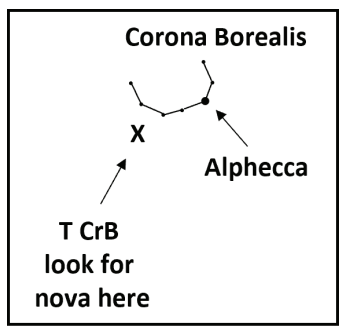
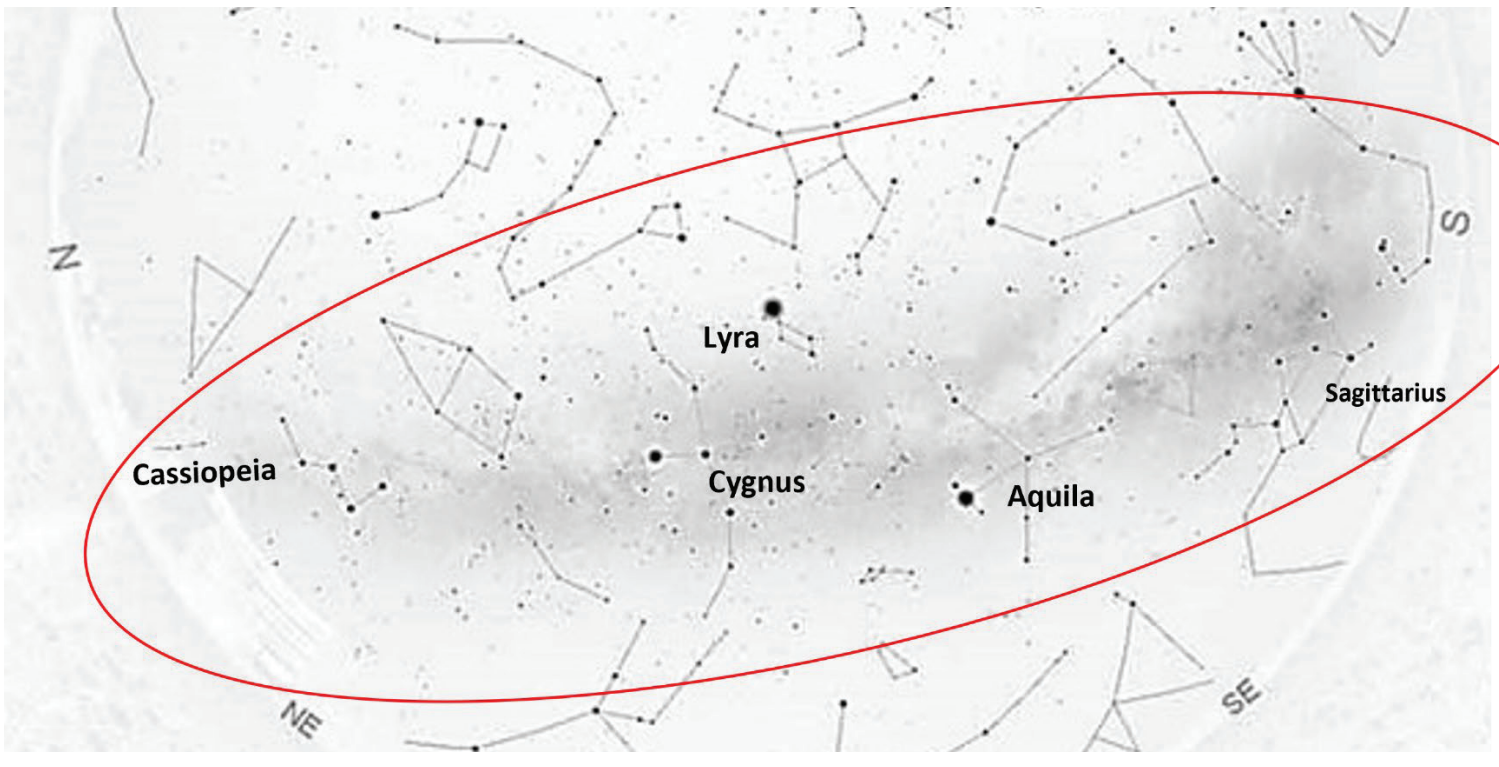
WHAT'S UP?

