetary stewardship*" is a much-used cliché, but only by deepening our working knowledge of our home planet may our civilisation aspire in any meaningful sense to planetary stewardship.

Left: The passage of the seasons from winter through harvest into autumn - a field beside Beacon Wood, Kent. From top to bottom, Jan. 7, April 17, June 4, July 19, Oct. 23, 2010.

Weather in March, 2012

Above: West Kingsdown, Kent. March 3, 2012.

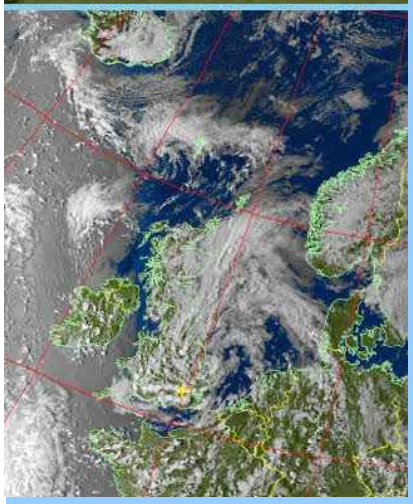
During most of the month, high pressure conditions persisted over the UK, and March 2012 was notably sunny. On March 1, the temperature hit 16.7°C at Herstmonceux, Sussex. Rain, including heavy showers with strong winds, occurred from March 3 to 4, with unsettled weather until March 6. During the sunnier weather that followed, a temperature of 19.0°C was recorded on March 15, at Gravesend, Kent. Unsettled weather followed from March 17 to 18. Sunnier conditions returned, with 22.8°C noted at St James's Park and Heathrow on March 28. From March 30 to 31, the high pressure area had moved west, allowing a cooler N to NW air flow. The maximum UK temperature of 23.6°C was recorded at Aboyne, Aberdeenshire on March 27, whilst the minimum temperature also occurred in Aberdeenshire, at Braemar, on March 18.

For the UK as a whole, this was the driest March since 1953, and the 5th driest since 1910. It was the warmest March since 1957 (being 2.5°C above the 1971-2000 norm) and the third warmest since 1910. For SE and central S England, the mean max. temp. of 13.5ºC was 3.4ºC above the 1971-2000 norm and the min. temp, of 3.4ºC was 0.6ºC above the norm. There were 182.6 hrs sunshine (164% of the norm) and just 27.8 mm of rainfall (47% of the norm).

Upper left: March 26 - Britain from Space (NASA). Lower left: March 28 - Blackthorn (*Prunus spinosa*) flowers on a hedgerow planted in Belair Park, West Dulwich, London. Below: Ornamental cherry on a West Dulwich street.

Weather in April, 2012

Above: The margin of Beacon Wood, Kent comes to life. April 2, 2012.



Low pressure areas persisted around the UK for most of April. They brought unsettled weather, which was unusually cool. Temperatures ranged from -8.2°C at Braemar (Aberdeenshire) on April 5 to 19.7°C at Kew Gardens on April 30.The first two days of the month saw a ridge of high pressure and sunny intervals. April 3 brought unsettled weather with sunny but chilly intervals again on April 5. Clouds and rain followed from April 6 to 9, and rains and thunderstorms interspersed with sun continued from April 11 to April 15, when more northerly, dry and cold conditions pertained with hail in eastern areas by day. Frost was widespread on the night of April 15/16, and temperatures fell to -4°C in some places. Rainy conditions followed from April 17 until April 30. On April 19, walkers and a school group in Sydenham Hill Wood, South London, were hit by heavy rain and a hailstorm. On April 28, 36.6 mm of rain was recorded at Hampstead.

April was colder than March, which last happened in 1998, and, temperatures nowhere in the U.K. exceeded 20°C. This was the coldest April since 1989, with a mean temperature 0.6°C below the 1971-2000 norm. It was also the wettest April on record. For SE and central S England, the mean max. temp. of 12.1°C was 0.4°C below the 1971-2000 norm and the mean min. temp, of 3.5°C was also 0.4°C below the norm. There were 151.3 hrs sunshine (95% of the norm) and an impressive 135.4 mm of rainfall (257% of the norm).

Upper left: Storm clouds tower over Belair Park, West Dulwich, South London, April 19, 2012. Lower left: Weather systems over Britain on April 19 (NOAA satellite; reproduced courtesy of Geoff Hamilton). Below: Heavy rain on the surface of the lake at Belair Park, on April 20, 2012.

Weather reviews are based on Met Office summaries published online.

From the Meridian - a thousand year perspective on history.

The old Royal Observatory was founded by Charles II in 1675. Around Greenwich may be found the evidence of a much longer story of human occupation. On April 19, 2012, a rare anniversary was celebrated on a small green behind St. Alfege's Church – downhill from the Observatory. It was another reminder that the events of our lives and the present day challenge of protecting human communities from the consequences of climate change are part of that deeper historical perspective.

It was 1,000 years to the day since Alfege (Ælfheah in Old English) Archbishop of Canterbury, had been martyred on this site. The event takes us back about one fifth of the time that has elapsed since the origins of writing and into a violent and unstable age.

