



# ***STARRY TRAILS***

***JULY 2020***

Our two gas giant planets return to our evening sky around mid-month! Jupiter will be at opposition on July 14<sup>th</sup> and Saturn will be at opposition on July 20<sup>th</sup>. They will rise, in the southeast, at sunset and will be present until dawn (Illustration 1). The two inner planets, Venus and Mercury, put on a show, around mid-month, in the predawn sky (Illustration 2). Also, with the opening of Milky Way season, this happens to be the best time of year to lay out on a warm summer night, with binoculars, and leisurely scan through the night sky! The summer Milky Way offers great views of many celestial delights! We have so much to see tonight, are you ready?! Once again, our hike will begin around 10:00pm. Don't forget your Starry Trail Map, bug spray, light jacket, binoculars and lawn chair or blanket.

We will begin our hike by facing west or the fading colors of the sunset. Low in the sky is the bright star, Regulus, which is part of the constellation Leo, the Lion. Turn left or south. The bright red, orange star is Antares, the heart of Scorpius (Illustration 3). To the left of Scorpius is the constellation Sagittarius, which looks more like a teapot. Between Scorpius and Sagittarius is the best part of the sky to scan with your binoculars and telescope! It is rich with deep sky wonders! Towards mid to late July, the brilliant object rising to the left of Sagittarius is Jupiter. Saturn will be left of Jupiter, dimmer and golden in color.

Hike upwards and overhead to the brilliant yellow-orange star, Arcturus. To the left of Arcturus, you will see a semi-circle of stars. It looks almost like a necklace, but it is the Northern Crown or Corona Borealis. I think it looks like a smiley face! Just a little more to the left will be a keystone or crooked square shape in the stars. This is the body of Hercules, the bravest and strongest hero! Binocular time! Take your binoculars and scan around the part of Hercules facing Corona. Do you see the fuzzy object? This is the finest Globular Star Cluster (M13) in the northern skies (Illustration 4)!

Turn to the opposite part of the sky or north. The Big Dipper is beginning to swing down through the sky. Take the two stars at the end of the cup and draw an imaginary line to the next bright star. You have reached the North Star! The North Star, or Polaris, is at the end of the handle of the Little Dipper. Also, down and to the right of the Little Dipper is Queen Cassiopeia, the W-shaped constellation (Illustration 5).

Trek to the right and you will be facing east. When looking up, you will see a very bright star, which is Vega. Journey down and to the left and you will come to Deneb. Now go right and you have reached Altair. When you connect these three bright stars you have made the Summer Triangle. Running through the Summer Triangle is the Milky Way, our galaxy! Pop open that lawn chair or lay out on your blanket. Take your binoculars and scan through that part of the sky from north to south. See all of those stars?! Even if you cannot view the Milky Way, due to light pollution, you can still see so many stars with your binoculars!

Head back to Deneb. Imagine this to be the tail of Cygnus, the Swan. To the right will be three stars in a line. These would be the outstretched wings. You should also be able to see the long neck and head of the swan extending from the wings. The head of the swan would be directly below Vega. This star is Albireo, which is a beautiful double star through a telescope (illustration 6)!

There was so much to see tonight! Maybe you were lucky enough to see a shooting star!

**Speaking of shooting stars, next month, the Perseids Meteor Shower!!!**

### **Highlights**

**July 4** – Earth is at aphelion or farthest distance from the Sun, 94.5 million miles.

**July 5** – Very slight penumbral lunar eclipse.

**July 5** – Full Moon. According to folklore it is the Full Thunder Moon or Hay Moon.

**July 5** – The Moon passes south of Jupiter.

**July 6** – The Moon passes south of Saturn.

**July 10** – Venus at greatest brilliancy in the predawn sky.

**July 11** – The Moon passes south of Mars after midnight.

**July 12** – Last Quarter Moon.

**July 14** - Jupiter at opposition.

**July 15** – Pluto at opposition.

**July 17** – The Moon passes north of Venus in the predawn sky.

**July 18** – The Moon passes north of Mercury in the predawn sky.

**July 20** – New Moon.

**July 20** - Happy Moon Day. 51 years ago, Apollo 11 Commander Neil Armstrong and Lunar Module Pilot Buzz Aldrin became the first humans to set foot on the Moon!

**July 20** – Saturn at opposition.

**July 27** – First Quarter Moon.

**July 29** – Southern Delta Aquarid meteor shower peaks.

**Brightest Stars:** West – Regulus **Southwest** – Spica **South** – Antares **Overhead** – Arcturus  
**East** – Vega, Deneb, Altair

**Binocular Highlights:** The Moon, Hercules Globular Star Cluster M13, Milky Way Deep Sky Objects to the left of Antares in Scorpio.

**Telescope Highlights:** The Moon, Jupiter, Saturn, Albireo, M4, M5, M6, M7, M51, M44, M13, M57, M3, M81, M82, M10, M11, M12, M27, M16, M17, M20, M21, M22, and M23.

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Night Sky Illustrations created by Suzie Dills using Starry Night Backyard & Stellarium.

*Illustrations courtesy of Cassandra Dills*

Written by Suzie Dills – Remember to download your Illustrations & Star Map!