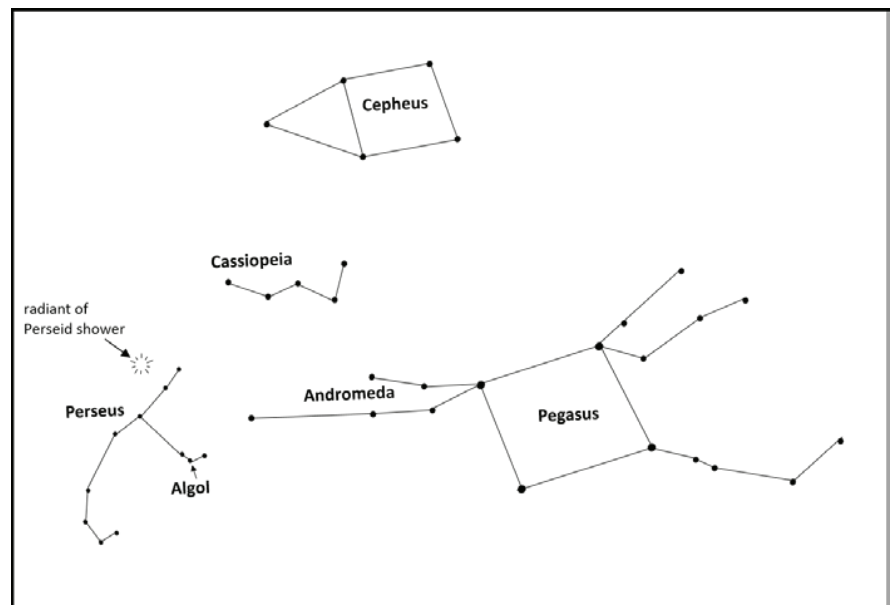


WHAT'S UP?

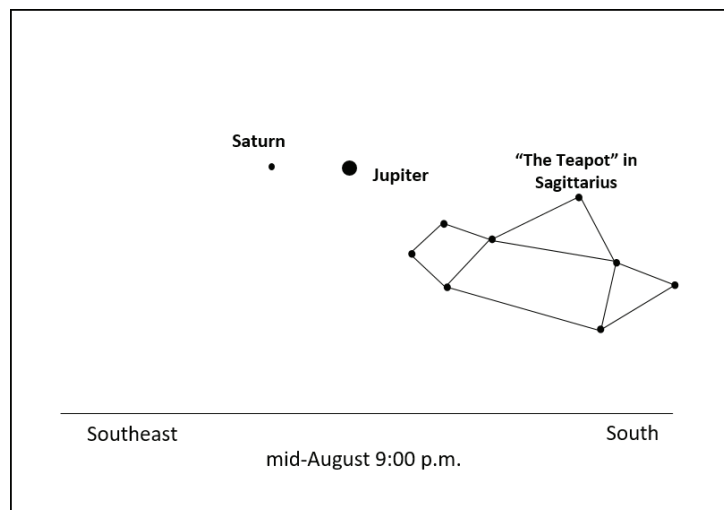
It's Summer, and time for the Perseid meteor shower. Weather-permitting, of course, this year's shower should be a better event to view than last year's was. You may recall that the peak night of last year's Perseid shower occurred very near to the time of a Full Moon, which washed-out all but the brightest meteors. This year during the best two nights to view the shower, the Moon will be just past the 3rd Quarter phase. Bright, yes – but not too bright. When is the peak? The best nights to go out looking for meteors will be the nights of August 11th/12th and August 12th/13th. The best time to look will be after it gets dark (~9:30 p.m.) and before the Moon gets too high in the sky (it rises at 11:51 p.m. on the 11th and at 12:23 a.m. on the 13th). You don't need any equipment to view the meteor shower. Set up a comfortable chair (one that reclines is best), sit outside in an open area, and look up. And even though it is summertime, you might also want to have a long-sleeve shirt and long pants handy in case it gets chilly and damp. Lastly – don't forget the bug spray! Carolyn and I also like to have tunes (Holst's *The Planets* and Pink Floyd's *Dark Side of the Moon* are always appropriate for these events) and beverages when we meteor-watch. As to where to look, look generally from the northeastern horizon to straight up. Just slowly scan the sky. The point from which all of the Perseid meteors appear to start (the *radiant*) never sets for us at our latitude of 42° North and will be low in the Northeast as night falls.

As I wrote in Installment #7, back on October 18th of last year, meteor showers occur when the Earth intersects a trail of dust left behind in a comet's orbit. In this case, the progenitor of the dust is comet 109P/Swift-Tuttle. Comet Swift-Tuttle orbits the Sun once every 133 years and will be back our way in 2125. It was discovered in 1862 by Lewis Swift (in Rochester, NY) and by Horace Tuttle (at Harvard University). That same *What's Up?* article explained that meteor showers are named after the constellation where the radiant is located. So, in this case, we can conclude the radiant is in the constellation *Perseus*. Perseus is a character from Greek mythology. Associating stories from one's culture with patterns of stars is a good way to memorize the patterns and where and when they are seen. The stars that form the outline of Perseus in the sky are near constellations that are named after other characters associated with Perseus. Together, they allow us to learn to recognize five groupings of stars spanning a large area of our northern night sky. Here's the story as I have learned it:

Perseus was a great hero, renowned for among other things, slaying Medusa (who, if she looked at you, caused you to turn to stone!). On his way home, he passed through a kingdom ruled by Cepheus (the king) and Cassiopeia (the queen). By the way, Perseus was riding the winged horse, Pegasus, that sprung from the neck of Medusa when she was slain (!). Now, as most kings and queens do, they had a beautiful daughter. Her name was Andromeda. However, Cassiopeia (as some mothers do) bragged about Andromeda's beauty. That annoyed one of the gods so much that he sent a sea serpent (Cetus) to destroy their kingdom. The only way that Cetus was going to stop was for Cepheus and Cassiopeia to chain Andromeda to a rock and allow Cetus to devour her. Cue Perseus. He steps in (flying on Pegasus' back), slays the serpent, and wins the hand of Andromeda. Yay! As you can see from this star map, these constellations – Perseus,



Cepheus, Cassiopeia, Andromeda, and Pegasus – are all near each other in our sky. Medusa even is there, represented by the star Algol, in the constellation of Perseus. Cetus is also a constellation, but a bit further away from the others and separated from them, so I don't show it here. There are many variations on these mythological stories, and the story I have told you is one of them. It is the one that I remember and that helped me to learn to find these constellations in the sky. If you want to get started learning them yourself, start by finding Cassiopeia. At 9:00 p.m. these days, you'll find it in the Northeast, about 25 degrees above the horizon. It looks like the letter W. Pegasus is just rising in the East – look for the large square made by four stars. From there, over the course of the Fall and Winter, use the chart to work your way over to the other members of this set of constellations as they join the rest in our night sky.



Before I go, I want to point out the planets that we can see on these August nights. Perhaps you've been following their positions all along based on diagrams from earlier *What's Up?* articles (if so, good for you!). But in case you've lost track of where they are, here is a diagram to help you find them. As night falls, we can see Jupiter and Saturn in the southeast about 20 degrees above the horizon among the stars of the constellation, Sagittarius. Mars which used to be an early morning object, is rising now around 11:00 p.m. and is located in the midst of the stars of the constellation Pisces. Mars will be starting to appear bigger and brighter over the next few months and a bit later this summer, I'll dedicate an article to viewing it.

You can reach me at astroblog@comcast.net with any questions and comments you have. This is *What's Up?* Installment #27.

Until next time, Keep looking up!

Barry