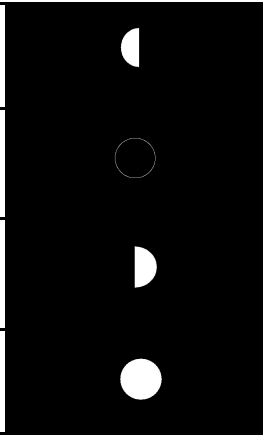


May Skies over the Pinnacles

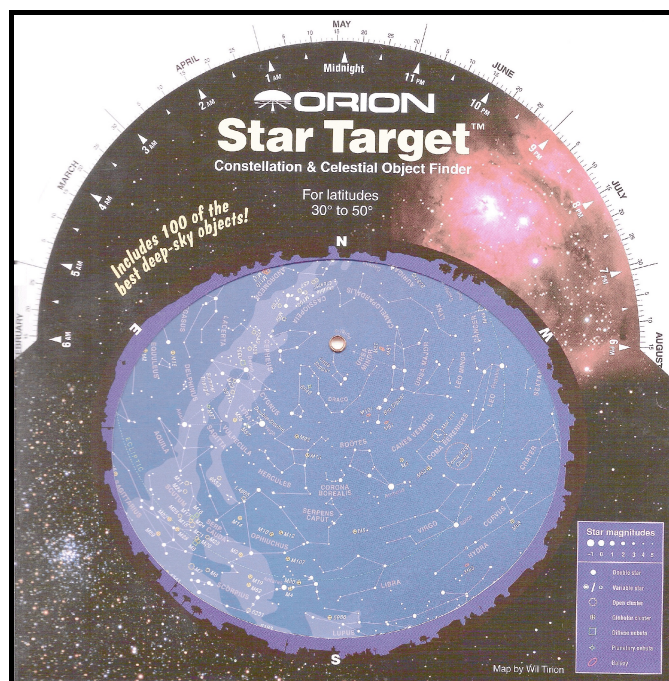
May 2021

May's four principal phases of the moon

May 3	Last Quarter	
May 11	New Moon	
May 19	First Quarter	
May 26	Full Moon	

Learning the Sky

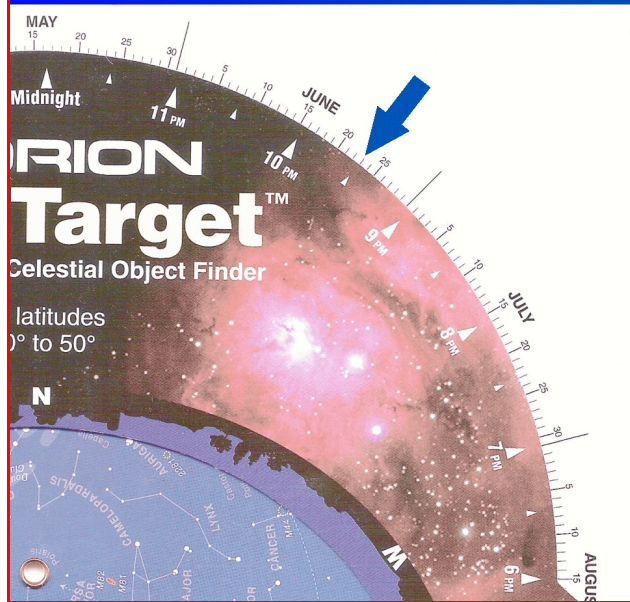
Finding your way around the night sky is tough. There is so much to see and being able to identify constellations on sight isn't easy - even with a good star chart. But getting a good chart is a good start. (No, I didn't major in poetry!) Until we can get together again under the clear night skies over the Pinnacles you can get started by getting an inexpensive **rotating star chart**. Just Google "rotating star chart" and several models will show up from around \$7 to \$12. You can also check out sites like the one sponsored by Sky and Telescope magazine. S&T won't steer you to a bad choice. Forget the 'glow in the dark' models. Get one that is big enough to see at night with a dim flashlight. While you're at it, you should get a flashlight that shines a red light. A standard white flashlight will cause temporary night-blindness if you use it to examine your chart and you won't be able to see once you turn it off. Red plastic or paper, taped over the lens of a white flashlight, also works.



Here's a rotating start chart from a company called 'Orion'.

To use this type of star chart, start by setting it to today's date and the time you are planning to go star-gazing. This is done by rotating the 'sky-wheel'.

