

THE GRANT COUNTY STARS INVITE YOU!

Give in to curiosity and learn about the night sky

By John Fiedor

For the Blue Mountain Eagle

When was the last time you stayed out at night and just gazed into the brilliant heavens? A starry night sky can stir any person with a mixture of wonder and questions, smattered with a tincture of unease, soul-searching, and maybe peace. Stargazing is so easy to do, inexpensive and quite rewarding—a life-long enjoyment. Still, though some may be curious, many are not sure where to start to explore, or how to get started as a stargazer. This article may help.

First, give in to your curiosity, your desire to learn about the night sky. In the least, it only takes time and a clear night sky. We are very fortunate as Grant County has one of the most pristine, most beautiful, night skies in the country. Add a few simple, inexpensive items, plus a bit of guidance and you are ready to explore the wonders of a starry night.

So, how should one prepare and get started? Here are a few suggestions for your first nights out, some adapted from Ken Graun's, "Guide to the Stars" planisphere—available online with a Google search. Start by learning about and finding individual stars, and then the star patterns in the night sky in the form of the constellations. You can jumpstart the learning process by enlisting the help of someone who is familiar with the night sky or attend a local night sky program, one that gets you out under the stars and points out features.

If you have to learn by yourself, don't despair. A great tool to have at the start is a planisphere. A planisphere is a flat, hand-held star chart that rotates, usually made of two plastic layers. It can be adjusted to display the visible stars, and constellations, for any time and date. They are very inexpensive, a good one costing less than \$20. Should you have the technology, you could find—and copy—a star chart online. The source I use often is at www.telescope.com, Monthly-Star-Chart, offered by Sky and Telescope.

Next, you need to find a dark area away from car and other bright or glaring lights. Needless to say, clouds will obscure portions, or all, of the night sky. Many times they will clear off an hour or two after sunset in Eastern Oregon. Though the moon is a wonderful sight and worth later exploration with binoculars or a telescope, avoid nights when the moon shines bright as it will make the stars more difficult to see. You should stay outside in the dark area at least 15 minutes to let your eyes adjust and acquire your best night vision. The iris in each eye will open to its maximum and allow the most light into the eye. You may be surprised how much you can see in what you thought was total darkness.

To see your star guide in the dark, or to move about more safely, use a red flashlight. Red light is best at preserving your night vision. Placing red cellophane, or red paint, over the lens

of a normal flashlight might suffice. If the red light is not bright; add more layers of red if so. The red light should only light up an area within three-to-four feet away.

Initially, face either north or south, as the constellations in these areas of sky are vertical and easier to identify. Using your star guide, which should be labeled with north or south, start by matching the brightest (biggest) stars on the guide with the brightest stars in the sky. The planets—Venus, Mars, Jupiter and Saturn—can be brighter than the brightest stars. If you find a bright "star" not on your star guide, it is most likely a planet. Online charts that are updated by month will usually have the planet positions noted along with the stars.

A constellation is a group of stars in the night sky that form a recognizable pattern traditionally named after its apparent form or identified with a mythological figure. The stories behind the mythological figures are fascinating. The book *Urania's Mirror*, published in 1824, is worth a look, as it visually paints those mythological stories. P.D. Hingley calls it "One of the most charming and visually attractive of the many aids to astronomical self-instruction produced in the early nineteenth century." Online, search for *Urania's Mirror*.

Modern astronomers have divided the sky into eighty-eight constellations, of which most can be seen from Grant County locations throughout the year. The constellations are much bigger than you might expect. The constellation Orion is the height of a hand span with your arm extended. The Big Dipper is greater than the length of a hand span. If you are having trouble finding any constellations, try to identify a few of the brighter and eas-

ier patterns, like the Big Dipper, Orion and Sagittarius. Use these as anchor points to work from and find others around them.

Most star charts will have a shaded, irregular area stretching across the face of the chart, labeled the Milky Way. This represents the glowing ribbon of low light stretching across our night sky, our own galaxy, one of billions in the universe. Our Milky Way is made up of billions of stars in the distance, to far to see individually, but teaming up together to cause the glow. In the darkest areas, Grant County offers a spectacular view of the Milky Way, best seen with the naked eye.

What other items might you have with you when you stargaze? You definitely want comfort in this type of recreation. How about a nice blanket to lie upon and some soft ground, and perhaps a pillow to prop your head? Standing or sitting in a chair is okay, but remember your head may have to tilt back awkwardly for long periods to look straight up. Dress for the weather. It does tend to get chillier after dark, so bring extra lay-

ers. Bring friends and share the experience. Have some drinks and snacks available, as you may stargaze for several hours if all goes well. Don't feel afraid to cut a session short. You'll know when you have had enough for an evening. If you need to use the restroom, use your red light as you do so. Avoid white light.

What about scopes? Initially, avoid telescopes. They can be frustrating to use without practice. First, become comfortable just gazing with your eyes. Later, try binoculars. It will change your views greatly, bringing the stars and planets closer and brighter, but so close you cannot see those large constellations. The general favorite in binoculars for stargazing is the 10x50mm size. At night, it is important to get as much of the starlight into your eyes as possible to see stars at their brightest. The 50mm wide lens grabs a lot of starlight and is about as big as binoculars can get without becoming too heavy to hold steady by hand. Whatever binoculars you may have on hand,

give them a test at night. You can also go online and search for "astronomy binoculars" for more advice.

When using binoculars for stargazing it is important to stabilize them for steady viewing. Laying on a blanket steadies your whole body and allows you to use your elbows to steady your view overhead. A tripod is also great, but added equipment, and some tripods won't allow a view straight overhead.

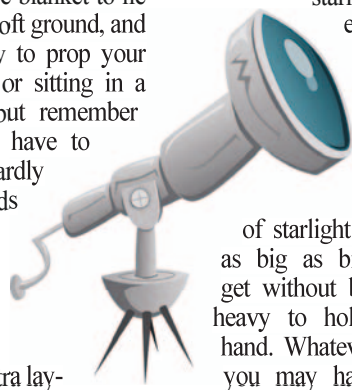
What is there to see the next few days ahead? A good online site, one I use for checking what to look for in the week ahead, is www.skyandtelescope.com/observing/sky-at-a-glance. Other such sites are also available if you search for them.

Regarding meteor showers, there are several periods during the year when these occur on a regular basis, and are best seen with the naked eye. Each shower will vary in the number of meteors, even from year to year. They are best seen when the moon is not visible, the sky at its dark-

est. On August 11-12, 2015, the Perseid Meteor Shower looks to be a night of potential, with a moonless, dark sky, and possibly 120-160 meteors per hour. With the widest view of the night sky as you can find, lie on your back and get comfortable. Aim your feet to the north as that is the direction the meteors will emanate from as they streak across the sky above. I like to imagine the earth I am pressed against as a spaceship hurtling through space. But that's me.

Hopefully you now have enough tips and encouragement to get started and to step out under a clear night sky and do a little stargazing. Believe me, once you become fairly familiar with the starry night you'll become used to being out in the dark. The stars and constellations will actually welcome and comfort you in spirit, as friends.

John Fiedor, former director of visitor services at the John Day Fossil Beds National Monument near Dayville, writes from his Dayville home.



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