

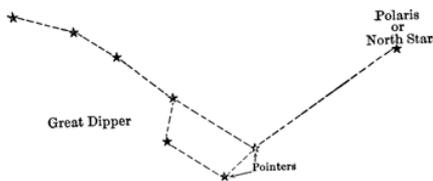
Stargazing Guide: October 2018

What to look out for...

Constellations (star pictures) and interesting stars:

1 The Plough

always the easiest place to start! Find it to the north-west. The last two stars point to the North Star, **Polaris**. Polaris is always seen to the North as it is above the North Pole.



2 Cassiopeia (say cass-ee-oh-pee-ah) the Queen. The Greeks saw this 'W' shape as Cassiopeia nailed to her throne as punishment for her boastfulness! Cassiopeia is seen higher in the sky in winter and lower during summer.



3 Pegasus (say peg-ah-sus) the winged horse has a large square of stars - can you spot any fainter stars inside? If you see four stars in the square then you know you have a nice dark sky. If you can see more it means the sky is very dark and you might be able to spot the Milky Way (see over).

4 Cygnus (say sig-nuss) the flying swan. It really does look like a swan with outstretched wings! The bright (and giant) star **Deneb** in the swan's tail forms "The Summer Triangle" with the other bright stars **Altair** (in **Aquila**) and **Vega**. Vega is a hot young star which may have planets forming around it.

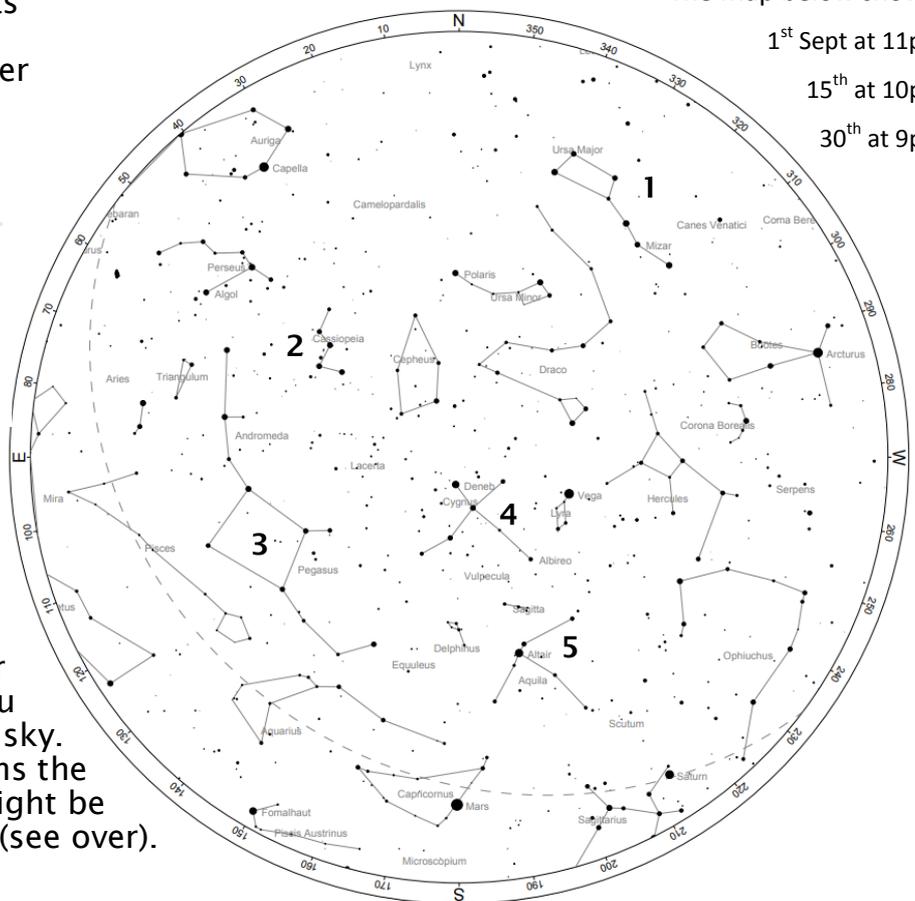
5 Aquila (say ah-quill-ah) the Eagle is best seen at this time of year. If you have binoculars then this is a great area of the sky to explore, containing beautiful star clusters.

The Map below shows:

1st Sept at 11pm

15th at 10pm

30th at 9pm



How to use this chart:

Imagine the chart flat & upside-down above your head. The circle around the outside shows the horizon all around you. Turn the chart to have North (N), South (S), East or West at the front depending on which direction you are looking.

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The Moon

You will see the different phases of the Moon at different times of day as they will be placed differently with respect to the Sun.



A good time to look is at First Quarter, when the Moon is visible in the early evening and lit from the side, casting long shadows which highlight its features.

Planets

Mars, Jupiter and Saturn all rise before the Sun sets each day of September, and all set before the Sun rises in the morning. Jupiter will only be visible briefly just above the horizon, setting shortly after the Sun. Saturn will appear in the midst of the band that is the Milky Way. To the left of Saturn and being pointed to by the Summer triangle, Mars will appear as a slightly pinkish, bright dot.

Mercury Spends the month setting shortly after the sun and appearing to move away from it in the sky. Mercury can be seen close to the horizon, getting closer to Jupiter throughout the month

The Milky Way

If you are somewhere very dark on a very clear night, you might see a faint milky band of light reaching across the sky from below Cassiopeia, through Cygnus and down to the southern horizon, looking almost like a faint cloud. This is the light of millions of distant stars.

There are more stars in this direction because we live in a flat galaxy (a galaxy is a huge group of billions of stars). Looking in this direction, you are looking through the flat plane of our galaxy where most of its stars lie. This line we see in the sky is how we know that our galaxy is flat.

Using Binoculars

Stars are not evenly spread through our galaxy. There are some dense clusters of stars and also more open clusters which are worth trying to find with binoculars or telescopes. Try looking near Cygnus the Swan's head, a quarter of the distance to the bright star Vega, to find Globular Cluster M56; or just enjoy exploring this part of the sky which is full of interest.

Tip of the Month

Almost all stars look white, but really they are a multitude of colours. The colour tells you how hot the surface of the star is: red is cooler (about 3,000oC) and blue is the hottest (about 30,000oC). If you have binoculars or a telescope, you can see the colour of stars by using them out of focus. The blurred image will look bigger, making it easier to see the colour.

Download this star guide and those for other months from:

<http://www.winchestersciencecentre.org/starguides>

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