



Isle of Wight  
National  
Landscape

# Discover Dark Skies FOR NIGHT TIME ADVENTURERS!

# WELCOME STARGAZERS!



The Isle of Wight has some of the darkest skies in England and Europe. 'Dark skies' are areas where there is little ambient light pollution and the stars are clearly visible.

The Isle of Wight Council, in partnership with Isle of Wight National Landscape, Vectis Astronomical Society and the Isle of Wight CPRE, are working together towards getting official recognition for the darkest areas of the Isle of Wight to become an **International Dark Skies Association (IDA) 'Dark Skies Park'**. The recognition would provide opportunities for the conservation of these important parts of the Isle of Wight landscape, which are often overlooked, namely, the stars and the creatures of the night! Dark Sky Communities are celebrated areas with low levels of light pollution, and this aspiration beautifully compliments the Island's designated '**UNESCO Biosphere Reserve**' status. It is anticipated the 'Dark Sky Park' status will be achieved in the very near future.



## Facts about the night sky:

- \* It is estimated that 85% (some say higher) of the UK population have never seen the Milky way due to the rapid rise of urbanisation and light pollution over the last 50 years.
- \* In the South east of England, which includes London, only 1% of land still has natural 'Dark Sky'.
- \* Dark skies are important for nocturnal animals and insects. Light pollution confuses them so that they can not feed or find a mate.
- \* Dark skies are also important for humans, 'circadian rhythms'- our biological clock-works on the basis of light and dark. Dark skies result in better sleep and in turn better mental and physical health.
- \* It is always possible to see a shooting star and make a wish. To improve your chances look out for 'meteor showers'.

# STARGAZING- WHAT WILL YOU SEE?



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Stargazing- what will you see?

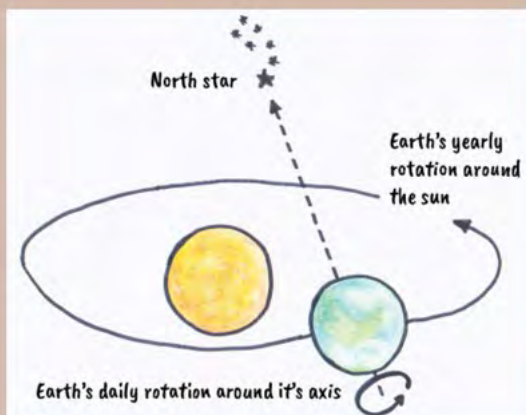
Choose a clear night without clouds.

Head out to a clear space and get looking, your eyes might take up to 20mins to get used to the dark. Stay away from any artificial lights/ light pollution.

You can also spot planets, galaxies and even the International space station!

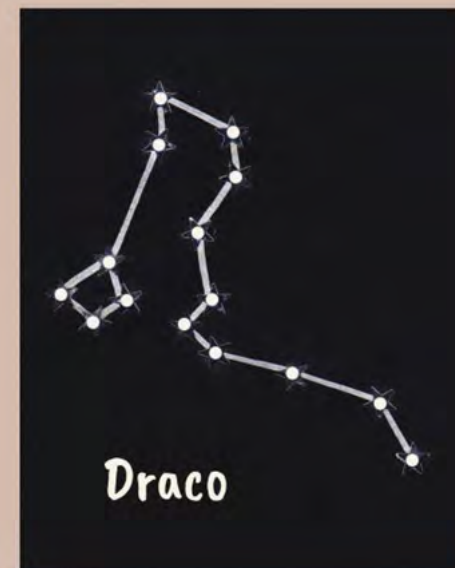
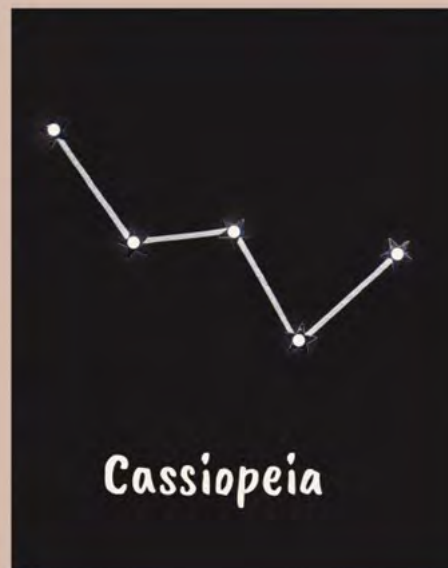
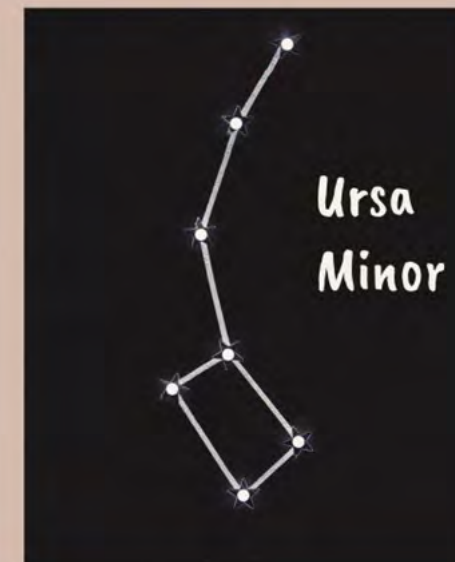
Find the north star- Polaris

