



Prime Meridian (159) July 30, 2022

Our Sun rose on the first day of June 2022, its light glittering off dew drops on a hillside in Kent, England.

June 2022: NOAA reported a warming world:

The 6th warmest June in a global record beginning in 1880.

Earth's land surfaces saw the 2nd warmest June on record.

We share some seasonal views from South East England.



**The day of the Northern Hemisphere's Summer Solstice. June 21, 2022.
The image was taken from DSCOVR at 11:31:05 UTC.**

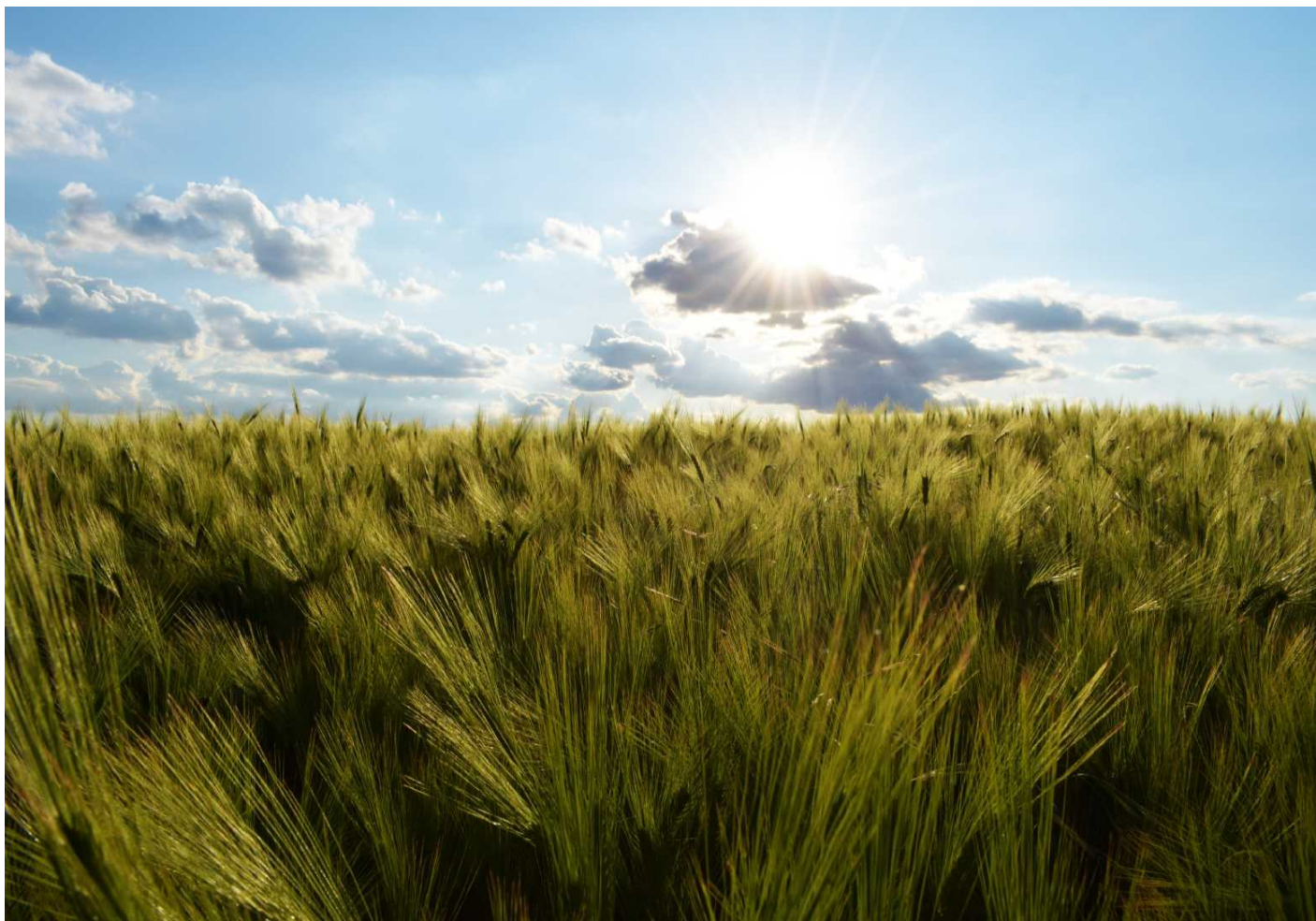
DSCOVR: Deep Space Climate Observatory is a NOAA satellite. It is located at the Lagrange point L1, 1.5×10^6 km inwards of the Earth orbit, where, trapped by both the Earth and the Sun, so it follows the Earth along in its orbit. NASA provides images from the Earth Polychromatic Imaging Camera.

