



STARRY TRAILS

JANUARY 2023

Happy New Year!!

Early winter sunsets give us plenty of time to enjoy the fabulous planet show after the sun goes down. Dazzling Venus has returned to the evening sky and can be found low in the west-southwest one hour after sunset on January 1 and two hours after sunset on January 31. Dim Saturn is up just to the left of Venus, brilliant Jupiter is high in the south and bright red, orange Mars is high in the southeast (Illustration 1). Grab your binoculars and focus on Jupiter. It helps to rest your arms on a table or steady surface. You will see four pinpoints of light. These are the largest Galilean Moons of Jupiter. Throughout the month, Venus slides along the ecliptic and meets up with Saturn on January 22 for a very close encounter. The pair will be less than one degree apart and will be in the same field of view through a telescope (Illustration 2)!

For our hike, we will head out one hour after sunset. This will be at 6:00 pm at the beginning of January and 6:30 pm by months end. Grab your winter coat, hat, gloves, warm socks, and boots. Do you have your Starry Trail map and binoculars? Let's enjoy!

As we step out on a clear January evening, the brightest stars of the year will take our breath away! This is the best time of year to practice star hopping! Face west or where you saw the beautiful colors of the sunset. Head up and you will see four stars that form the Great Square of Pegasus (Illustration 3). Trek up and to the right and you will see a group of stars that are in the shape of a sideways "W". This is the constellation Cassiopeia. Grab your binoculars. From the top point of the W shape, scan slowly up and to the left. You will come upon the Double Cluster in Perseus. Find the bottom point of the W. Scan once again to the left and down slightly. Do you see a fuzzy circular shape? That is the Andromeda Galaxy (M31). It is 2.5 million light years away!

Turn to the right to face north. You will notice the Big Dipper up on its handle. By the way, look at the second star in the handle with binoculars. It is a double star! Head to the cup of the Big Dipper. 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 (Illustration 4).

Trek to the right or east and you have arrived at the most magnificent picture in our stars, Orion, the Hunter! The three stars in a row make up the belt of Orion. The bright red-orange star up and to the left of the belt is Betelgeuse. The bright blue-white star down and to the right of the belt is Rigel. Now with your binoculars scan just below the belt. You will notice a small fuzzy area. That is the Orion Nebula (M42). New stars are forming in that hydrogen gas cloud! We call this a stellar nursery. Now let's find Orion's best friend. Journey back to the belt of Orion. Draw a line down and to the left, to the brightest star in that part of the sky. You have reached Sirius, the Dog Star. Sirius is the number one brightest star in the night sky.

Just above Orion you will notice a V shape in the stars. This is the face of Taurus, the Bull. The bright red-orange star is Aldebaran. To the left of Aldebaran, the bright star you will see is Capella. Hike up just a little more to a small cluster of stars. These stars are the Pleiades or the Seven Sisters. The Pleiades has to be my favorite group of stars to gaze at through my binoculars. Take a look! What a treasure!! Return to Orion. Scan left to the two stars that look almost identical. These are Gemini the Twins (Illustration 5).

See how easy it is to star hop through the winter sky! There are so many bright stars to guide us!

Now, head inside and grab a cup of hot chocolate. Next month, Jupiter and Venus will continue to get closer in the evening sky and we will begin to see signs of spring!!

Highlights

January 3 – The Moon passes south of Mars.

January 3 – Quadrantid meteor shower peaks.

January 4 – Earth at perihelion or closest distance to the Sun (91.4 million miles).

January 6 – Full Moon. According to folklore, it is called the Full Wolf Moon.

January 14 – Last Quarter Moon.

January 21 – New Moon.

January 22 – **Venus passes less than a degree south of Saturn.**

January 23 – The Moon passes south of Venus & Saturn.

January 25 – The Moon passes south of Jupiter.

January 28 – First Quarter Moon.

January 30 – The Moon passes south of Mars.

Brightest Stars: East- Southeast - Betelgeuse, Rigel, Aldebaran, Sirius. **East:** Procyon, Castor, Pollux, Capella.

Binocular Highlights - The Moon, Jupiter, Andromeda Galaxy M31, Double Cluster near Perseus, Pleiades, Orion Nebula M42, Milky Way from Capella thru Cassiopeia.

Telescope Highlights - The Moon, Jupiter, Mars, Uranus, Neptune, M1, M2, M15, M31, M41, M42, M81, M82, M35,36,37,38 (near Capella), NGC869 & 864

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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!