



Signs of Spring

By Brad Young, Astronomy Club of Tulsa

Everyone enjoys seeing winter end and the warmth and sunshine of spring returning each year. We all have signs that we are looking for to indicate the renewal of life that attends each cycle. Many of these occur during daytime, such as the return of birds from the south, the first daffodils and clover fields, and that first morning when, stepping outside, you realize the last frigid day is behind you.



There are also many signs in the night sky that show us that the season of renewal has begun. Some of these have old sayings attached to them, such as "March comes in like a lion and goes out like a lamb," referring both to the weather and perhaps to Leo rising in the east while Aries sits in the west at night. Here are a few other ones to look for to let you know that things will be better soon.

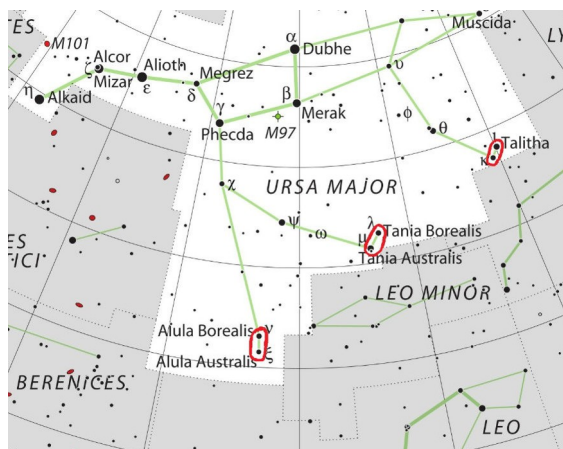


In evening twilight, the zodiacal light is always a sure sign of spring coming around. Although bright Venus has dampened the effect in late winter, as she exits the sky, March and April will better show the cone of faint light coming up from the sunset point about an hour after the sun goes down. This is the light shining back at us from uncountable particles of dust strewn along the ecliptic from past comets and other debris. Images often show it brighter than it appears to the eye, but if you are in a relatively dark, moonless sky, you may see it unaided. When the crescent Moon returns to the sky the first week of March, notice how it has its horns pointed nearly straight up, indicating the high tilt of the ecliptic this time of year. My wife calls this the "Cheshire Cat Moon", from the Lewis Carroll character.



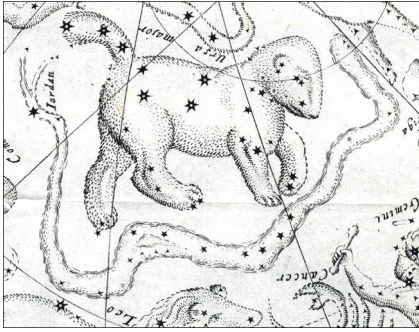
This is another sure sign of spring, and often there is a good appearance of Mercury in the sunset sky in March. This year, Mercury becomes visible just before March begins and will be seen about 40 minutes after sunset low in the west until the third week of the month.

As the constellations begin to come out with the end of twilight, several signs that spring is coming are readily apparent. The descent into the western sky of Orion, Taurus, and the rest of the winter Milky Way is a sure indicator that warmer days are just around the corner. As mentioned, the last autumnal zodiac constellation Aries sets early, while the first spring zodiac constellation Leo begins to rise when it gets dark. And, if you look in the northeast, the Big Dipper, after appearing low in the sky all winter, is now beginning to rise bowl first and, according to legend, begins to pour out the water it accumulated which represents our spring showers.

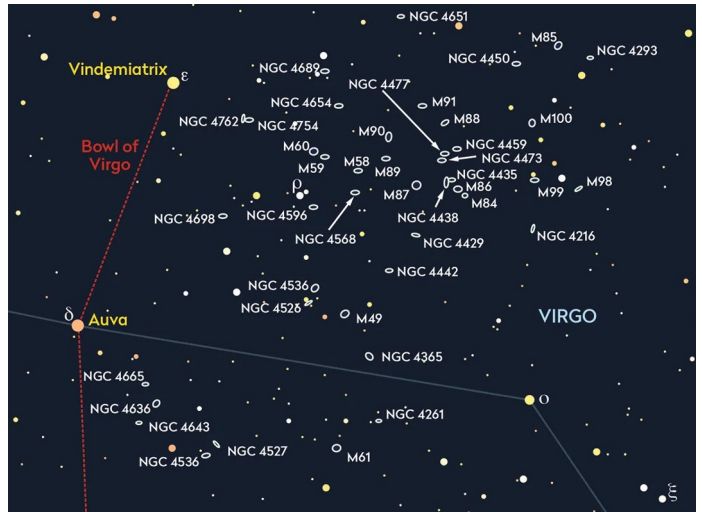


Also in Ursa Major, the Three Leaps of the Gazelle, a collection of sets of wide pairs of stars, begin to be seen again in the evening. If you have dark skies, you may even catch the lines of stars of Lynx, to the northwest of the Leaps. These meanderings represent a defunct constellation that once represented the River Jordan. Jordanus was created by Dutch astronomer and cartographer Petrus Plancius for his celestial globe of 1612. Later, this lovely and lengthy constellation was broken into Canes Venatici, Leo Minor, and Lynx by Hevelius.