<https://epic.gsfc.nasa.gov/?date=2022-06-21>

Global climate: The 6th warmest June in a 143 year record.

The USA's National Oceanic and Atmospheric Administration (NOAA) reported: "The global surface temperature for June 2022 was the sixth-highest in the 143-year record at 0.87°C (1.57°F) above the 20th century average. This month was also 0.08°C (0.14°F) cooler than the warmest June on record set in 2019. The ten warmest Junes have all occurred since 2010. June 2022 also marked the 46th consecutive June and the 450th consecutive month with temperatures, at least nominally, above the 20th-century average."

<https://www.ncei.noaa.gov/access/monitoring/monthly-report/global/202206>



Above: On the afternoon of June 1, 2022, barley is ripening in the sunshine on the hill beside Green Streat Green, Kent. **SAFETY NOTE: Do not look at the Sun with your eyes, cameras, binoculars, or telescopes.**

Seasons in South East England

June 2022

London saw the UK's highest temperature.

The provisional UK mean temperature was 13.9°C, which is 0.6°C above the 1991-2020 long-term average. England's mean was 14.9°C (0.5°C).

In our region, England SE & Central S, as a whole, the warmest temperature was 21.0°C (0.9°C above the 1991 to 2020 average). The coldest was 10.0°C (-0.3°C below the norm). Our region was the second monthly warmest in the UK (East Anglia's warmest reached 21.4°, 1.4°C above the 1991-2020 norm). The mean was 15.5°C, which was 0.3°C above the 1991-2020 norm and 1.2°C above the 1961 to 1990 norm. There were 242.1 hours of sunshine (116%) and 33.3 mm of rain (62%).

The UK's coldest recorded temperature of -1.5°C was at Altnaharra, Sutherland, Scotland on June 2. The warmest was 32.7°C, which was recorded at Heathrow (Greater London), and also at Santon Downham (Suffolk) on June 17.

<https://www.metoffice.gov.uk/research/climate/maps-and-data/summaries/index>
<https://www.metoffice.gov.uk/research/climate/maps-and-data/regional-values>



