

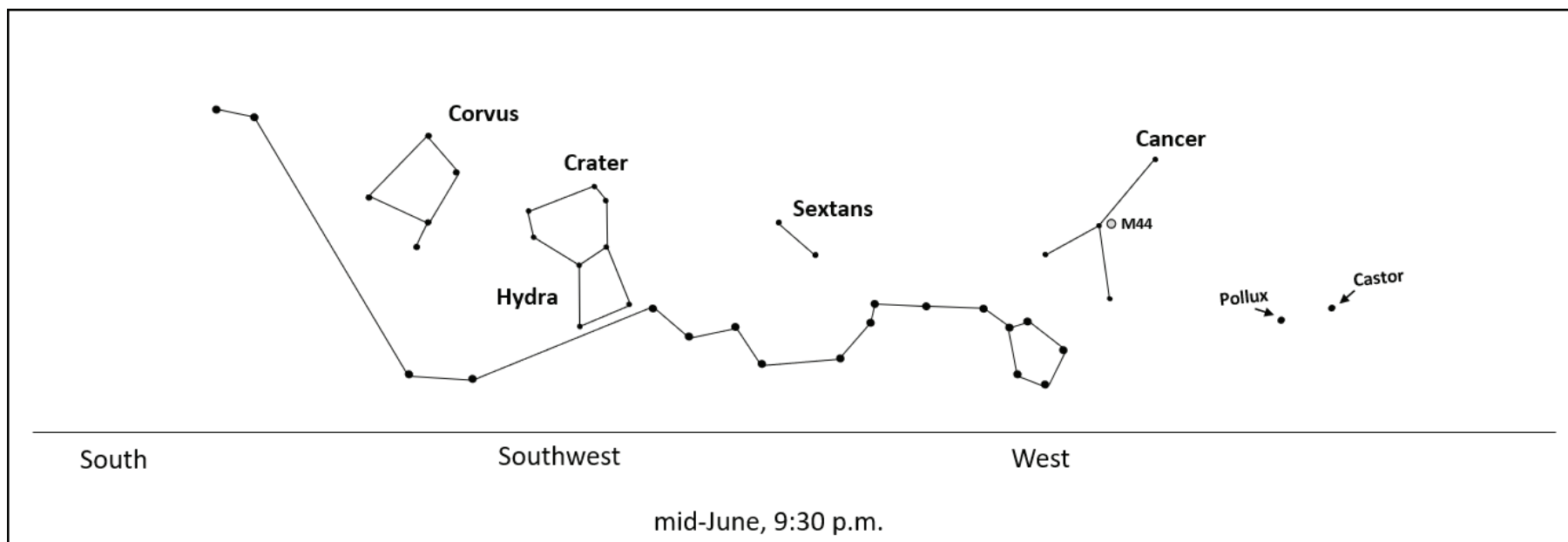
# WHAT'S UP?

Happy June. Did anyone try to see the partially-eclipsed Sun on Thursday morning? I'll let you know next time what I was able to see. Since the Moon was passing in front of the Sun (the cause of the eclipse) we know that also means it was a New Moon on Thursday. Now is a great time to follow the positions of the Moon each night as it starts on another cycle of its phases. When you do, note the time of day, where the Moon is relative to the Sun, and where it is relative to a landmark in your view. As we talked about in the last installment, these little things all serve to build our connection to our universe. Speaking of movements and connections, we're just a week or so away from seeing the Sun as high in our sky as it ever gets – at mid-day closest to the Summer Solstice. This year, the solstice occurs a bit before midnight on June 20<sup>th</sup>. Of course, the Sun won't be in our sky at that hour. While the next day, the 21<sup>st</sup>, will be considered our first full day of summer, the Sun will have been just a tiny smidge higher in our mid-day sky on the 20<sup>th</sup>. Do the calculation. For us, mid-day (the time at which the Sun is exactly due South) occurs close to 12:45 p.m. EDT. That's about 10-<sup>3</sup>/<sub>4</sub> hours *before* the moment of the solstice (about 11:30 that night). The next mid-day – on the 21<sup>st</sup> – occurs 13-<sup>1</sup>/<sub>4</sub> hours *after* the solstice. This is all academic and we certainly won't notice the difference at all, but it's good to think about because again, it helps tie us in to what's actually going on around us.

