experience nights that have sadly disappeared from much of the country. The few places in England where low light pollution and are continuing to work to protect them. Exmoor National Park Authority, Devon and Somerset County Councils, landowners, and visitors have made a commitment to work to keep our nights dark and full of stars.

In recognition of our dark skies and the resemblance to a large ladle, the Plough has been recognised as a feature in the night sky by different cultures around the world for thousands of years and is referred to as The "Seven Stars" in the Bible and "The Bear" in Homer’s Iliad. The Plough is not in itself an official constellation but rather the brightest seven stars of the constellation Ursa Major or Great Bear. Like Orion, the Plough, visible all year round in the Northern Hemisphere, is very useful for navigating the night sky.

Three things to find for beginners.

There are almost limitless stars, planets, constellations, galaxies, meteors and other objects to discover - but here are three of the most easily recognised features to get you started.

1. **The Moon**
   - The moon, Earth’s only natural satellite and the second brightest object in our sky after the sun, is 238,900 miles away and has fascinated mankind since the dawn of time. Known as Luna to the Romans and Selene to the ancient Greeks, the moon was often considered a female force in contrast to the masculine sun. The gravitational pull of the moon draws the oceans’ water towards it and influences our twice daily tides. Our months are based off the 28 day cycles of the moon’s phases. The moon makes an ideal starting point for astronomy as even fairly basic binoculars will soon reveal the surface pochmarked by millions of years of meteorite impacts.

2. **Orion - The Hunter**
   - Orion is perhaps the most easy constellation to recognise in the winter skies of the Northern Hemisphere and is, visible above Exmoor between November and February. Named after a great hunter from Greek mythology, he is usually represented with a belt formed by the three prominent stars - Alnitak, Alrdom and Mintaka, along with a raised sword and a shield. Orion is very useful as an aid in finding other stars. For example, by extending the line of his belt south eastwards you can find Sirius, the brightest star in the night sky.

For thousands of years, man has marveled at the night sky. Wonder of what it is...

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![Image of Orion constellation]
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Experience nightskies that have sadly disappeared from much of the country.

Light pollution

The effect of any artificial light on the environment. It is usually characterised by the orange “sky glow” that is produced above our towns and cities. This is caused by street lights and glare from lighting that spills beyond its intended lit area.

We all rely on artificial light to live our lives, but badly designed lighting wastes energy, disrupts wildlife and prevents us from enjoying our night skies. Here on Exmoor we are working together to make sure that lighting is well designed, efficient and does not affect our wonderful dark skies.

Links

If you would like to find out more about astronomy, then there are some great resources on the internet, here are just a few:

- www.darksky.org/
- www.darkskylight.org.uk
- www.bbc.co.uk/science/space/
- astronomy.swin.edu.au/cosmos/
- www.nasa.gov/
- fourmilab.ch/earthview/vplanet.html
- fourmilab.ch/yoursky
- www.esa.int

Why not visit one of our three National Park Centres where you will find Planispheres and a range of books to help you get started:

- Dulverton National Park Centre
  - 7-9 Fore Street, Dulverton, TA22 9EX
  - Tel 01398 752509
- Dunster National Park Centre
  - Dunster Steep, TA24 6SE
  - Tel 01643 821835
- Lynmouth National Park Centre
  - Lyndale Car Park, Lynmouth
  - Tel 01598 752509

Interactive maps and other information are also on the dark skies page of our website: www.exmoor-nationalpark.gov.uk/dark-skies

Three things to find for beginners.

What is a Dark Sky Reserve?

Dark Sky Reserves are places that have exceptionally starry skies and have made a commitment to work to protect them. Exmoor National Park Authority, Devon and Somerset County Councils, landowners, businesses, individuals and communities within Exmoor have all worked together to reduce light pollution and are continuing to work together to keep our nights dark and full of stars.

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Why is it Bad for Wildlife?

All animals have evolved without the influence of artificial light, and many of them are nocturnal so they are only active during the hours of darkness.

Birds when migrating and insects such as moths use the moon and stars to navigate in ways that we do not yet fully understand artificial light may confuse them and make this much harder. When insects are attracted to artificial lights it may change how easy it is for species such as bats to feed on them. This affects the natural ecological balance.

Artificial light may also affect animals by disrupting their ability to differentiate between the hours of day and night leading to birds singing during the night under streetlights.

EXMOOR

Europe’s First International Dark Sky Reserve

Exmoor National Park was designated Europe’s first International Dark Sky Reserve in Autumn 2011 by the International Dark Sky Association.

In recognition of our dark skies and the work we are doing to keep them that way and help people enjoy them, Exmoor National Park was designated Europe’s first International Dark Sky Reserve in Autumn 2011 by the International Dark Sky Association.

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Top Tips for Stargazing on Exmoor

Stargazing is easy - just go outside on a clear night and look up. Wherever you are there will be something to see. However there are some things that you can do that will help to make your experience really special. We have put together some simple tips to help you get the best out of your stargazing.

When to go
Stargazing on Exmoor is an all-year-round activity, and any clear night will provide plenty to see. The darker months provide longer nights and the chance for younger astronomers to enjoy some pre-bedtime observing. March and April can be particularly good times for observing in the UK, and late summer and autumn often provide the best chance of seeing a shooting star.

Before you go:
- Check the time of sunset, and aim to start observing at least an hour and a half later - to allow the sky to become properly dark.
- As beautiful as the moon is - the best time for seeing the stars is when the moon is not in the sky, as moonlight can make it harder to see the dimmer stars.

What to do:
- Use the starcharts on the right to get started. They show how the prominent features that you can see in the northern skies above Exmoor will look different throughout the year.
- And don’t forget that clear nights are often chilly - so wrap up warm and bring a hot drink.

Where to go:
Find a place that:
- Is away from the glare of direct lights
- Is open to the public
- Has good sight lines, without tall buildings or trees
- Is safe, without hazards such as traffic or steep drops.

On the map you will find some places that we think are particularly good places on Exmoor to enjoy the night sky. Generally the further you are from illuminated built-up areas the darker the sky will be and the more stars you will be able to see.

In the centre of a city, where naked-eye observation is restricted by the effects of light pollution, as few as 200 stars may be visible. In a dark sky area like Exmoor the dark adapted human eye would be able to see about 3000 stars!

Starcharts

Starcharts: There are many different resources available that will show you what you are looking at as the position of the stars and planets is constantly changing with time and location. These include simple star maps, planispheres that allow you to set the date, and even smart phone apps.

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How to use the Starcharts

Face the direction which you think is North and look up at the night sky. Hold this page in front of you and find the starchart which relates to the present season.

The Plough (or Big Dipper), is the most easily recognised group of stars in the Northern sky, it is always above the horizon. The Plough is always the same shape but it appears to rotate throughout the year as the Earth progresses on its orbit.

No matter which way up it is you can always use The Plough to locate Polaris (which is also known as the North(ern) Star or Pole Star) which is the brightest star in the constellation Ursa Minor. Continue an imaginary line between the two stars, Merak and Dubhe that form the outer edge of the Plough’s tip and travel five times that distance to locate the Pole Star. If you are facing North then the Pole Star should be directly in front of you.

Cassiopeia is easily recognised by its distinctive ‘W’ shape formed by five bright stars.

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