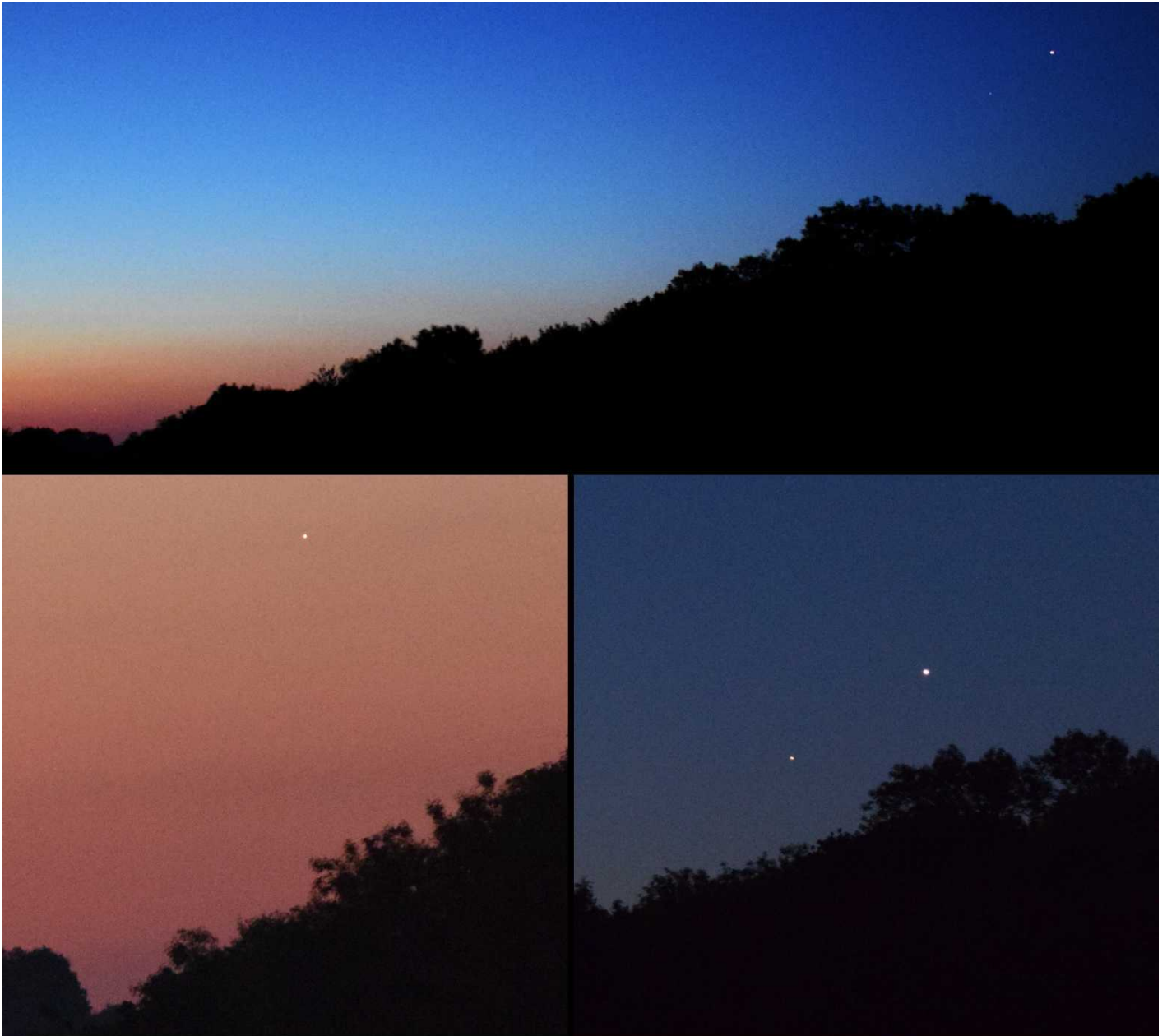
June saw familiar wildlife around woods and fields.

Above: Dog roses (*Rosa canina*) in a hedgerow on the hill above Longfield, Kent. June 2, 2022.

Right: The common mallow (*Malva sylvestris*), at Rochester, Kent. June 9 (Megan Bruce).

Red Admiral (*Vanessa atalanta*). Path in Beacon Wood Country Park, Kent. June 26.





Above, from left to right: Venus, Mars and Jupiter. On June 2, 2022, six major planets lay towards the dawn sky, Saturn, Jupiter, Mars, Venus, Uranus and Mercury. The last two were too close to the Sun to be seen in the sky. Here, three of them can be seen. Jupiter, the Sun's largest planet is over five times more distant from the Sun than Earth. Its polar radius is 10.5 and equator 11.2 greater, and its mass is 317.8 Earths. Mars' is 0.53 Earth's diameter. It swings in to 1.381 and out to 1.666 the distance between the Earth and Sun. Venus is 0.72% our distance of from the Sun. It has 0.95% Earth's diameter and 81.5% its mass. Venus gets about twice the Earth's solar energy, and beneath a thick atmosphere of mostly carbon dioxide, its oceanless surface is at 460°C. Astrobiologists continue to speculate about the upper clouds of Venus and Jupiter, and beneath the surface of Mars.