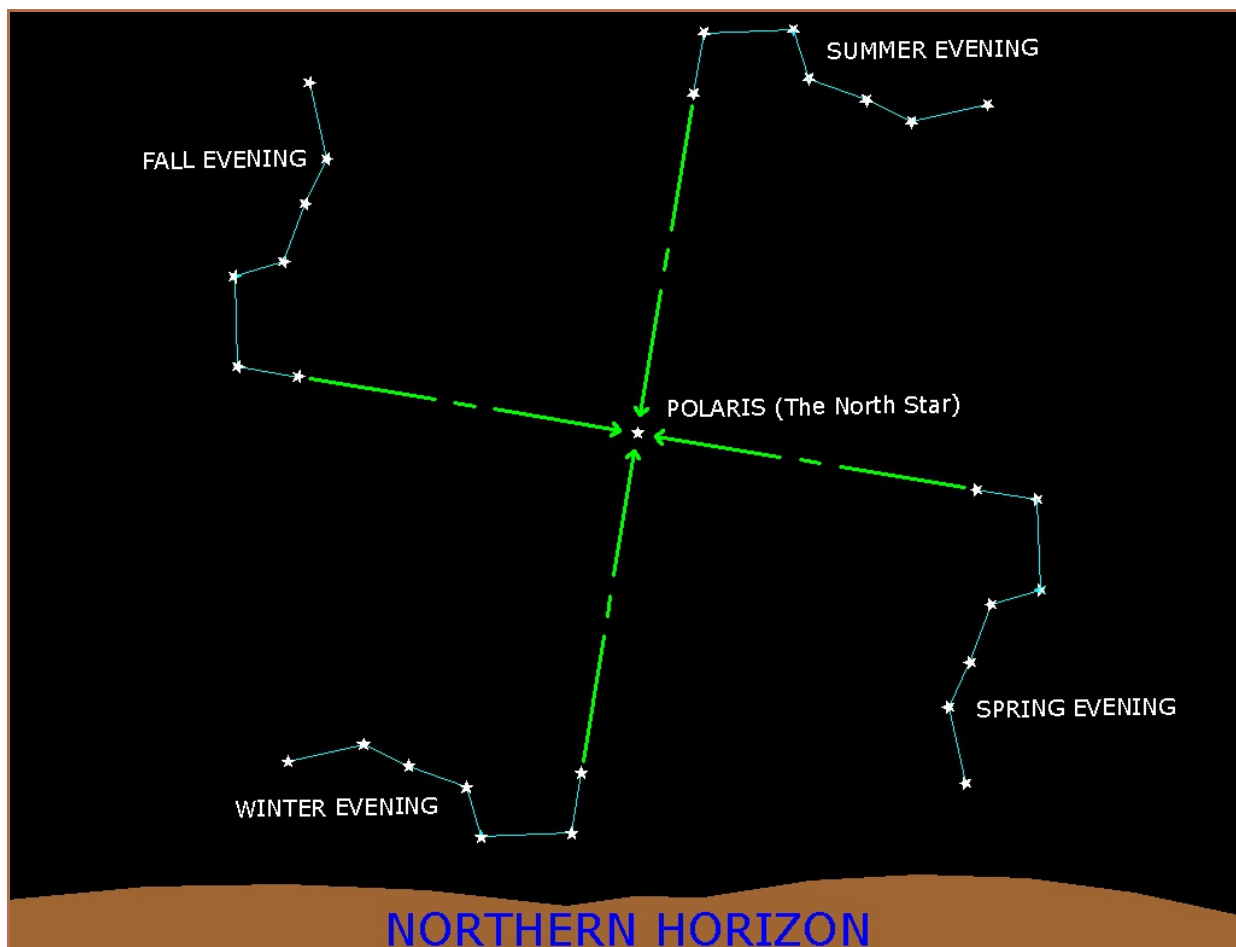
Using Your Rotating Star Chart



1. Check the Date
2. Check the Time
3. Rotate the outer date wheel to line up with the current time.

This star chart is set to about 9:30 on June 23.

Now, start by facing north. A magnetic compass will point the way, or if you are really cool, you can use the pointer stars of the Big Dipper to point to the North Star. The Big Dipper is shown about how it appears in each of the four seasons when you go outside after dark and look north.



