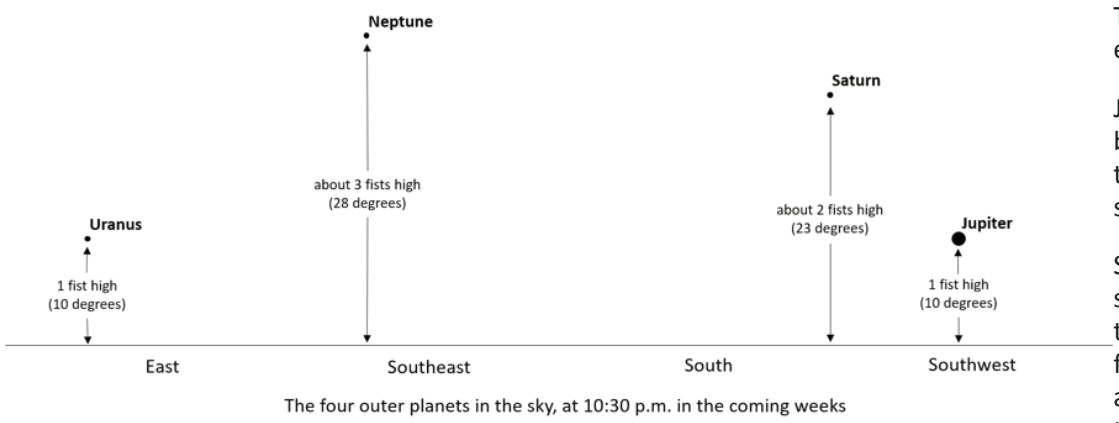
What's Up?

BY BARRY DECRISTOFANO

I hope that you've been able to get out on some of these evenings and look for Jupiter and Saturn—and find them! If so, you might be noticing that each night, at the same time of the night, you're finding them a bit farther to the West. They'll continue to shift in that direction until they sink from our evening view in the fall. However, we won't be at a loss for planets. Around 8 p.m., Neptune is just rising above our eastern horizon, and by 10 p.m., Uranus makes its appearance. To see them, grab some binoculars. (Technically, Uranus is visible to our unaided eyes, but it is very faint. Binoculars will help a lot.) Yes, that's right – around 10:30 p.m. on these late August, early September nights, we can see all four of our solar system's outer planets arrayed across our sky, from East to West!

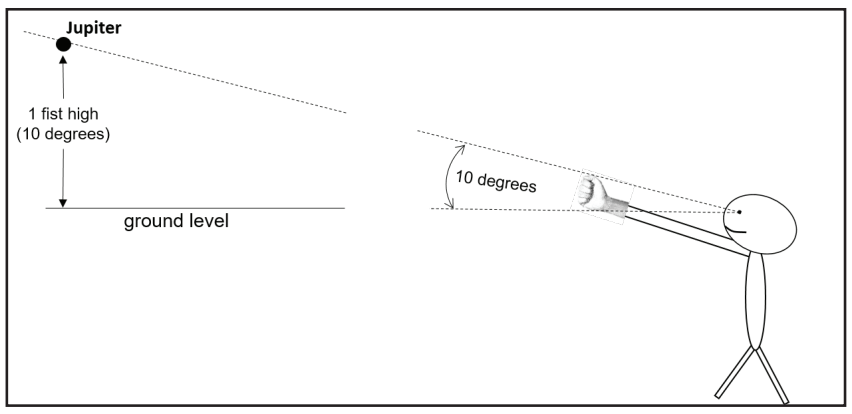
"You may not carry a protractor or sextant around, but you do happen to have a handy tool for measuring these angles in the sky—your hands. If you stretch an arm out in front of you and make a fist with your thumb up on the top of it, the angle that your fist makes from the bottom to the top of it is about 10 degrees. This works whether you are tall, short, young, or old. It's not exact, but it's close, and it's real 'handy' to use.



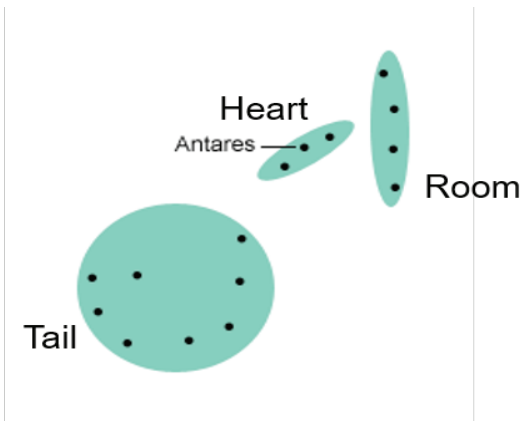
The four outer planets in the sky, at 10:30 p.m. in the coming weeks

Jupiter is so bright, it should be fairly easy to locate. Saturn may be a bit harder to identify with certainty. It's the brightest 'star' to the left and above Jupiter and is brighter than all of the other stars near it.

