



## THE STARRY SIDE The heart and heat of Summer BY GREELEY WELLS

Last time in Spring we talked of standing "on" the flat disc of our Milky Way Galaxy looking out into dark and almost faint sky. Now our Milky Way has risen in the east and with it our lovely summer triangle made up of the brightest stars in three different constellations. All three in the white mists of billions of stars and other celestial objects, that makes up our Milky Way Galaxy.

Let me take you outside for a look. After all it's warm and wonderful out there at night under those beautiful stars and as it cools with night even the mosquitoes will go away. Come on out, bringing me along in this article, and a comfortable chair that leans back to show you the sky. Remember where your sun rises? That's east, put it to your left. And where it sets? That's west, put it to your right. You're feet are now facing south. So get comfortable and look up. Hope you have a friend, spouse or child with you.

The Milky Way is rising in the east (your left). It starts from over our head in the north arching high in the east and ending close to our feet in the south. In the south you'll notice the Milky Way bulging and brightening, that is the center of our Milky Way Galaxy that we live in. That very center is in the constellation: Sagittarius, the archer or tea pot. It's above your feet, a little left or east, and really looks like a tea pot. A

tight planet line with Regulus added about 30 minutes after sunset. The configuration of planets is now this: to the left and highest is Mars then diagonally to the right and lower is Saturn then Regulus, a star, is low close to Venus who is by far brightest and rightmost and lowest. By the end of the month Venus will set about a hour after sunset. Almost all this is so close to the horizon line that if you don't have a wonderfully low west-northwest or can't climb a mountain, you may miss it. In which case you'll be seeing only the highest: Mars and maybe Saturn. (That's my fate, here on Carberry Creek.) With a good low horizon later in August the group is joined by Mercury who will be the dimmest. Way above all this in the west is the bright Arcturus "follow the arch [of the big dipper's handle] to Arcturus".

Jupiter is half a sky away from all the other Planets in the south above the handle of the tea pot Sagittarius. And he pretty much holds his position slowly drifting both months. It's a fairly good position for a telescope view.

Saturn joins Mars and Regulus in July, see below and above.

Mars is very close to the brighter Regulus on July 1st. On the tenth and eleventh it is visited by Saturn. Both are in the west and setting a little over

> an hour after the sun. See above for August happenings, if you have a good low north-western sky. By the end of August Mars falls lower towards the sunset's afterglow to be gone from view in September till next year.

## OF SPECIAL NOTE

Well the most exciting time of the night sky each year is August 12 for me. Like clockwork the Perseid Meteor Showers grace our night skies. The moon sets by midnight or so. The showers are active from July 17th - August

24th but crowning night of August 12/13 is the best. Perseids are fast, bright and leave a persistent trail most often. The radiant is in the north east below the "W" of Cassiopeia in Perseus. They are good after midnight and best predawn but any time will get you some if you're patient.

So if you're still in your chair facing south try to lean way back to see all the sky, especially the north overhead where Perseid is.

One more thing to consider if you go out early in the morning to see the show: you'll be seeing the winter sky up there! Yes, early mornings show you a sky that is about a season or two later, actually predawn in August is actually a November sky. So notice Orion and even the dog star Sirius rising in the east before dawn. This is why the ancients called this hot weather the Dog Days of summer! I can imagine the ancients trudging out to the fields in the cool of the early dawn and seeing Sirius rising. Wouldn't you do a lot of your work then before the heat of the day? The moon on August 2nd is a slim sliver that hovers left of Venus. August 3rd the moon is below and between Mars and Saturn. Watch for it on the 4th as it's moved to the left of Mars. This is an excellent opportunity to notice that it moves about a fist's width at arms length each night. Step out those evenings to see it right after sunset. July's full moon, the Hay Moon or Thunder Moon, is on the 18th and August's full moon, the Grain Moon, or Green Corn Moon is on the 16th. I've been calling these moons by the month in which they appear but really they are seasonal moons. Three sets for each of the four seasons. We publish every two months so it doesn't come out "right." So I just call them, a bit inaccurately, by the month. I hope you'll forgive me.



Photo: www.utahskies.org

handle on the left forms a trapezoid of four stars, and a spout on the right, of three stars, out of which seems to flow the Milky Way's milk! There's even a triangular top. In July, bright Jupiter is close to the upper left and above it is a small configuration of stars that is the tea spoon for the tea pot. It's even right side up with the handle to the left. To the right of all this is Scorpio, still very much in the bulge of the Milky Way. See the bright and reddish star, the "Rival of Mars," it's called Antares. It's the middle of three stars sort of diagonally horizontal and to their right is another three in a row of vertical stars. Imagine the first three the arching body of the scorpion; the right hand vertical three in a row make the shoulders of the outstretched claws. Hey, the 3/4 size moon joins Scorpio on July 13th, right between and below these two trio's of stars! To the lower left of Antares, and probably going to or below the horizon line, is a line of stars that sweep down to the left and up again ending in two small stars close together. That's the scorpion's stinger, look out! When you finally figure out all this constellation I think you'll be amazed at how "accurate" it is. How much like a scorpion. So July 13th might be a good night to do this star/constellation looking or in August go out the night of the 12th/13th and see meteors too! (See below.) A valuable technique for finding the right stars is to squint a bit blocking out the confusion of lesser stars leaving only the bright ones, which these constellations are mostly made of.

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## THE PLANETS

Venus has not been around for some time now while it went behind the sun. Now it is just barely becoming visible in the western sunset's evening sky by the end of July. It's in the west-northwest. It's so close to the sun that it sets only about 45 minutes after the sun does. But it's so bright it may be the first "star" you see in the west. Good luck seeing it. By July 30th Venus is very close to Mars and Saturn. They make a

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