The solar system also gets into the act, beginning of course



with the Sun itself. When the Sun appears to cross the equator in the sky on March 20th, we have our vernal equinox, vernal meaning spring. It's not quite the date of actual equal day and night, which occurs this year on March 16th, when sunrise occurs at 7:32 a.m. and sunset at 7:32 p.m. The date is different because sunrise and sunset are earlier and later respectively due to refraction by the atmosphere. But you get the picture, Earth is tilted so that both hemispheres get about the same amount of sunshine each day at this point. Meanwhile, the planets we've been watching all winter have now stopped their retrograde motion as they fall behind the Earth in their orbits and begin to move eastward again and start to fade. Saturn has already left the evening sky, Venus will soon, and all the outer planets have become dimmer.

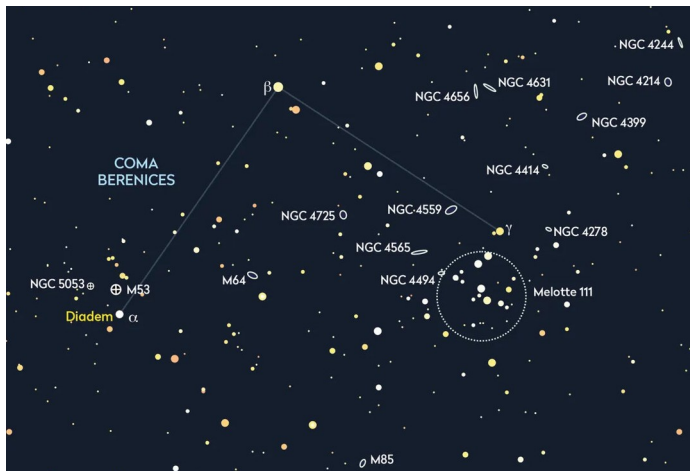


The magnificence of the winter Milky Way may be starting to go away in the west, but that opens our view north of the Milky Way towards the multitude of galaxies and galaxy groups visible this time of year. Here are charts for the main galactic targets you may wish to see:

Charts adapted from *Sky at Night*

This is the time of year when you will hear about Messier Marathons and other galaxy hunting adventures. For instance, our club is having a Messier Marathon on March 28 this year. There are a few winter sights still available, but soon attention will be more focused on the faint fuzzies that abound in springtime skies.

Other indicators are more subtle, such as the flaring up of the geosynchronous satellites that orbit the Earth around its equator. See my article, *As Far as the Eye Can See*, for more information. And don't dawdle in looking for items in the spring sky, as I mentioned in *Why the Spring Sky Changes Fast*, the lengthening days and shortening nights will catch you if you don't look out, and you may not be able to see your target by the time the next dark of the Moon rolls around.



One not so welcome sign of spring is our artificial imposition of Daylight-Saving Time. I suppose all signs, good and bad, point to warm weather, so it should be included. But there's nothing sillier than watching it get dark later when it's too cold and dreary to enjoy the outdoors after work, and you can no longer get in several hours of observation before bedtime.

It may not seem so, but soon we will be outdoors again, observing the stars in elements much more comfortable and inviting. Springtime is a wonderful time to observe at night and to experience in general. Although I'm not

thrilled with the sniffles and sneezing of allergies, they are a level up from the cold biting winds of winter. Before you know it, the temperature will be 100°F by 10:00 a.m. at which time I will begin to complain about how hot it is and wish one of those cool breezes would come back - just for a few moments.

Books by Brad

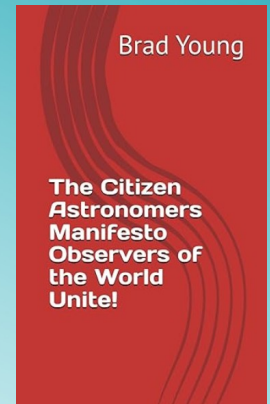
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