Using Your Rotating Star Chart

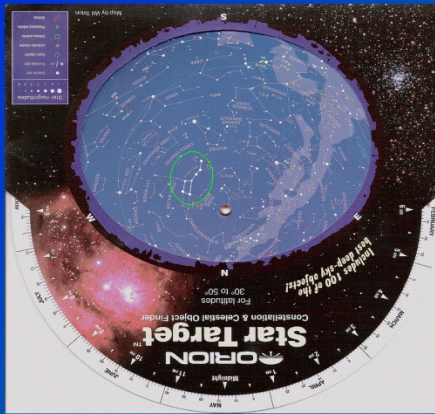
If you know the approximate date, the stars will tell you!

First, turn your star chart over, so NORTH is down.

If you have a compass, use that to find NORTH

No compass? No problem!

Find the Big Dipper on your star chart



N



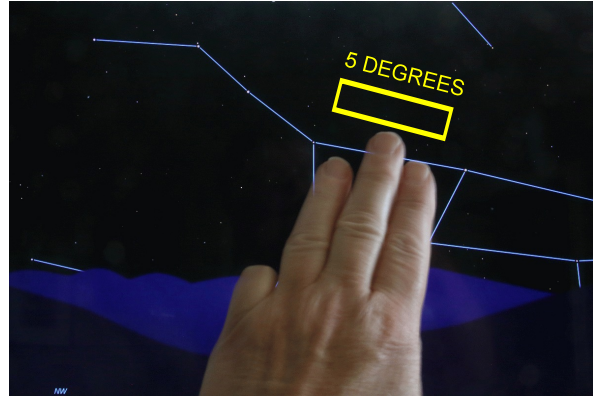
Notice this is where the Big Dipper appears at the end of June. I've circled it in **green**. To identify other stars in the north, hold the chart so that the printed 'N' is at the bottom. Now see if the Big Dipper is where the chart shows! If not, repeat the steps above. Whenever you want to identify stars in some other direction, hold your star chart with the printed cardinal direction (North, East, South or West) down, closest to that horizon.

Sometimes in "Skies Over The Pinnacles", I help you to find interesting objects by telling you how far away they are from, let's say, a star. The distance from one end of the Big Dipper to the other is called '25 degrees'. That's called an angular distance. Angles are usually measured in degrees. If you stand looking in one direction, then spin around all the way until you're facing the same direction, we say that you've spun around 360 degrees. A half-turn is 180 degrees and a quarter-turn is 90 degrees. If you point your finger straight-up, then move your arm down so that you're pointing at the horizon, you have moved your arm 90 degrees.

You can use your hand as a handy tool for determining the angular distance between two objects in the sky. Here's an illustration using my computer screen and the Big Dipper. Always extend your arm out all the way to do this.



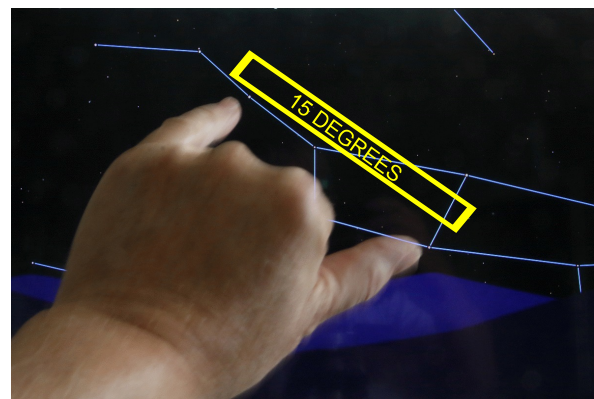
1 degree pinkie



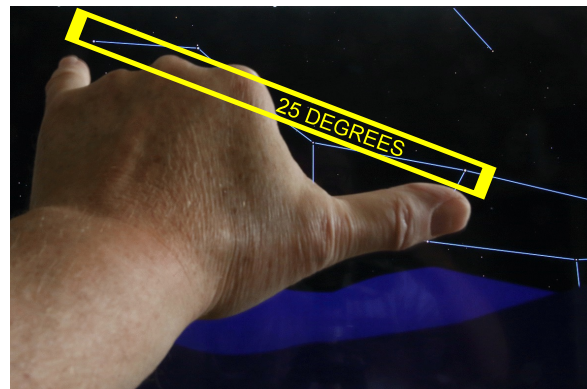
5 degree scout solute



10 degree fist



15 degree Rock 'n' Roll



25 degree wide pinkie & thumb



I'm not sure, but I think the last picture is of Gene of the rock band, KISS, demonstrating the width of the constellation Orion.

