

Prime Meridian

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Image: NASA



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Current Conservation Efforts in Ireland - Irish Butterflies.

Susannah Peel

Ireland has affectionately been referred to as the Emerald Isle, and for good reason. With a mixture of woodland, lush green fields, bog and marshland, it lives up to its name.

However, Ireland is not without conservation concerns and the inevitable problems of over-use and depletion of its natural resources have led to reduced biodiversity within its ecosystems. The loss of biodiversity was supposed to be halted by 2010, as the National Parks and Wildlife Service (NPWS) points out, but a lot remains to be done. At the same time, huge efforts are being made to preserve its heritage and iconic species at risk of extinction. What is the current state of conservation in Ireland?

Butterflies are a useful starting point when looking at biodiversity. They are a useful indicator of ecosystem health since they react quickly to changes in their environment (either positively or negatively). The recently published red list of butterflies is disturbing, showing that 18% of butterfly species in Ireland are in danger of extinction and a further 15% near threatened. The small mountain ringlet has been declared extinct.



Left: the silver washed fritillary.

Butterflies have come under direct threat from huge development projects that have been especially prevalent in recent decades. The decrease in traditional farming practices, use of chemical pesticides as well as loss of native hedgerows to create larger fields and grazing of marginal land, are also a problem.

However it is not only farming which impacts butterflies and ecosystem health; the use of chemicals, moss peat and insecticides in peoples' gardens have a large impact.

There have been public awareness campaigns to reduce these factors, however much work remains to be done. Jesmond Harding, Secretary of Butterfly Conservation Ireland, told me that another significant concern was the afforestation of marginal land.

Various projects have been organised in an effort to improve habitat quality for butterflies, for example a work party in February 2012, organised by Butterfly Conservation Ireland, cleared a ride at Lullybeg Reserve, used by many species of butterfly for feeding and by Speckled Woods for breeding. The area also has the potential to attract the Silver-washed Fritillary to breed and evidence of success was recorded. A report from the site showed the following species: Dingy Skipper, Green-veined White, Orange-tip, Large White, Small White, Brimstone, Common Blue, Small Copper, Red Admiral, Painted Lady, Small Tortoiseshell, Peacock, Silver-washed Fritillary, Marsh Fritillary, Ringlelet, Wall, Speckled Wood, Meadow Brown and Small Heath, as well as a newly discovered species, the Cryptic Wood White.



Right: Wood Brown.

One of the richest sites for butterfly species is Fahee North, near Carron in County Clare. Some of the country's most range-limited and threatened species live and breed there, including all four Irish Fritillaries, the Dingy Skipper, Wood White, Brown Hairstreak, Grayling, Wall, Small Heath, Transparent Burnet and Wood Tiger. The richness of this site is largely thanks to its mosaic of high quality habitat types which include open limestone pavement, scrubby pavement, wetland, heath, limestone grassland, hedgerow and scrub. There is also a nearby close cropped sward and un-grazed sward, both of which add to the range of species found.



Above: Peacock butterfly.

Combined with the efforts of conservation groups and the small number of National Parks in Ireland, there are many things people can also do individually to help create suitable habitats for butterflies (which in turn improves ecosystem quality and leads to an increase in biodiversity of many other native species). As well as stopping or at least reducing pesticide use in their gardens, people can attract butterflies by growing native trees, shrubs and plants, herbs and scattered flowers. These provide better shelter and food for butterflies and other insects than newer, more ornamental hybrid and exotic plants.

Susannah Peel is a zoology graduate interested in promoting awareness of environmental issues. She took the photographs accompanying this article during the summer of 2013.

Prime Meridian follows global change and the cycle of the seasons in Southern England. It is published as part the outreach programme of the Ecospheres Project - Earth Campaign.

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There are other protected areas in Ireland that help to preserve biodiversity, including the Burren, from the Irish *Boireann* meaning “Great Rock” also in County Clare. The Burren is one of the largest karst landscapes in Europe. This is a type of landscape which has been shaped by the dissolution of a layer or layers of soluble bedrock (in this case limestone). It measures approximately 250 square kilometres and much of it has been designated as Special Areas of Conservation (SACs), under the EU Habitats Directive. A small portion of the Burren has also been designated as Burren National Park. It is one of only six National Parks in Ireland and the smallest in size (15 km²).

Below: The limestone exposures of the Burren.