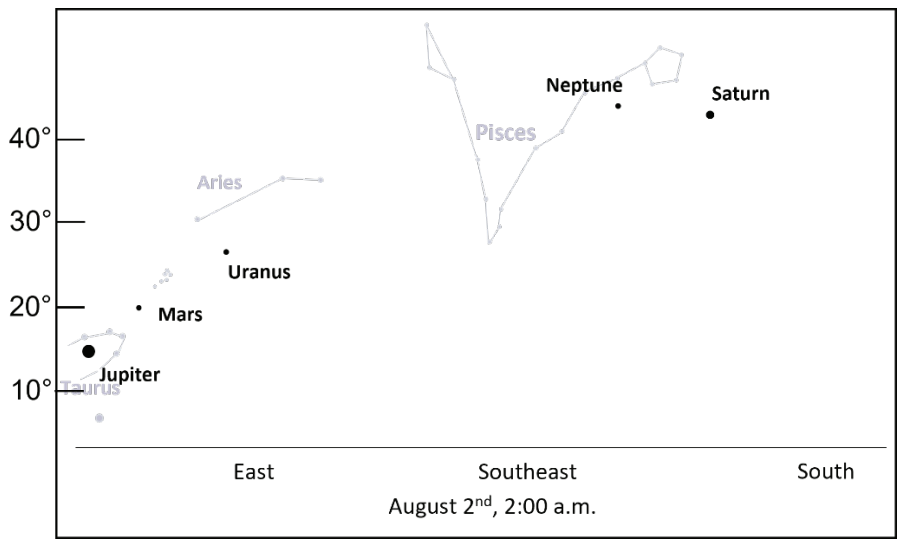
Hello. Well, even when it hasn't been raining, the nights haven't been too good for stargazing. But when we have had a clear night, have you found the constellation *Corona Borealis* yet? If you recall, I told you about our chance to view a nova in that star group sometime between now and the end of the year. It hasn't happened yet, so keep checking. As a review, Corona Borealis can be found between the constellations of *Boötes* and *Hercules*, high in the southwest as night falls. It is a semi-circle of not-all-that-bright stars. Its brightest star is a 2nd-magnitude star named *Alphecca*. When this nova occurs, in the spot where we now so no star at all (without using a telescope) we will see a "new" star that will be visible without a telescope. These events occur in binary (two-star) systems where one star is a *white dwarf* star and the other is a *red giant* star. Over time, a layer of gas pulled from the giant star forms on the smaller star. Over time, the temperatures and pressures at the base of the gas increase and eventually a thermonuclear explosion occurs that blasts away the piled-up gases, increasing the brightness. Exactly how bright it will be is unknown. In 1946, the last time this star became a nova, it reached 2nd magnitude. So, look for a star about as bright as Alphecca. Again, based on the 1946 event, it will brighten over about one day and fade again in about one week. The star is known as *T Coronae Borealis* or, *T CrB*, for short. Because of its periodic outbursts, it is also called the *Blaze Star*. Happy hunting!





Also, when we do have a clear night, take advantage of our dark skies. Look overhead and scan from the northeast horizon to the southern horizon. Does this part of the sky appear a bit fuzzy? It should. At this time of the year, stretching from the constellation *Cassiopeia, the Queen* in the northeast to *Sagittarius, the Archer* in the south, we are looking into our home galaxy, the *Milky Way – Via Lactea*, in Latin – literally, the "milky way". Until the 17th century, when Galileo turned his telescope towards the Milky Way, we couldn't appreciate it for what it is. In Galileo's 1620 publication, *The Starry Messenger*, Galileo included his drawing of what he saw – distinctly separate stars. Not just a milky band. This was mind-blowing stuff at the time. The heart of the Milky Way (and the location of the black hole known as *Sagittarius A**) is found on our southern horizon in Sagittarius.

Planet Roundup: Just after sunset, Mercury is starting to slip lower and lower, while Venus is moving higher and higher in the western sky. If you have an open western sky, around 7:30 p.m., look for tiny Mercury about three finger-widths above the horizon. Venus, much brighter, is to the right and just barely above the horizon. We'll have much better views of Venus over the coming months. In the east, Saturn rises around 9:30 p.m., Neptune at 10:00, Uranus at 12:30 a.m., and Jupiter at 1:00. The Moon reaches its 3rd Quarter phase on the 27th, the New Moon occurs in the early morning hours of August 4th, 1Q is on the 12th, and the next Full Moon is on the 19th.



You can email me at astroblog@comcast.net with any questions and comments. This is *What's Up?* installment #87.

Barry