



STARRY TRAILS

OCTOBER 2017

As we head into October, don't forget to take in the wonderful smells of autumn and the sounds of crickets on those last warm evenings of the year! Lovely planet Saturn continues to shine in the southwest 30 minutes after sunset (Illustration 1). During mid-month, Saturn's rings are tilted at maximum openness! We will not see this tilt again until 2032. Venus and Mars continue to put on a show in the eastern sky before sunrise. On the morning of October 5, Venus and Mars are less than 1 degree apart (Illustrations 2)!

Our hike begins around 7:45. Grab your Starry Trail map, jacket, binoculars and for those cold nights, your gloves. Start by facing west and the beautiful colors of the sunset. Turn slightly left, or southwest to the bright golden colored object which is Saturn. Saturn certainly is a lovely object in a telescope!

Now venture slightly towards the right to the familiar keystone shape of Hercules, which will be sinking lower in the west each night. (Illustration 3). Journey overhead to a bright blue-white star, which is Vega. Trek up just a bit more to another bright star, Deneb. Head to the left and down slightly to the next bright star, Altair. When you connect these three stars you have made the Summer Triangle. Great! Running through the Summer Triangle is the Milky Way, our Galaxy! Take your binoculars and scan through that part of the sky. Look at 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 right and up of Altair. Do you see the group of stars that resembles a coat hanger? Cool!

Hike back to Deneb. Imagine this to be the tail of Cygnus, the Swan. To the left will be three stars in a line. Those make up the 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 to the left of Vega. This star is Albireo, which is a beautiful double star through the telescope. Just above the Summer Triangle you will see a group of stars that look like a kite. This is the constellation, Delphinus, the Dolphin (Illustration 4)

Turn to the right or direction north. The Big Dipper is very low on the horizon. Take the two stars at the end of the cup of the Big Dipper and draw an imaginary line to the next bright star. You have reached the North Star! The North Star is at the end of the handle of the Little Dipper. Venture to the right and upward. Do you see the W shape in the stars? You have found Cassiopeia (Illustration 5). Grab your binoculars again. 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, a bit, and down slightly. You will come upon the Double Cluster in Perseus. If you continue to hike down to the horizon, you will see a bright red-orange star, Capella.

Turn once more to the right. You will now be facing east. Look straight ahead and up. You will see four stars that form a large square. This is the Great Square of Pegasus (Illustration 6). As we head further into October, you will begin to see a small cluster of stars, the Pleiades, or the Seven Sisters. This has to be one of my favorite clusters of stars to view through my binoculars. Give it a try. Wow! Our final listen to the crickets, until next summer..... Next month, late autumn constellations and the Leonid Meteor Shower!

Night Sky Highlights

October 5 – Venus & Mars less than a degree apart in the eastern sky, 40 minutes before sunrise.

October 5 – Full Moon. According to folklore it is the Harvest Moon. The Moon rises slightly later several consecutive evenings which is an aid to late harvesting.

October 12 – Last Quarter Moon.

October 15 – The Moon occults or passes in front of the star Regulus, one hour before sunrise in the eastern sky.

October 17 – Saturn's rings tilted at maximum openness.

October 17 – The Moon passes north of Venus & Mars before sunrise in the eastern sky.

October 19 – New Moon.

October 21 – Peak of the Orionid Meteor Shower.

October 24 – The Crescent Moon passes north of Saturn.

October 27 – First Quarter Moon.

Brightest Stars – Overhead: Vega, Deneb, Altair. **West** – Arcturus. **North East** – Capella.

South – Fomalhaut.

Binocular Highlights – The Moon, Hercules Globular Star Cluster M13, Milky Way from southwest to northeast starting at Sagittarius, the Pleiades, Double Cluster (NGC 869 & 884), and Andromeda Galaxy M31.

Telescope Highlights – The Moon, Saturn, Uranus, Neptune, Albireo, M31, M8, M51, M13, M57, M81, M82, M10, M11, M12, M27, M15, M16, M17, M20, M21, M22, M23, M25, M2, M39, M92 and NGC 869&884.

Starry Trails is a fun & easy way to explore the night sky as it appears from your own backyard! Journey over to **StarryTrails.com** & get everything you need to navigate the night sky! Starry Trails is a free publication & your able to make copies to pass along to your friends & family so they can learn and enjoy the night sky with you!

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

Illustrations courtesy of www.CassandraDills.com

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