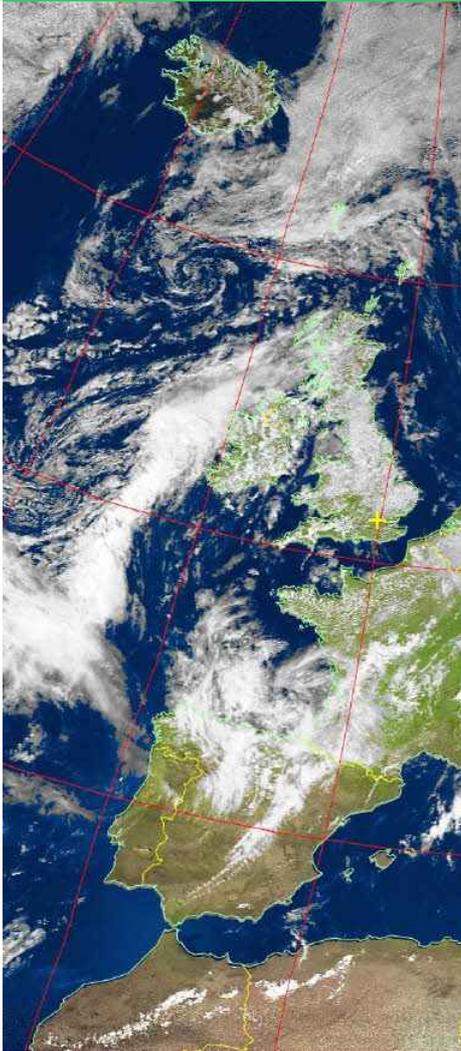


Seasons in South East England August, 2013



For the UK as a whole, the provisional mean temperature was 15.6°C (0.7° higher than the 1981-2010 average). Hot and humid air from the south saw the UK's highest August temperature of 34.1°C at Heathrow (Greater London) on Aug. 1, and 26°C was widespread on Aug. 2 despite rain. Brighter weather from Aug. 3 to 4, but more normal temperatures. Thunder on Aug. 5, but dry and sunny on Aug. 6. Aug. 5 saw the UK's lowest August temperature (0.2°C, at Kinbrace in Sutherland). It was mostly dry and sunny from Aug. 7 to 13 (overnight rain Aug.8/9), and the far SE remained dry despite rain on Aug. 14. Sunny spells and showers during the period 15 to 18, sunny on Aug. 19 to 20. Much rain 22 to 24. Aug 25, settled but heavy afternoon showers in Oxfordshire and Wiltshire. Aug. 26 to 31 saw dry and sunny weather, with showers on Aug. 30. The Met office summed up the weather after Aug. 4: "*Frontal systems brought rain at times, mainly to the north-west, but there was also plenty of fine, sunny weather, particularly in the south and east. The main exception was Saturday 24 August when 30-50 mm of rain fell across parts of eastern England, with torrential downpours causing flash flooding in Essex.*"

Top: August 31, 2013. View along hedgerow near West Kingsdown, Kent. Upper left: August 29. Elder (*Sambucus nigra*), West Dulwich, London. Lower left: August 31. Berries of wayfaring tree (*Viburnum lantana*) ripen in a hedgerow near West Kingsdown. Below: August 20. Ripening apples. Rosendale allotments, South London.



SE and central S England, mean max. temp.: 22.6°C (0.8°C); mean min. temp.: 12.5°C (0.4°C). Hours of sunshine: 214.7 (105%). Rain: 41.3 mm (72%). Anomalies re. 1981-2010 norm in brackets. Source: online Met Office data.

Global climate; August 2013.

For yet another month, temperatures remain at the upper end of the record from 1880. According to the NOAA, the mean global temperature for August 2013 (combining data for land and sea) was $0.62 \pm 0.12^\circ\text{C}$ above the 20th C average of 13.8°C. August 2013 tied with August 2005 as the 4th warmest August on record (1998 was warmest). For the world as a whole, the surface of the land was $0.85 \pm 0.20^\circ\text{C}$ warmer than the average (7th warmest on record; August 2010 was warmest), and the ocean was $0.53 \pm 0.05^\circ\text{C}$ warmer (5th warmest; August 1998 and 2009 were joint warmest). For the Northern Hemisphere the combined result for land and ocean was $0.69 \pm 0.15^\circ\text{C}$ (5th warmest; warmest was August, 2010). Land in the Northern Hemisphere was overall $0.84 \pm 0.18^\circ\text{C}$ above the average (8th warmest; warmest was August 2012), with the ocean $0.60 \pm 0.05^\circ\text{C}$ above the average (3rd warmest; warmest 2005). In the Southern Hemisphere, the combined land and ocean temperature was $0.54 \pm 0.07^\circ\text{C}$ above the mean (5th warmest; August 1998 was warmest). Land in the Southern Hemisphere was overall $0.87 \pm 0.13^\circ\text{C}$ above the average (4th warmest; warmest was August 2005), with the ocean $0.48 \pm 0.05^\circ\text{C}$ above the average (9th warmest; warmest 1998). Source: NOAA National Climatic Data Center, State of the Climate: Global Analysis for August, 2013, published online. Data provisional.

Top, left to right: Spear thistle (*Cirsium vulgare*). Gatekeeper (*Pyronia tithonus*) on creeping thistle (*Cirsium arvense*). Left: Weather on August 6, 13:26 GMT from NOAA 19 satellite (courtesy Geoff Hamilton). Below: August 13. Rainbow just before sunset over fields near Ash, Kent. Images: M. J. Heath unless specified otherwise. © M. J. Heath 2013.

