

Stargazing Guide: January 2019

What to look out for...

Constellations (star pictures) and interesting stars:

1 The Plough always the best place to start! The last two stars point to the North Star, Polaris, which you can use to orient your map. Polaris is always seen to the North as it is directly above the North Pole.



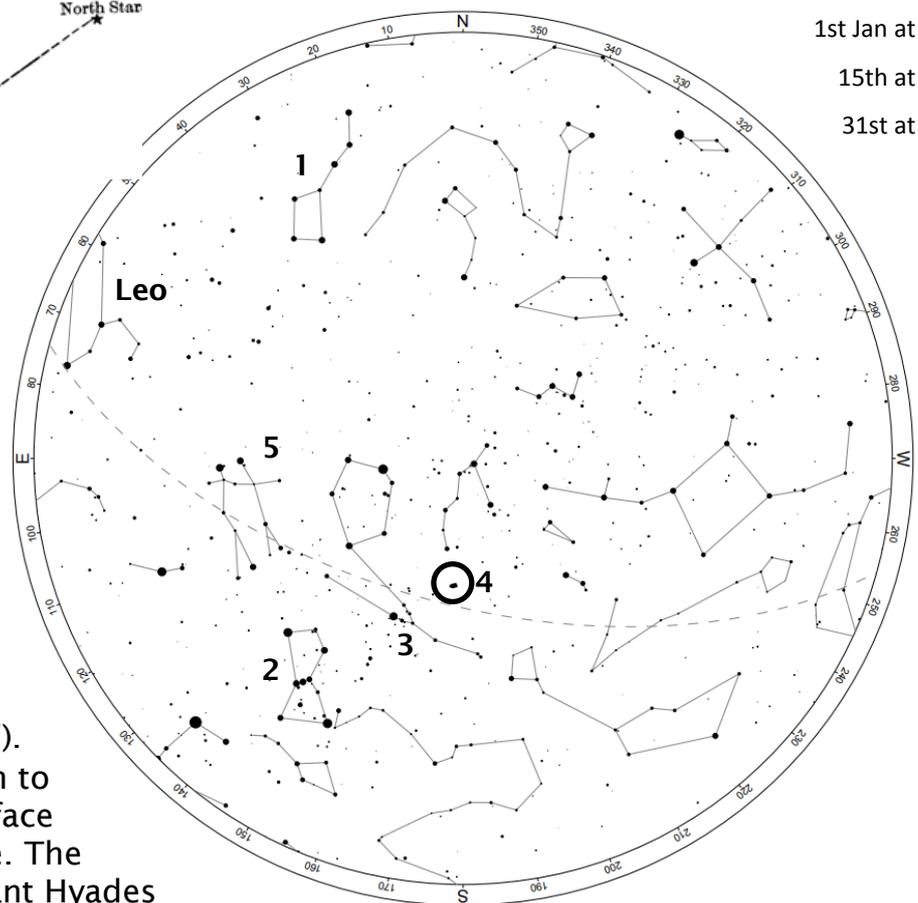
2 Orion (say "uh-RYE-un"). An unmistakable pattern rising in the East after sunset. There will be more about Orion in next month's guide.



3 Taurus (say "TOR-rus"). Look up/right from Orion to find the 'V' of the bull's face with his great orange eye. The fainter stars are the distant Hyades star cluster (say "HY-uh-deez").

4 Pleiades (say "PLY-uh-deez"). Mentioned last month but well worth another look. This lovely star cluster is more than twice as far away as the Hyades. The stars are very young - between 75-150 million years old (born during the Jurassic and Cretaceous periods).

5 Gemini the Twins. Look first for their bright heads. In Greek mythology the brother on the left (Pollux) was immortal but the other twin (Castor) was mortal. When Castor died, Pollux was heartbroken and asked that they be placed in the stars so they could be together again.



Map shows:

1st Jan at 9pm

15th at 8pm

31st at 7pm

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

Look for the large black mare (say "MAR-ray") which show where there used to be lakes of lava before these cooled and hardened back into rock.



Imagine how these looked when still glowing red! Research suggests the Moon had volcanic activity until about 100 million years ago, possibly even as recent as in the last 20 million years ago, and not billions of years as previously thought.

Planets

Mars is visible each evening and can be seen in the South throughout the month once the sun sets. It will set each night before midnight.

Venus, Jupiter, and Mercury All rise in the early hours of the morning in the East shortly before sunrise at the start of the month. Venus will be visible till the sun rises each morning throughout the month rising at a similar time each day and appearing a similar distance from the Sun.

Jupiter will rise earlier each day throughout the month appearing closer to Venus each day till near the end of the month when it will appear in the sky before Venus.

Mercury will rise later each day appearing to get closer to the Sun each morning. At the end of the month it will rise at the same time as the Sun making it impossible to spot.

Saturn starts the month rising after the Sun but will rise earlier each day becoming visible before the Sun rises towards the middle of the month.

Using Binoculars

Binoculars are fantastic for looking at star clusters like the Hyades and Pleiades. You will be able to see many, many more stars this way. Try counting how many you can spot!

With good binoculars and clear skies you might even be lucky enough to make out faint wisps of light reflecting from gas and dust surrounding the Pleiades. This is what gives them an unusual misty appearance by eye. Originally it was thought this was gas remaining from their birth, but it is now thought they just happen to be travelling through this misty cloud.

Tip of the Month

Find the darkest spot you can, even if this just means finding a shadow of a tree or wall to shield you from street-lights or moonlight. You'll be amazed how many more stars you can then see.

Download this star guide and those for other months from:

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

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