What's up? Planet-wise, we are in between favorable viewing times. Venus and Mars are pretty much lost in the glow of the setting Sun. At magnitude -3.8, Venus is bright enough to be seen soon after sunset if you have a low western horizon. It will be the first "star" that you can see. Mars however, between its +1.8 magnitude and the twilight, will be a definite challenge. Moving eastward along the Ecliptic, Saturn and Jupiter begin to show themselves above the horizon between midnight and 1:00 a.m. Look to the east, and they will be the two brightest objects along the horizon. An hour later comes Neptune. Uranus pops up just as the morning twilight begins (around 4:00 a.m.) and tiny Mercury, rising just before the Sun, is too close to our nearest star to be visible. As Autumn approaches, we'll get to see all of these better.

In March, we left off our grand tour of the constellations after having gone as far eastward as Gemini and Canis Minor. We can now pick up from there. Let's start with a few constellations that are hugging the western and southwestern horizon – *Cancer*, *Crater*, *Corvus*, *Sextans*, and *Hydra*. Around 9:30 p.m. as the end of twilight is near, the Twins – Castor and Pollux – are two bright points above the west-northwest horizon. Above and to the left, crawling down towards the horizon is *Cancer*, the *Crab*. Composed of dim (4<sup>th</sup> magnitude) stars the constellation is noteworthy for the presence of a group of 1,000 or so stars moving together through our galaxy. This is the Beehive Cluster also known as Praesepe (the Manger) and M44 (Messier 44). About 600 lightyears from us, this fuzzy patch illuminates our retinas with light that left those stars around the start of the Renaissance here on Earth.

Sweeping southward along the horizon is the largest (in extent) of all the constellations. It is *Hydra the Water Snake*. Like *Cancer*, it is mainly composed of dim stars. Its lone "bright" star is 2<sup>nd</sup>-magnitude *Alphard*. The name is from the Arabic for "the solitary one".<sup>1</sup> Hydra's claim to fame is that it represents one of Hercules' labors. A multi-headed snake, it is the sister of the dragon, *Draco*. While fighting the serpent (which had been eating cattle and causing general havoc around the area), he was also attacked by a crab that came out of the water. You guessed it. After dispatching the crab and then the snake, these two creatures found their way into our night sky. Just above Hydra, looking from left to right, we can find a crow, a cup, and navigating device. *Corvus*, the *Crow* and *Crater*, the *Cup* are two of our most ancient constellations. *Corvus*, *Crater*, and *Hydra* are all linked in a tale as far back as at least the 3<sup>rd</sup> century BCE. Sent by Apollo to fill a cup with spring water and return it so that Apollo could offer a sacrifice to Zeus, the crow was distracted by figs, ripening on a tree. By the time the figs had ripened and the crow had had its fill, Apollo found another source of water. Seeing through the crow's lie that a serpent had blocked access to the spring, the crow was banished to a life of thirst and all three – the crow, the cup, and the serpent – were placed adjacent to each other in the sky. Continuing westward, a more recent addition to our skies is *Sextans*, the *Sextant*. This is a representation of the navigational instrument of the same name and was introduced in the 17<sup>th</sup> century by Johannes Hevelius in his star atlas. All of *Sextans*' stars are dimmer than 4<sup>th</sup> magnitude which, combined with it's position low in our skies, makes it difficult to identify.



As always, you can reach me at [astroblog@comcast.net](mailto:astroblog@comcast.net) with any questions and comments you have. This is What's Up? Installment #46.

*Barry*

<sup>1</sup> Ridpath, I. (2018). *Star tales*. Cambridge, The Lutterworth Press. My go-to source for constellation tales.