Anyway, get yourself a rotating star chart and try learning the constellations. Start with the easy ones, like the Big Dipper* and use the constellations you know to help you find others, nearby.

*The Big Dipper isn't really a constellation. It's a familiar but unofficial apparent star-grouping known as an asterism.

Attractions in May

May 4

Get up before the sun and you'll be treated to a very pretty sight. The Moon, Jupiter and Saturn will appear near each other to form a wide triangle low in the south-east.

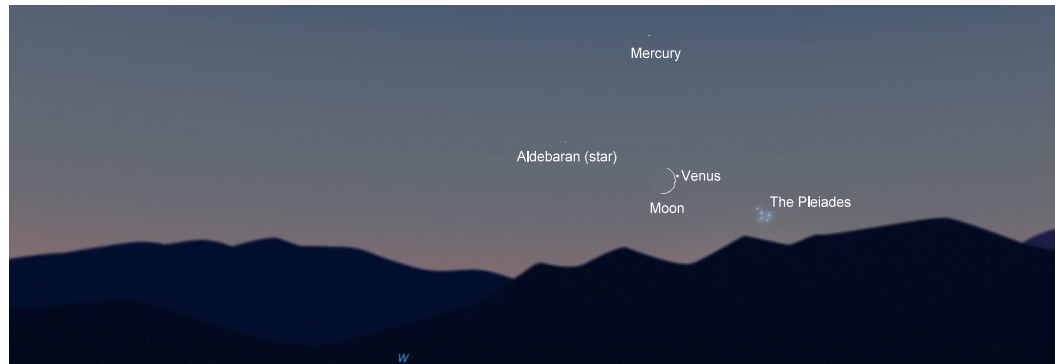


May 6

The annual Eta Aquarid meteor shower might just give you an opportunity to see some rocks and dust space to show themselves as luminous streaks coming from the direction of the constellation Aquarius. As usual, I recommend that you set your alarm for about 3:30 AM and dress warm!

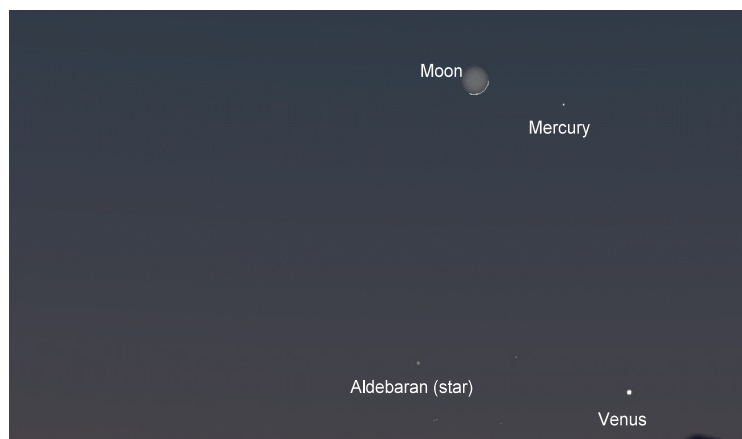
May 12

Binocular Alert! Just as it's starting to get dark after sunset look low in the west for a thin sliver of a moon appearing right next to the Moon. Look above the Moon and you might see the planet Mercury and to the lower right to spot the Pleiades star cluster. A glance to the left will reveal Aldebaran, brightest star in Taurus the bull. We discussed the Pleiades and Taurus last month.



