

I hope you have been taking full advantage of the recent spell of clear nights. Venus has been spectacular in the evening sky. The winter constellations of Orion and his retinue have moved away into the west taking with them the winter triangle i.e. Betelgeuse, Sirius and Procyon. The summer triangle comprising of the stars Altair (from the constellation of the Eagle) Vega (from the constellation of Lyra) and Deneb (from the constellation of Cygnus the Swan) are now visible in the late evening.

The phases of the Moon during May are as follows. Full Moon is on May 7th and will reach last quarter on May 14th. The Moon is new on May 22nd and reaches first quarter on May 30th. The Moon will pass  $5^\circ$  from Jupiter on May 12<sup>th</sup>,  $5^\circ$  from Saturn on May 13<sup>th</sup> and  $4^\circ$  degrees from Mars on May 15th.

On May 3<sup>rd</sup> the gibbous Moon will occult a +4 magnitude star in the constellation of Virgo. Shortly before 10.30 pm BST the star will disappear behind the dark limb of the Moon reappearing 50 minutes later at 11.16 pm BST on the sunlit limb of the Moon at a point near the crater Endymion. The event will be easily visible through a pair of binoculars weather permitting!

If the skies are clear on May 24th after sunset, there will be a spectacular configuration of the crescent Moon and Venus with the much fainter Mercury roughly half way between the two.

Venus has been moving closer to the Sun as it approaches inferior conjunction on June 3rd. By May 24th it will be showing a narrow crescent and, because it is near inferior conjunction, is much closer to us than it was when it was at greatest eastern elongation at the end of March. This results in the apparent size of the disk being large enough to be able to discern the crescent in a pair of binoculars. It will be interesting to compare the phase of Venus with the phase of the Moon

Jupiter is pulling away from the Sun and will rise shortly after midnight BST by the end of May. It is moving towards opposition in July but remains in that part of the ecliptic that does not rise very high from our latitudes.

Saturn is in a similar position following Jupiter round the ecliptic. The two planets are about 20 minutes of Right Ascension apart. Both are morning objects which will remain low in the sky.

Uranus is too close to the Sun to observe this month as it is just past conjunction. Neptune is also difficult to observe at the moment as it is still in the predawn sky.

The meteor shower Eta Aquarids is active during May. It reaches a peak on the night of 5/6th of May. The best time to observe this is about 90 minutes before sunrise. The radiant will be situated above the east south eastern horizon, a little to the left of Mars. The Zenith Hourly Rate is an estimate of the number of meteors per hour that might be seen under ideal conditions when the shower is at the peak of its activity. The estimate for the Eta Aquarids is 40 but the observing conditions are far from ideal as the radiant is close to the horizon and the showers peak will be competing with the onset of twilight. This, together with a near full Moon, does not make for ideal conditions.

This month I am going to focus on one of the lesser known constellations. Early star catalogues showed constellations of easily recognised star patterns such as Orion or Leo the Lion. The names of many of these star patterns are of great antiquity. When Hevelius mapped the sky in the seventeenth century he found a number of areas that did not belong to any constellation. One such blank space lay south of Ursa Major, the Great Bear. Two bright stars were in this area and Hevelius called them Canes Venatici, The Hunting Dogs, who were supposed to be chasing the Great Bear round the Pole. There are no other named star patterns so the whole of the area of blank space below Ursa Major became Canes Venatici. The space is large, stretching from 12° to about 33° north declination and from 12 hours to about 13 hours 30 minutes Right Ascension. There was some discussion

about the naming of the brightest star. Hevelius called it Asterion but it was finally called Cor Caroli - the Heart of Charles. Even then there was some debate as to whether it was a memorial to Charles 1<sup>st</sup> or 2<sup>nd</sup>. I understand that Charles 1<sup>st</sup> won!

Cor Caroli is a double star with magnitudes +2.9 and +5.5. with a separation of 19 seconds. The brighter of the pair is blue white while the other is yellow orange. They are a spectacular sight in a small telescope.

There are three Messier Galaxies in Canes Venatici. The first is M 51, the Whirlpool Galaxy, made famous by Lord Rosse who used his 72-inch reflecting telescope to see the spiral structure of the galaxy. It is to be found at Right Ascension 13 hours 29 minutes and 53 seconds, Declination +47° 11 minutes and 48 seconds. It is 23 million light years away from us.

M63 is known as the Sunflower Galaxy and is 26 million light years from us. Images of it show an inner flocculent spiral resembling the central part of a sunflower. It is bright enough to be detectable in a pair of 10x50 binoculars. It is to be found at Right Ascension 13 hours 15 minutes 49 seconds, Declination +42° 2 minutes and 6 seconds.

M106 is another galaxy in range of a pair of 10x50 binoculars. It is 20 million light years from us and is one of the largest galaxies in the sky. It is another spiral galaxy and can be found at Right Ascension 12 hours 18 minutes and 57 seconds, Declination +47° 18 minutes and 31 seconds.

NGC 4244 is another spiral galaxy but this one is not in Messier's catalogue. It is however number 26 in the Caldwell Catalogue. We are seeing it from the side so there is little sign of its spiral structure. Through a telescope it appears as a needle of light. It is relatively close to us at 10 to 12 million light years. It can be found at Right Ascension 12 hours 17 minutes and 30 seconds, Declination +37° 48 minutes 27 seconds.

So, to summarise the challenges for this month:

- Find the summer triangle and identify the three stars that make it
- Watch the Moon pass in front of a star on May 3rd.
- See the Moon Venus and Mercury just after sunset on May 24<sup>th</sup>
- Identify the two stars of the Hunting Dogs and observe Cor Caroli through binoculars or a small telescope.
- Get telescopic views of the 5 galaxies in the constellation of the Hunting Dogs.

Until next month I wish you clear skies!