

**By Vernon Whetstone**

*Amateur Astronomer*

We come now to the last two characters in our celestial story, Cassiopeia the Queen and Cepheus, the King.

Both are found in the early evening autumnal sky in the north about an hour after sunset.

Cassiopeia is the very familiar "W" shape and is easily recognized, Cepheus on the other hand will take some looking.

If you follow Cassiopeia into December she will change into another shape, the letter "M" and be located due north. Or you could even look at her at about 1 a.m. now to see the result of her changing act.

In the spring sky she will be back into her old self as a "W," only this time in the east.

The northern end of the Milky Way runs right through Cassiopeia, which means there are some very nice binocular objects to observe.

Use your binoculars and look at the bottom leg of the "W" you will find the open star cluster M-103 near the star on the right.

If you use the bottom leg as a pointer going from left to right it will point to the Owl Cluster, a very nice little star grouping.

Move to the top leg and use it as a pointer from bottom to top to find M-52 star cluster. There are more objects in Cassiopeia that you can have fun hunting for.

Don't forget that just below Cassiopeia is the fascinating double Perseus star clusters, an absolutely astounding sight in binoculars.

Now to Cepheus. While Cassiopeia is rather obvious and easy to find, Cepheus on the other hand, will take some looking.

Cepheus is made up of second and third magnitude stars and looks like what a child would draw if you asked them to draw a house.

A box for the house and two lines forming the roof. That is what Cepheus looks like, except that from our viewing point he is upside down with the roof pointing down toward the Polaris, the North Star.

That is one way you can find him. Look for the North Star, go up and right to find the top of the roof, the rest of him is located above the roof.

Poor Cepheus, he never gets much attention as there is not really much there to look at, but when you find him, you can check him off your "to discover" list.

SKY WATCH: New moon yesterday, Sept. 27, and of course, a new moon means no moon is visible. On Friday, Sept. 23, the sun crossed the celestial equator moving south giving us the beginning of autumn while our friends in the southern hemisphere are starting spring. Jupiter rises at about 9:30 p.m. MDT and will be best for viewing by 11:30 p.m.

Now is the time to find the planet Mars and watch for the next few mornings as it takes a stroll through the stars of the Beehive Star Cluster, M-44. Although there are several hundred stars in the cluster only one will be bright red, and that will be Mars.

Mars and the cluster are best seen at about 4:30 a.m. MDT, and while I am not necessarily a morning astronomer, this is one event worth getting up for. Watch each morning as the planet

gets closer and eventually is among the stars of the cluster on Oct. 1. Then the next few mornings watch as it strolls away. Now, you do know the planet is not really in the star cluster, don't you? While Mars is currently about 167 million miles from us, the Beehive is about 500 light years, which is about 900 trillion miles away. The two just happen to be along the same line of sight from us and only look like they are close.

NEXT WEEK: More astronomical blathering.