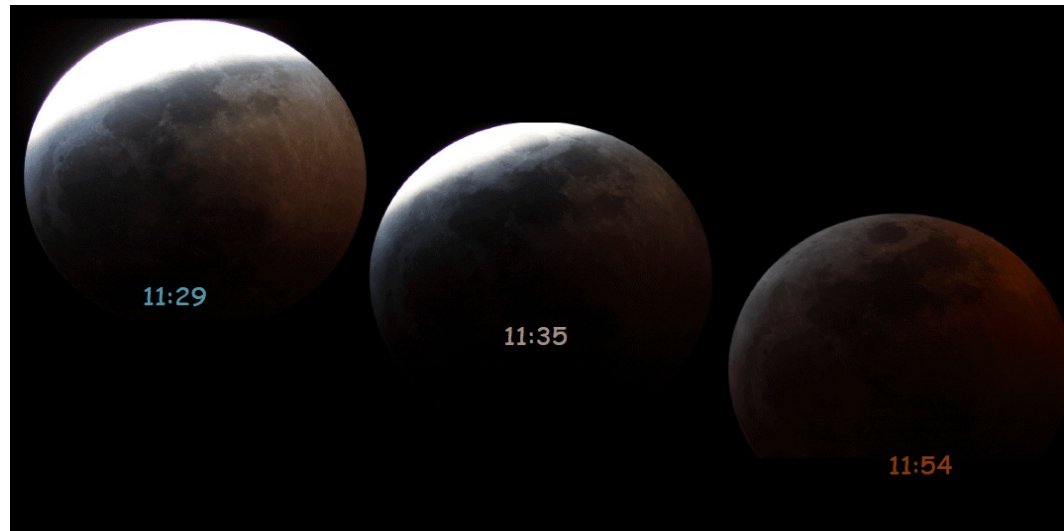
May 13

Look again at this area. The 'fatter' Moon will give you a nice pointer to Mercury.

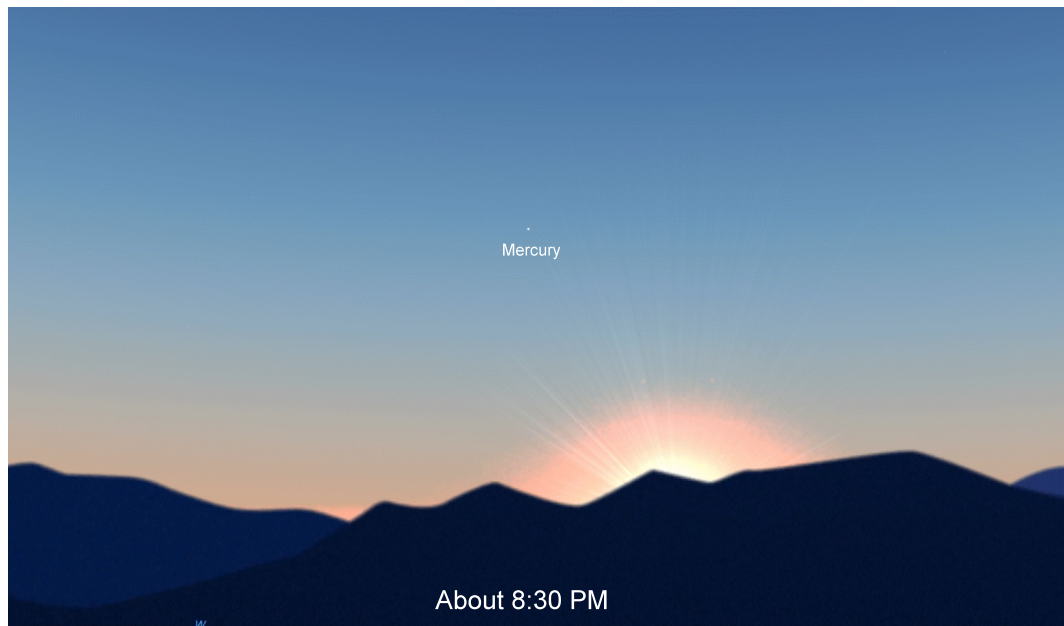


May 26

If you're up before sunrise and skies are clear in the west, you may just notice the setting full Moon has taken on a slightly reddish appearance or may be just a little darker than usual. That's because the moon is just entering the cone-shaped shadow of the Earth, marking the beginning of the umbral, or darkest phase of a lunar eclipse. Most people living around the Pacific Ocean will see the entire eclipse of the Moon. If you lived in Hawaii, you'd be treated to a front row seat of a show where the Moon will turn coppery-red, like these pictures I took of this lunar eclipse of 2019.

**May 28**

If you've been watching the Planet Mercury during this month you've noticed it creeping higher and higher in the sky each day. If you haven't, here's your golden opportunity to see the elusive little guy. This evening Mercury's orbit will carry it about as far as it gets from the Sun's glare. So it will stay above our horizon, giving you more time to search for it with your eyes or with binoculars or maybe even a small telescope.



All simulations were produced with the program, Starry Night, version 8.