(‘polar star’, ‘ships star’ or ‘guiding star’) This then helps you to locate the other stars as it is visible all year around from the northern hemisphere and stays in roughly the same position.



Other star constellations visible year-round are ‘Cassiopeia’, ‘Draco’ the dragon, ‘Ursa major and minor’ (the bears, big one is also known as the plough or big dipper)

You can download apps to help you identify the stars in the sky, use a homemade ‘planisphere’, or obtain star maps from astronomical societies.



# ANIMAL MAGIC AT NIGHT...

Animal magic at night...



It is not just humans that love the Isle of Wight's dark skies. Lack of light pollution is a blessing for nocturnal creatures. You might spot:

**Foxes, Badgers, Owls, Hedgehogs, Dormice, Moths and Invertebrates...**

\*The Isle of Wight is home to 15 of the possible 17 resident species of bat in England.

\* Hedgehogs are endangered, their numbers are falling at an alarming rate and they need our help to survive. They are out of hibernation from April to October.

\* In 2018, 879 species of moths were recorded on the Isle of Wight. A narrow bordered bee hawk moth was found recently which was thought to have been extinct for 60 years! Moths are as important as bees for pollination.

\* Barn owls, little owls, short-eared owls and long eared owls can all be found on the Isle of Wight. We do not have tawny owls with their familiar 'to-whit / to-who' call.

\* Owls are not the only birds active at night on the Island. Nightjars and nightingale can also be heard in the Island's countryside



