



# *STARRY TRAILS*

*September 2015*

*According to folklore, the Full Moon in September is called the Harvest Moon.*

On the same night, the Moon will also be closest to the Earth in its orbit, so we call it a Super Moon. But wait..... the most exciting part is that we will have a Total Lunar Eclipse the night of the Full Super Harvest Moon!!! Check out our highlights section for full details of this phenomenal event on Sunday, September 27<sup>th</sup>!

Let's head out for our hike. We can still enjoy some warm nights and great sounds, but autumn is just around the corner. Are you ready to enjoy our starry hike? Grab your Starry Trail map, bug spray, binoculars, jacket and chair or blanket.

Our hike begins around 8:30pm. To start, we will face west or the spectacular colors of the sunset. Turn slightly to the left and you will notice two bright objects. Saturn, the golden colored object is to the right of the red, orange star Antares, the heart of Scorpio. Continue to head left of Antares to the constellation, Sagittarius, which looks more like a teapot. Between Scorpio and Sagittarius is the best part of the sky to scan with your binoculars and telescope! It is rich with deep sky wonders! (Illustration 1)

Turn right or back to direction west. Trek up and you will see a bright yellow, orange star, Arcturus. Arcturus has been with us since spring. Just above Arcturus, you will see a semi-circle of stars. It looks almost like a necklace, but actually it is the Northern Crown or Corona Borealis. I think it looks like a smiley face! Right overhead will be a keystone 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 2)

Turn right 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, to the right of the Little Dipper is Queen Cassiopeia, the W-shaped constellation. Grab your binoculars. From the top point of the W shape, scan slowly to the right and up slightly. Do you see a fuzzy circular shape? That is the Andromeda Galaxy. It is 2.5 million light years away! Find the bottom point of the W. Scan once again to the right and down slightly. You will come upon the Double Cluster in Perseus. (Illustration 3)

Hike again to the right and you will be facing east. When looking up overhead, 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. Great job! 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! Here is a challenge: scan to the left of Altair. Do you see the group of stars that resemble an upside down coat hanger? Cool!

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! If you look just below the Summer Triangle, you will see a group of stars that look like a kite. This is the constellation, Delphinus, the Dolphin. Journey below Delphinus. Notice four stars that form a square. This is the Great Square of Pegasus, a sure sign of autumn! (Illustration 4)

**Take a few minutes and listen to the late summer sounds! Farewell summer until next year!**

## Highlights

**Sept 5** – Last Quarter Moon

**Sept 13** – New Moon

**Sept 18** – The Moon passes north of Saturn

**Sept 21** – First Quarter Moon

**Sept 23** - Autumn begins in the Northern Hemisphere at 4:21 am

**Sept 27** – Full Moon. According to folklore, this is the Harvest Moon. This Full Moon appears closest to the Autumn Equinox and marks a period when the Moon rises slightly later on several consecutive evenings which is an aid to late harvesting.

**September 27 - TOTAL LUNAR ECLIPSE - Partial Eclipse begins at 9:07pm.**

**Total Eclipse begins at 10:11pm. - Total Eclipse ends 11:23pm.**

**If you are an early morning riser, you will spot Venus, Jupiter & Mars in the eastern sky before sunrise!  
Venus is the highest and brightest, Jupiter is low on the horizon and reddish Mars is in between.**

**Brightest Stars:** West – Arcturus, Spica. **Overhead** – Vega, Deneb, Altair. **South** – Antares.

**Binocular Highlights** - The Moon, Hercules Globular Star Cluster M13, Milky Way from south to north starting between Scorpio and Sagittarius, Double Cluster (NGC 869 & 884), and Andromeda Galaxy (M31).

**Telescope Highlights** - The Moon, Saturn, Neptune, Albireo, M2, M3, M4, M6, M7, M8, M51, M13, M57, M81, M82, M10, M11, M12, M27, M15, M16, M17, M20, M21, M22, M23, M25, M31, M39, M92 and NGC 869&884

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