Below: The waxing crescent Moon in the early evening of June 1 (left) and June 2 (right).





June 2, 2022 was the Queen's Platinum Jubilee, and the evening saw beacons and fireworks across the UK. Above: A beacon on the tower at St Peter and St Paul Church at Ash, Kent. Below: A firework display took place at Longfield Community Park, Kent (photo from Megan Bruce).





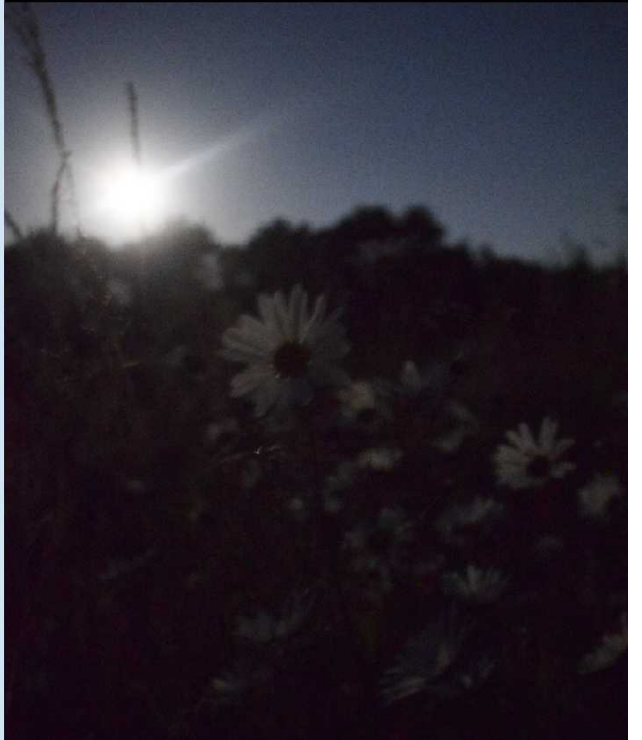
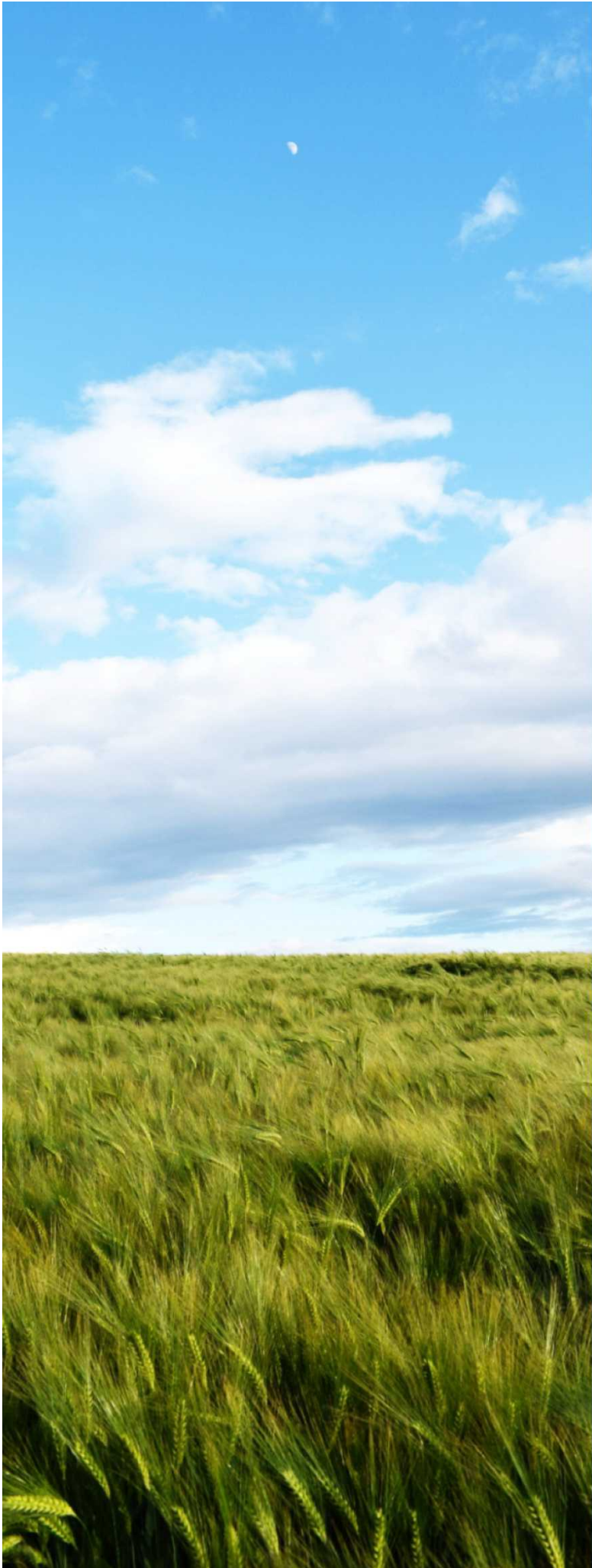
Above: Barley on the hill near Green Street Green. Kent. June 12, 2022.

