

# The Night Sky

## November

### Equipment you will need

Because of the darkness of our forest locations, you can see many wonders of the night skies with your naked eye, although your eyes will need a good 20 minutes to adjust to the darkness. Any bright lights, such as that from your torch, will set them back again. You can reduce this effect by putting a red filter on your torch. Equipment worth investing in includes:

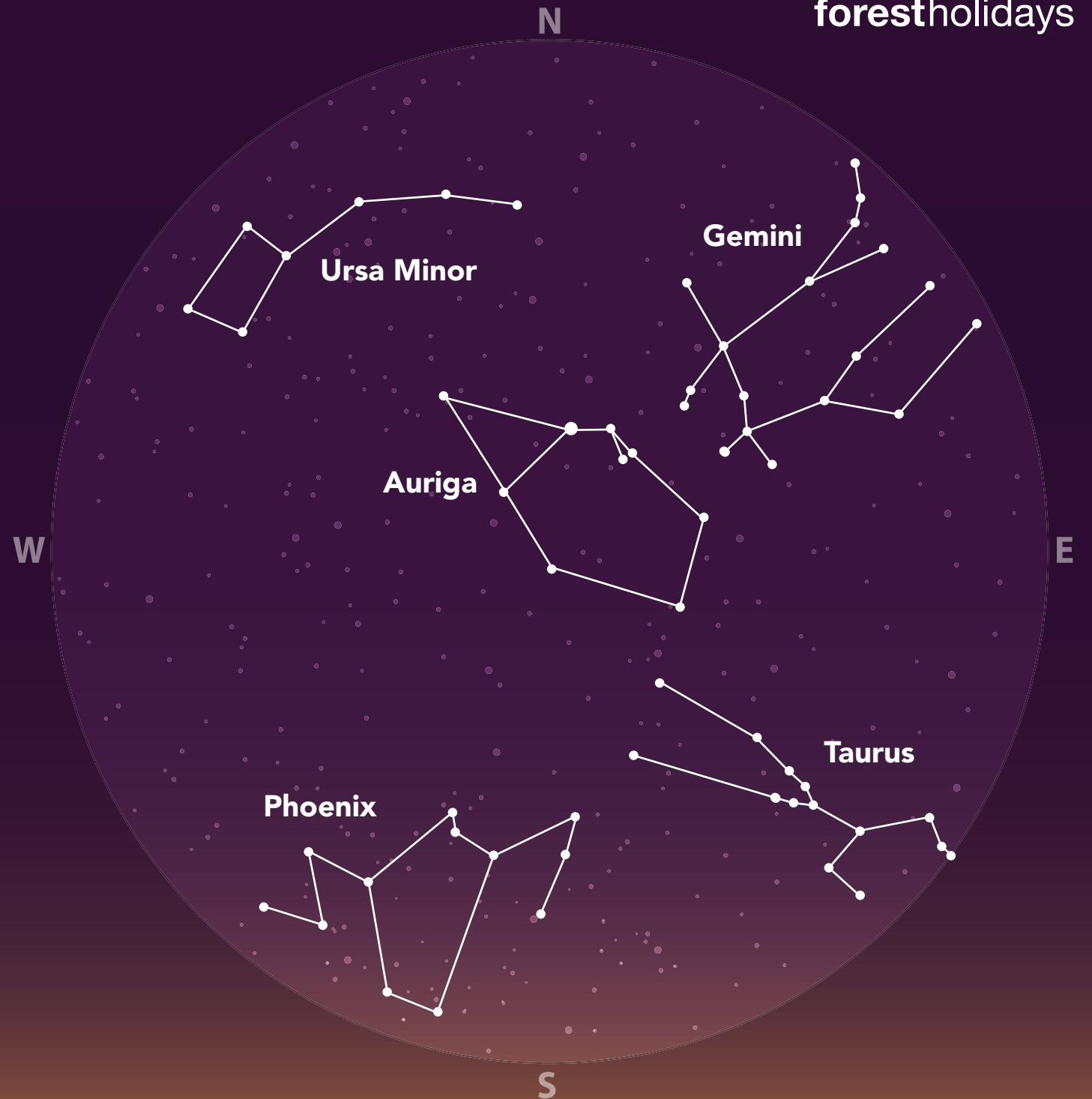
- **Binoculars** – cheaper and easier to carry than a telescope. Look for ones with glass lenses.
- **Camera** – to capture that fantastic star scene forever
- **Tripod** – essential for use with your camera
- **Telescope** – worth investing in for the really committed stargazer
- **Google Skymaps** – a superb free app, available for Android and iPhone. You point your phone towards the sky and it shows you the constellations and identifies the stars using inbuilt GPS

### Getting started – your first 5 constellations to spot

- **Ursa Major** (the Big Dipper) has been used by sailors since ancient times to locate the fixed-point Pole Star and navigate home
- **Leo** (the lion) is it a lion, as the Greeks decided? Or is it K9 from Doctor Who?
- **Cassiopeia** (the queen of Aethiopia) is one of the easiest constellations to locate and looks like a huge W, almost directly overhead
- **Cepheus** (the king of Aethiopia) is one of 48 constellations identified by 2nd century astronomer Ptolemy. Imagine a child's drawing of a house, complete with roof
- **Orion** (the hunter), with belt and sword, is perhaps the most famous constellation – and one of the few that actually bears some slight resemblance to its namesake

### Stargazing facts for kids

- You can see the International Space Station without using binoculars, and you can track it moving across the sky
- The sun is 300,000 times bigger than earth and 93 million miles away. If you could catch a plane to the sun, the journey would take 20 years
- We're more connected than you might think. The gravity of the sun and moon bring about the tides in our seas
- Footprints and tyre marks on the moon from the Apollo 11 mission will stay there forever – there is no wind to blow them away
- How much do you weigh? If you weigh 50kg here on earth you would only weigh 19kg on Mars because of lower gravity



#### Auriga

A large constellation most prominent during winter nights in the northern hemisphere. Its brightest star, Capella is an unusual multiple star system among the brightest stars in the night sky.

#### Gemini

One of the easiest ways to locate this constellation is to find its two brightest stars Castor and Pollux eastward from the familiar 'V' shaped Taurus and the three stars of Orion's belt.

#### Ursa minor

Also known as the 'little bear', the tail of this constellation may also be seen as the handle of a ladle, hence the name 'little dipper'.

#### Taurus

Its name is a Latin word meaning 'bull' – it is also one of the oldest constellations, dating back to the Early Bronze Age when it marked the location of the Sun during the spring equinox.

#### Phoenix

Named after the mythical phoenix, this is a minor constellation in the southern sky.