After his sister Gunhilde had been killed in the St. Brice's Day massacre of Danes by the English (1002), Sweyn Forkbeard, King of the Danes, launched multiple raids on England, extorting large sums of Danegeld. Alfege was abducted from Canterbury Cathedral, in AD 1011, by Danish raiders under Thorkell the Tall, after he had pleaded with them about the slaughter of the town's inhabitants. He then refused to allow a ransom to be raised for him. A night-time attempt by a rescuer to lead him from his damp cell at Greenwich, across the marshes to freedom failed because his ankles were too sore from wearing leg-irons for him to move sufficiently fast. Re-captured, he was returned to Greenwich, where, on the Saturday of Easter week, during a feast, he was killed, apparently spontaneously, by a drunken group of Danes, who had been pelting him with bones. Finally, one of them, whom he had baptised the previous day, slew him with an axe, possibly to end his sufferings. Appalled by the killing, Thorkell defected to the English King Ethelred, with 45 ships. Sweyn Forkbeard re-attacked England from the Humber, led a successful march south and set himself up as the first Danish King of England. Ethelred fled from London to Greenwich, from which he sailed, via the Isle of Wight, to Normandy. In the ensuing kaleidoscope of gangster-style politics, Thorkell fell out with Ethelred and returned to England with Sweyn's son Cnut (second Danish King of England) in 1015, fell out with Cnut in 1021, returned to favour, and then disappeared from history after 1023.

Alfege was canonised in 1078, and the present church is the third to have been built on the site of his martydom. The second, built in 1290, saw the baptism of the future Henry VIII in 1491. It collapsed during a storm in November 1710. Parliament received a petition from the parishioners for funds to rebuild the church. A coal tax, introduced to assist restoration of London after the Great Fire of 1666, was still in place, and the petition was instrumental in directing this income to a new Commission for Building Fifty New Churches. St. Alfege, designed by Nicholas Hawksmoor (c.1661-1736), was the first to rise from this effort. It was built in the period 1712 to 1714 and consecrated in 1718. Hawksmoor's design included a new tower, but the medieval tower was retained, and in 1730, it was re-faced and topped by a spire.

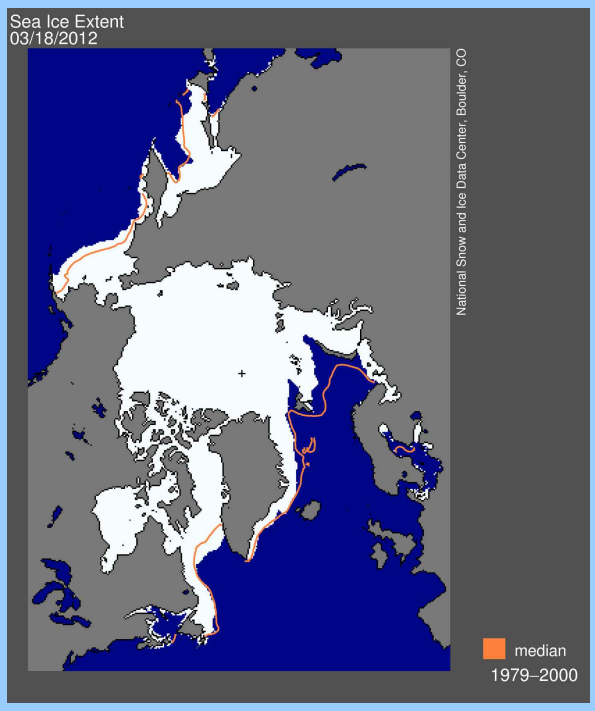
On a rainy afternoon, a full millennium after the slaying of Alfege, and in an age that none then alive could have imagined, Rowan Williams, Alfege's successor as Archbishop of Canterbury, stood before the press' cameras and microphones and spoke of the need for universal reconciliation. "*St. Alfege,*" he reminded his hearers, "*refused to be ransomed because he didn't believe that his own life was worth more than the lives of the peasants of the South East of England who would have had to pay for him to be released.*"

From the life and death struggles of the Viking age, one's mind returned to the challenges of our own pivotal moment in human history. The Earth does not guarantee us a prosperous and trouble-free ride regardless of how we abuse it or how complacent we become about natural threats. It will be a tough task to graduate as true planetary stewards. It will require sacrifice and dedication. Will we act responsibly? Will we achieve the long-term security and well-being of our civilisation? Standing on this spot a thousand years from now, what would meet our eyes?

Upper right: Rain showers over London, seen across the greening branches of Sydenham Hill Wood, on the afternoon of April 19, 2012. Lower right: Hailstones in Sydenham Hill Wood. Below: London's Shard and other towers, around 5 miles (8 km) away, loom indistinctly through the showers

March 18, 2012: Arctic sea ice maximum.

The U.S.A.'s National Snow and Ice Data Center reported that Arctic sea ice reached its greatest extent for the winter of 2011/2012, 15.24 million km^2, on March 18, 2012. With an area 614,000 km^2 below the 1979 to 2000 average of 15.86 million km^2, it ranked as the 9th lowest maximum annual extent in the satellite record. The date at which sea ice reached its maximum coverage in 2012 was 12 days later than the 1979 to 2000 average date of March 6. The lowest maximum on record took place in 2011, when sea ice expanded during the long polar night, to a mere 14.64 million km^2. The NSIDC reported that the nine years from 2004 to 2012 are the nine lowest maxima in the satellite record. After March 18, the melt season was under September, when it shrinks to its annual minimum.



Prime Meridian Editorial:
prime-meridian01@hotmail.com

Images (unless otherwise stated): M. J. Heath.

On the side of a hill near Ash, Kent, a small patch of woodland surrounded by fields catches the rays of the afternoon Sun. May 26, 2012.