Left: June 21. Pyramidal orchids on the edge of Beacon Wood Country Park, Kent. (*Anacamptis pyramidalis*).

Centre: A honeysuckle, Latin name *Lonicera periclymenum*, was flowering in a hedgerow between a road and field near Green Street Green, Kent. June 23, 2022.

Next page: On the afternoon of June 8, a waxing Moon, slightly beyond half, could be seen in a blue sky between clouds. We are looking up from of the ripening yellow-green fields above Green Street Green, Kent). At right top: Closer look at the Moon, June 8. Centre: Full Moon on June 14, lighting up daisies at New Ash Green, Kent.







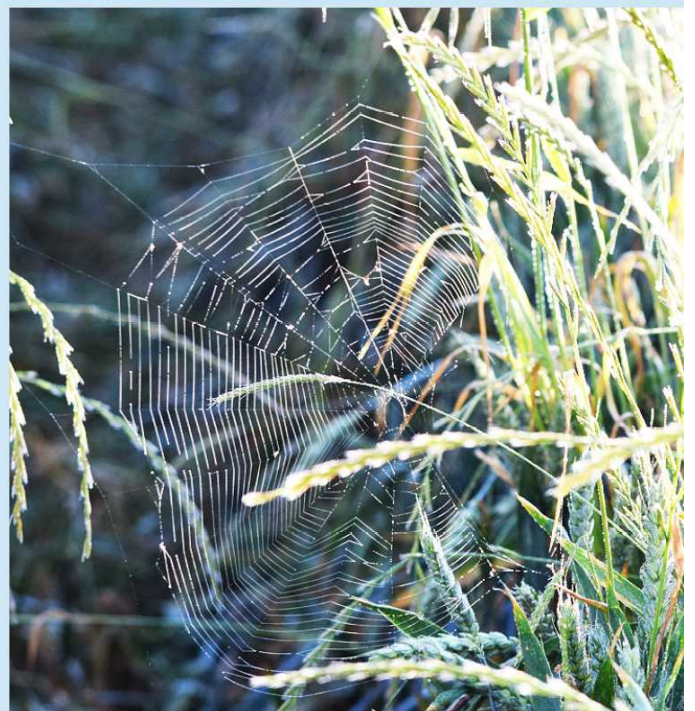
The morning of the Summer Solstice, June 21, 2022.

