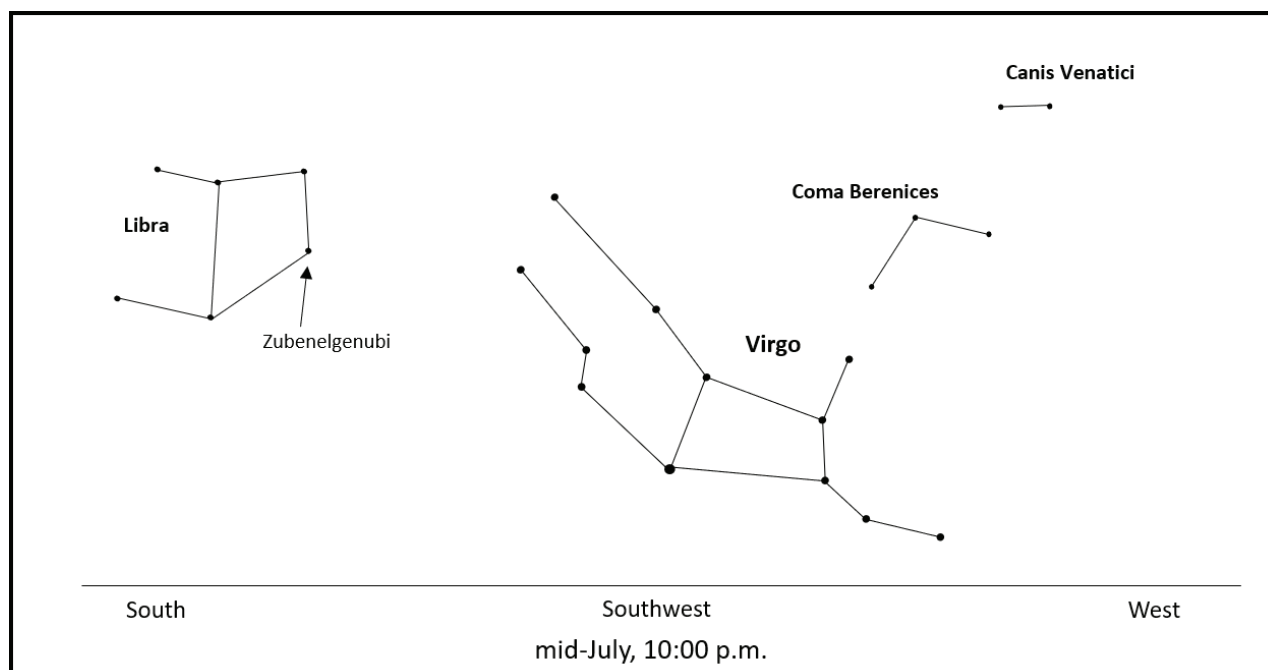


WHAT'S UP?

Hi. Good news for all of us that like the night sky – it's getting darker a wee bit earlier each night! Two weeks ago, sunset was around 8:30 p.m. and now, it's about 15 minutes earlier. Not much I know, but I'm not greedy. The changing darkness brings up a point that someone asked me about. They were in Maine and wondered if the sky would be much different there. They knew of course that the stars would all be in the same relative positions, but what about elevation and sunset time? Not very different, it turns out. Their location was $2\frac{1}{4}$ degrees north of us (well of my house in Plympton) and just a smidge more to the west. As far as darkness goes, the sun sets about 5 minutes later there at this time of the year. As to star positions, viewing from $2\frac{1}{4}$ degrees north of us means that the Celestial North Pole (right near Polaris) would be $2\frac{1}{4}$ degrees higher above the northern horizon. Looking southward the stars there would be $2\frac{1}{4}$ degrees lower (closer to the horizon). Not much difference. Think about this if you're on a trip that takes you a lot further north or south of the Plympton/Halifax/Kingston area. At night, look to the north and to the south and see if you can notice a change from what you see from your home. In the southwest U.S. one summer, I was stunned by the sight of the Scorpion crawling high in the southern sky instead of creeping along the horizon as it does here.

Moving through the sky now past the three felines that we looked at last time (Leo, Leo Minor, and Lynx) we come to two Zodiacal constellations and two new ones – *Virgo*, *Libra*, *Coma Berenices*, and *Canis Venatici*. Reclining casually now on the southwestern horizon, *Virgo*, the Maiden is usually depicted holding a stalk of wheat in one hand and a palm leaf in the other. The constellation's brightest star, *Spica*, is a 1st magnitude star. Its name is means "ear of grain" in Latin and in Greek (*Stachys*, in Greek.) If you've been reading *What's Up?* for a while you've heard the phrase, "Arc to Arcturus and Spike to Spica." That's a mnemonic (a memory device) to help us find the stars *Arcturus* and *Spica* by starting from the handle of the Big Dipper. To *Virgo*'s left is a relatively dim (3rd and 4th magnitude) diamond-shaped quartet of stars outlining the balance arms of *Libra*, the Scale. Two even dimmer stars further left mark the two balance pans of the scale. The designation of these stars as a balance dates to Roman times. The ancient Greeks saw these stars as *the Claws* – an extension of the scorpion that is further west. Though, going further back, the group was also seen a scale by the Babylonians, circa 1000 B.C.E. In this era, the Sun's location at the Autumnal Equinox was within the boundaries of the Scale and perhaps was the reason behind the association. The brightest star in *Libra* has the awesome name of *Zubenelgenubi*. That's Arabic for "the southern claw", a reference to its Greek classification as an extension of the Scorpion. If you are familiar with all of the constellations of the Zodiac, does anything about *Libra* strike you? It is the only one of the twelve that is an inanimate object. The rest are all animals or people. To the north of *Virgo* we'll find our next two constellations. The first one we come to is *Coma Berenices*, *Berenice's Hair*. While known by the Greeks as the hair of Queen Berenice of Egypt, it was considered as part of the constellation *Leo*.



It wasn't until the 16th century that it was depicted as a separate constellation. *Coma Berenices* is comprised of a scattering of faint stars. Further north in the sky is the pair of Boötes' hunting dogs, *Canis Venatici*. One of the constellations created in the 17th century by Johannes Hevelius, they are depicted as snapping at the feet of the bear *Ursa Major*, walking just above them. As we've seen before, other cultures refer to the same stars but in different groupings. With these sets of stars, Chinese astronomy saw *Taiwei*, a court where the Privy Council met. This included stars of *Virgo*, *Coma Berenices*, and *Leo*.

In my last article, I told you that the club we are a part of, the South Shore Astronomical Society, can be found with their telescopes (and their friendly personalities) every Friday evening at the Scituate Lighthouse. At our last meeting we decided that because there are no planets to be seen in the early evening sky right now that the Lighthouse events will occur only when there is a Moon to be seen in the evenings (and the sky promises to be clear.) By the Fall, a group of planets will be back in our evening skies and the Lighthouse events will occur regularly again. For now, watch the Club's website (www.ssastros.org) for any Lighthouse viewing sessions this summer.

You can reach me at astroblog@comcast.net with any questions and comments you have. This is *What's Up?* installment #48.

Keep looking up!

Barry

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