

Chippewa Valley Astronomy Update, December 2022



Figure caption: The star cluster known as the Pleiades, or “The Seven Sisters”, is a treat to see in the winter night sky, up and to the right of the constellation Orion.

This image was created from data taken at Hobbs Observatory, by Emmett Kyle, current president of the Chippewa Valley Astronomical Society.

Essay: **The Missing Sister**

By Kevin Litten

When you look at the night sky you see that the stars are not evenly distributed. Our minds create forms out of chaos. Then our cultural aesthetic turns them into familiar objects. So the constellation Cassiopeia may look more like an easy chair than a queen. Ophiuchus might look like a Viking ship instead of a man holding a snake. Scorpio, which does look like a scorpion, may also look like an umbrella. Different cultures in the past viewed them one way and we may see them differently.

To our human eyes, all stars look the same distance away. We are unable to tell if one star is further away than another. In reality some stars are hundreds of times further away than the stars visually close to them. Now, I say hundreds of times because it can't be thousands of times. Nearly all of the stars we see with our naked eye are within 1000 light years.

Is there a sweet spot to the stars we see? We see the blur of our galaxy in the Milky Way and there are nearby groups of stars that stand out.

One group of stars that are related are the Pleiades. This group is found in the constellation Taurus, which does at least look a lot like the horns of a bull. The Pleiades are also sometimes called “The Seven Sisters.” To our modern eyes only 6 stars are easily visible. With the skies our ancestors had they could see nine. With binoculars a couple dozen are visible. A telescope, maybe a thousand.

So why seven? Was one star brighter thousands of years ago? Possibly. The Pleiades were the seven daughters of Atlas; sisters to each other. Confabulation is nothing new, making the story fit the evidence is as old as time itself. There were other stars up there. Maybe that last sister was one of the dim ones.

Taurus and its cluster the Pleiades are easy to spot early in the wintertime. The Pleiades is a naked eye object that looks even better in binoculars. About 400 light years away, all those stars in close proximity to each other.

The poet Alfred, Lord Tennyson penned:

*“Many a night I saw the Pleiads,
rising thro' the mellow shade,
Glitter like a swarm of fireflies
tangled in a silver braid.”*

The Pleiades are cool.

-- Kevin Litten is a member of the Chippewa Valley Astronomical Society