# PREPARING TO GO STARGAZING

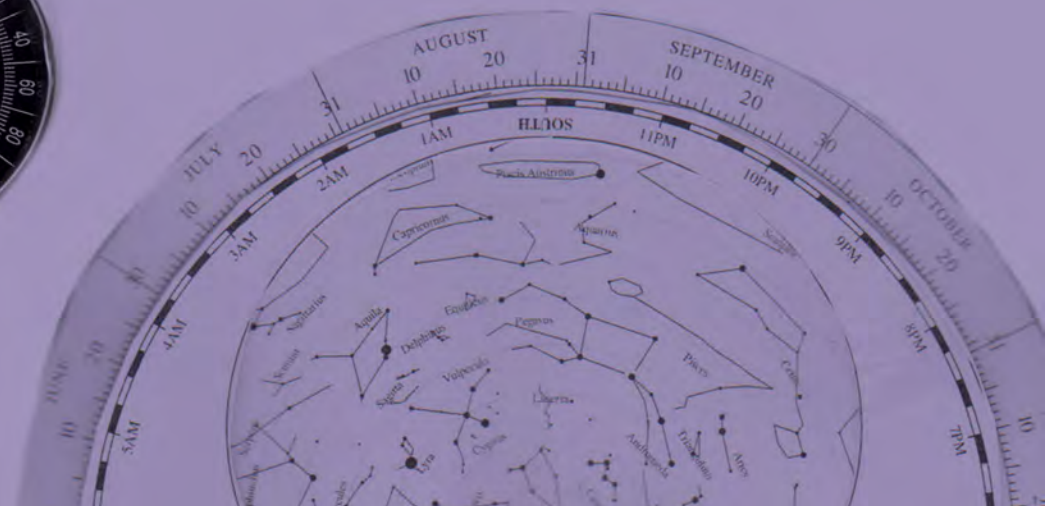


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Getting out and about to see the dark skies is easy. All you need is your eyes and a dark spot. Wrap up warm, dress appropriately, and head out with friends and family to see nature's most amazing spectacle.

Many people think that you need a telescope but there is a lot that can be seen with the naked eye. Binoculars are helpful if you have them- 8 x 40 magnification is ideal (or 7 x 50 or 10 x 50 will enable you to see even more detail). A compass is helpful as well for locating the north star, or an augmented reality stargazing app on your phone, or a planisphere which will help you to see the constellations.

To help you get to the perfect star gazing spot a red light/torch is best as it will not affect your night vision, or upset wildlife. You can buy red torches, use rear bike lights or even wrap some red cellophane over your existing torch (buy some chocolates and recycle some of the red cellophane wrappers!)



The Island's southern coast line is the best place with little light pollution- Compton beach, Atherfield, Brightstone, Brook, Whale chine, Blackgang, Chale, and Shorwell areas are all fantastic locations.

Newchurch observatory is worth checking out as they sometimes run stargazing events as well as the Island Planetarium at Fort Victoria, Yarmouth who run stargazing weekend courses.

**What are you waiting for?**

**Go explore the Island's dark skies!**

# TAKING PHOTOS OF THE STARS



## **Using a good quality phone camera or compact camera:**

*It is difficult to do this on a phone or compact camera and some might not have the capability- but have a go!*

Turn off auto focus, the camera will be struggling in low light. Use a night time setting or try to use long exposure- a slow shutter speed and low F number. Keep your camera still, use a stand, tripod or position it so it is resting on something. Do not zoom in, you can always crop the photo later.

## **Using an SLR film or digital camera:**

\*Ideally use a tripod and a timer setting to minimise touching the camera or a 'lockable cable release' which allows you to press the button without touching the camera directly.

\*Shoot using manual with manual focus.

\*Generally use as wide an angle lens as you have.

\*Set your ISO as low as you can to keep the quality but still get the exposure.

\*Use a slow shutter speed of a few seconds or use 'Bulb setting' if you have it which allows you to hold your shutter open for a long time- approx 20 seconds max. Set your aperture wide, a low F number. Experiment to see what exposure works best.

\*To achieve the star trail images, where the stars all look as if they are spinning you will need to find the north star, polaris, which they all spin around. Use long exposure, you will need to experiment but the shutter speed could be from a 30 seconds to 1 hour depending on your other settings and available light.



Image: Copyright Gianpaolo Mario, Compton bay at night.



Image: Copyright, Margaret Smith, Twilight Wight Photography.

# DISCOVER MORE ABOUT DARK SKIES:



To find out about Dark skies and the effects of light pollution watch this short film 'Losing the Dark':

<https://darksky.org/resources/videos/losing-the-dark/>



To find out about stargazing locations and events near you visit:

<https://gostargazing.co.uk/>



A helpful website for finding out what constellations are visible from your exact location:

<https://stellarium-web.org/>



How to make a planisphere:

<https://in-the-sky.org/planisphere/>



Play 'spot the space station' with help from Nasa:

<https://spotthestation.nasa.gov/>



To find out what to look for in the night sky each month visit:

<http://www.jb.man.ac.uk/astronomy/nightsky/>



Watch the BBC's Sky at night programmes:

<https://www.bbc.co.uk/programmes/b006mk7h>



The Isle of Wights Astronomical society website

<http://www.wightastronomy.org/>



The Isle of Wight Natural Landscapes website

<https://www.wightaonb.org.uk/>



New Carnival website

<https://newcarnival.co.uk/>



Image: Copyright, Ben Francis, The Moon IOW

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*Ben Francis*