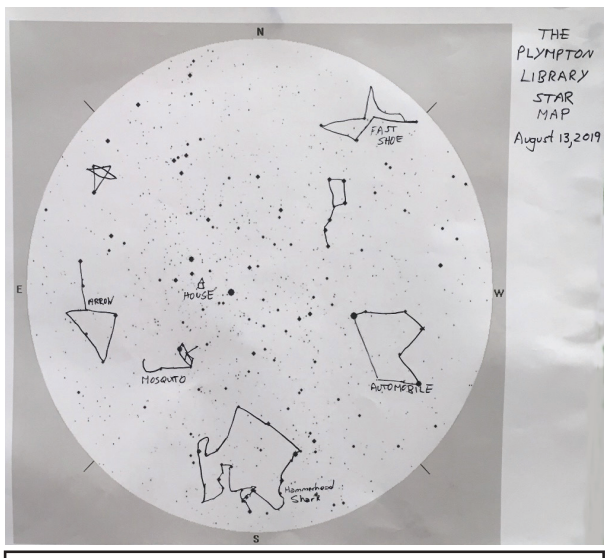
Seeing Neptune and Uranus will require binoculars or a telescope. Zooming in on them means you won't see them against the sky's larger backdrop, so how will you know when you've found them? Fortunately, when magnified, planets don't look anything like stars. You can magnify a star as much as you want to and it will still just look like a point of light because they are just too far away to see in greater detail (with telescopes available to amateurs). The planets of our Solar System, however, are much closer. When magnified, they don't look like tiny points of light at all! They look like small bright disks. Neptune looks bluish and Uranus, bluish-green. By the way, if you do have access to binoculars or a telescope, remember to look at Jupiter and Saturn, too. They have their own fascinating attributes.



Turning our attention back to stars, let's revisit Scorpius. While the originators of our constellation system are lost in time, scholars have used evidence and deduction to conclude that the Greek-named constellations were adapted from those of the Babylonians and Sumerians who had a knowledge of astronomy by 2000 BCE (two thousand years before the common era). We'll talk more about our constellations and their names over the course of future *What's Up* articles, but for now let's stop and realize that the names we use for star patterns aren't the only ones in use. In fact, many cultures have names for star groupings that are different from the ones we know. However, many of the same stars were identified as part of any given culture's main constellations.



Ancient Chinese constellations numbered over 200 and the ecliptic was divided into 28 *xiu*, or mansions. (In case you don't remember from August 16th's *What's Up?*, the ecliptic is the plane in space where our Zodiac constellations are found.) The mansions marked the motion of the Moon from night to night. The 28 mansions were divided into four parts – the Azure (blue) Dragon of the East, the Vermillion (red) Bird of the South, the White Tiger of the West, and the Black Tortoise of the North. Within the Azure Dragon of the East, three mansions correspond to the stars of our Scorpion and they are: Room, Heart, and Tail.



The Plympton Library constellations:

the Fast Shoe • the Automobile

the Hammerhead Shark • the Mosquito

the Arrow • the House

and two others unnamed

This is one of many examples of how humans have grouped and named star patterns in our night sky. Another, much more recent set of constellations was created just two weeks ago! Where? By whom? Right here in Plympton. The Plympton library hosted Carolyn and me as we conducted activities about constellations (take a look at the August 16th edition of the *Express*). As part of the evening, participants made *The Plympton Library Star Map*! Here's what it looks like:

(You can find this map on display at the Plympton Library.) So you see, the night sky is very much a part of people's lives from the earliest days, right up to today.

I'll close this entry with a question and an answer. Question: How do I know this stuff about other cultures' constellations? Answer: While I do have a general knowledge of it from studying astronomy as a passionate hobbyist for 50+ years, to get the details as right as I can, I do a bit of research before writing about it. In this instance, I referred to one of my go-to resources – Ian Ridpath's *Star Tales* (ianridpath.com/startales/contents.htm). Ian Ridpath, journalist, author, editor, and more, has been writing about astronomy for many years. But I never use just one source. I always look at other sources, and at the sources of the sources to see that what's been written is accurately conveying the information. The bottom line is that I try my best to give people correct information.

Until next time, Keep looking up!

Barry