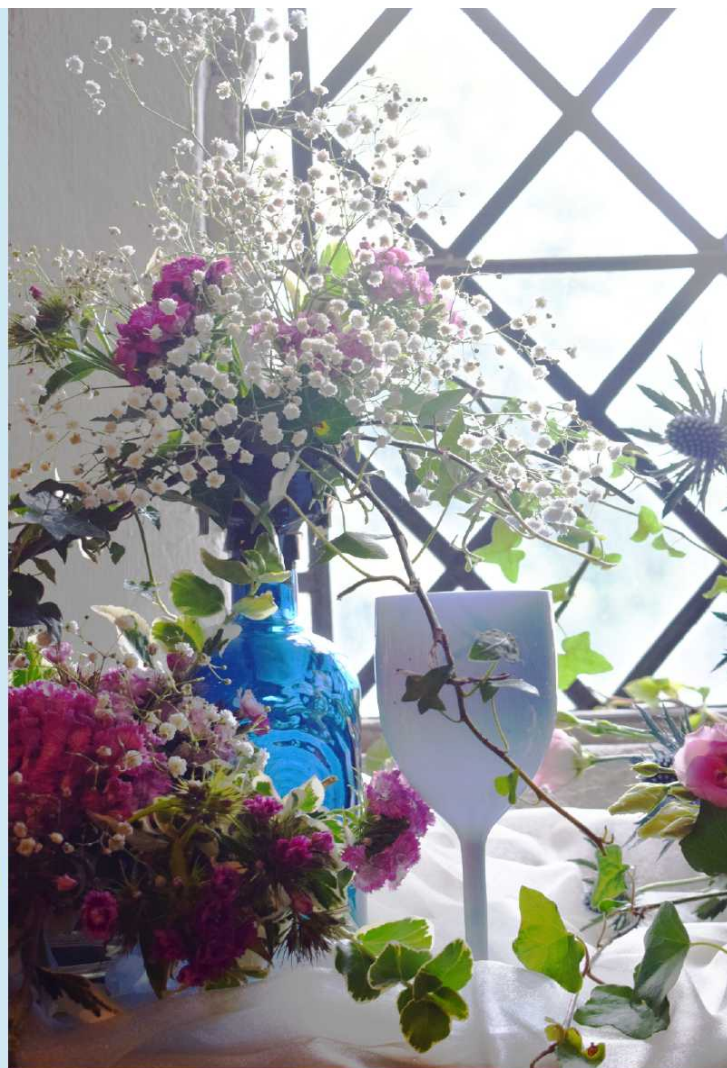
Above: Grasses dripping with dew in a misty field at Ash, Kent.

Centre: Looking from the high ground at Ash, across the valley at Hartley Bottom, and up onto the next hill at Ridley, Kent.

Lower right: A spider's web between stalks in a field on the hill at Ash, Kent.

At the exact moment of the Summer Solstice (09.14 UT), the Earth lay 152,022 million km from the Sun.





Left: Viper's bugloss (*Echium vulgare*). Rochester, Kent (Megan Bruce). On June 9. 2022.

Top: An annual flower show in St Peter and St Paul Church, Ash. June 25.

Below: The waning Moon from New Ash Green, Kent. Left to right, shrinking to a sliver through June 15, 22 to 25.





Above: Barley continuing to ripen on the field looking down towards Green Street Green. Kent. June 26. Below: Wheat field on the hill at Hartley, Kent. June 30, 2022. Just a few weeks more, and the crops will be harvested on these sites.





Above: The brilliant white flowers of the elder (*Sambucus nigra*) are a welcome event of the summer, and were seen here in the hedgerows near Green Street Green, Kent. June 14, 2022.

Prime Meridian.

Prime Meridian is published by the Ecospheres Project, a research and media collaboration. It looks at the cycle of the seasons in South East England and looks out from the Prime Meridian into the global environment. It steps back to look at the Earth in its astronomical context. The threat caused by human activity to the ecosphere of Planet Earth goes beyond climate alone. The Earth Crisis, as we have called it, involves numerous factors, which interact with each other in a complex way. The authors pursue also the search for other habitable worlds. This is an area of research in which the editors have been active. We assert the moral duty of space exploration to inflict no harm on life elsewhere from human impact.

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