

village view

by Andrea Leonard

Where did summer go? Surely 'twas Memorial Day but a moment ago; and in the next breath, almost, the 4th of July; suddenly Labor Day came and went, and now autumn's here; summer's over.

Fall is "apple-pie-and-ice-cream" weather. Spicy mornings, rich with harvesty smells, blend into over-warm noontimes, finally capped with cold sweet nights, the melting moonlight flooding the shadows.

It's autumn nights that stimulate us, bring thoughts of Hallowe'en, touching off hoarding instincts against winter months to come, exciting us with clear starlit skies and a moon, looking as it rises, fatter than the greatest pumpkin of them all.

Autumn skies are clear, as a rule, and it's warm enough to star-gaze through the evening hours. As winter comes, cold drives us inside after dark. As spring follows and flows into summer, mists and fogs hamper viewing. For seeing objects in the night sky, October's the best month of the year.

The Hunter's Moon will rise early, at 4:53 p.m., climb the eastern sky, and come to fullness just before midnight on October 7th. Though it will appear immense as it rises, and near enough to reach out and touch, its orbit will take it farthest from Earth on the 10th. The illusion of size and nearness results from magnifying effects of moisture in Earth's atmosphere near the surface, through which we see the rising satellite.

While the moon is the most dominant visible heavenly body after sunset, the planets of our solar system and the stars of the universe make a fascinating study. Even with the naked eye, we can trace and identify the planets and major constellations and learn their positions at different times of the year.

On October 11 the planet Jupiter will rise quite close to gibbous waning moon. While it will remain close to the moon throughout the night, it should be possible, if the night is clear, to see them separate, the moon moving slowly to the left of Jupiter, starting at about 8 p.m.

Jupiter is the fifth planet from the sun, the largest and most massive in our solar system; it has a diameter of approximately 86,000 miles, a mass approximately 318 times that of Earth, and revolves around the sun every 11.86 Earth-years at a mean distance of 483 million miles. Jupiter has twelve moons.

Saturn with its ten moons and an encircling system of rings composed of many small solid bodies, will rise about midnight as the date changes from October 17 to 18. It will appear earlier than our moon, now a waning crescent. Both will be visible until nearly dawn, with our moon moving slowly to the left beneath Saturn.

This planet is the sixth from the sun, the second largest in the solar system with a diameter of 74,000 miles, a mass 95 times that of Earth, and completes its orbit around the sun once every 29.5 Earth-years. Its mean distance from the sun is 886,000,000 miles.

Our moon will come closest to Earth on October 23, just eight hours after the moon is new. The effects of the moon's approach will be apparent in stronger tides; it's the moon's gravitational pull on Earth's waters that makes our tides rise and fall.

Those of us who conform to tradition and certain Acts of Congress will, on October 24, turn our clocks back one hour and return to Eastern Standard Time. With much reluctance, I'll go along with it.

On this evening, as well as the one following, we shall, if we watch, see the planet Venus shift from the moon's left to its right, as it passes below the young crescent.

Venus is the second planet from the sun, has an average radius of 3,800 miles, a mass 0.816 times that of Earth, and revolves around the sun every 224.7 days, at a mean distance of approximately 67.2 million miles.

Between October 1st and the 15th, Mercury will be visible as the morning star, if you're up before the sun. Look for Mercury low in east; by sunrise it will be more than 15 degrees above the horizon. It will appear brightest near the middle of the month.

Mercury, the smallest of the planets, is nearest the sun. Its year is only 88.0 Earth-days at a mean distance of 36.2 million miles from the sun. Its diameter is approximately 3,000 miles and its mass, approximately 0.05 that of Earth.

Morning and evening stars are not, of course, stars; they're planets. In October Venus and Mars are evening stars, and Mercury, Jupiter and Saturn, morning stars. Mars, however, is not well-placed to be visible.

Mars is fourth in distance from the sun, half again as far as is Earth. It takes 1.88 years to complete its orbit, but its day is only slightly longer than Earth's: 24 hours and 37 minutes. This planet is 4,218 miles in diameter, has a mass 0.108 of Earth's, and two moons, one of which orbits Mars once a day; the other makes almost three daily revolutions around its planet.

Venus, is a bright, but not particularly conspicuous object in the evening sky. It'll be found low in the west-southwest during early twilight and will set before dark. At the end of October, Venus will ride somewhat higher in the sky and be visible longer after sunset.

Jupiter, while technically not an evening star, will be the more prominent evening object since it rises in the east a few hours after sundown, and remains visible until dawn as the brightest starlike attraction above the horizon.

The morning star, Saturn, will rise about midnight during the month of October, and by dawn will be well up in the southern sky. You'll also find Mercury in the dawn sky, especially during the first two weeks of the month. Look for it low in the east from dawn until the sky lightens too much to see any stars.

It's easily the brightest object you'll find near the eastern horizon at this hour and is simple to spot since there are no other objects visible nearby to confuse with it.

Perhaps more interesting than the planets are the Meteor Showers. These will radiate from a region between the stars Betelgeuse (the red star) and Castor, (a bright star in the constellation Gemini). If you need help in locating constellations, star maps are available at public libraries.

On the 21st of October the Meteor Showers will peak and you may expect to see twenty or more meteors per hours, swift and often bright, between midnight and dawn, when the radiant is well up in the east and south.

The luminous trails streaking across the sky are caused by a meteoroid entering Earth's atmosphere; the friction heats the object to incandescence, and the brilliant trail it makes we call a meteor.

When a meteoroid, any of numerous celestial bodies ranging in size from specks of dust to stony or metallic asteroids weighing thousands of tons, survives passage through the atmosphere and reaches the earth's surface, we call it a meteorite.

With summer gone and autumn here, we turn from sun-worship to star-gazing if we find ourselves where the lights of heaven catch our attention. Once you begin to look at the night sky, it's hard to stop searching. Only the chilling cold will finally urge you indoors to a warm fireside; your head will whirl with the immensity of the universe, and with its beauty.