

## Polaris is the North Star, for now



**Tips  
from the Posse**

By Mark Rackay

In this day and age, we have the GPS for the main navigational instrument. There is even a GPS device with your cell phone, along with dozens of apps to help you find your way.

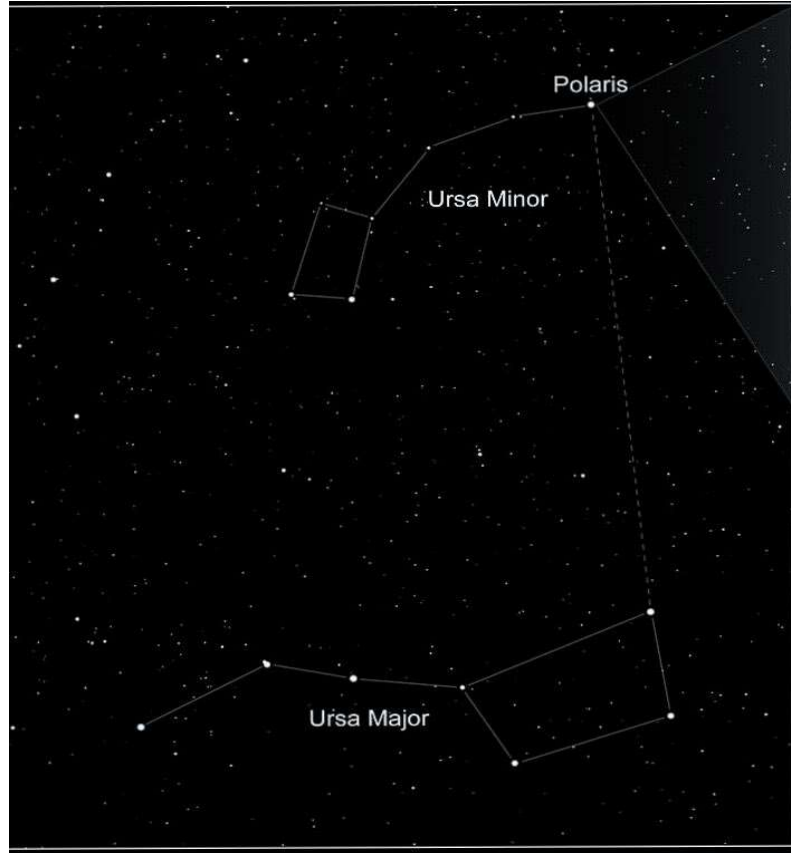
Perhaps the reason I don't use the GPS as much as other folks, is because I remember a time when we had to find our way without one. I have always carried a compass, and sometimes I even remember to look at it once in awhile.

My old man mentor taught me to find my way by paying attention to the landscape, and when it was dark, to use the stars. When a blizzard hit, taking away all visibility, we just hunkered down until it let up, and we could find our way again.

I have written about the North Star in the past as a navigational aid. This star, called Polaris, can help you when you are lost, and can help keep you on track when you are out afield at night. Knowing about the North Star, and reliably being able to find it are two different things.

The North Star is known for holding still in the night sky while rest of the sky moves around it. The reason the North Star does not appear to move is because it is located nearly at the north celestial pole, the point around which the entire northern sky turns. Regardless of your position in the northern hemisphere, or the time of night, the North Star marks due north.

The North Star has a lot of names. It is called Polaris, designated as Ursa Minoris,



Here is a view of Polaris as seen from the Hubble Telescope. (Photo courtesy of NASA/HST)

and sometimes called the Pole Star. For our purposes here, we will just call it the North Star. Whenever I refer to the North Star as Polaris, some of my friends start thinking about their ATV, so I will not use that in order to not confuse my already confused friends.

Located in the constella-

tion Ursa Minor (The Little Dipper) it is relatively easy to locate. Many people think it is the brightest star in the sky, but far from it. If you try and follow the brightest star, you will be in for a long night of wandering around in circles, which is why making sure you have the right star in your sights.

To find the North Star, start out by locating the Big Dipper (Ursa Major). Every kid should have spent time outside looking at this constellation. The Big Dipper has seven stars. Find the two bright stars that form the side of the bowl, opposite to the tip of the handle.

If you draw an imaginary line through those two stars, extending the line until you reach a star of similar brightness (about five times the distance that these two stars are apart) you will have found the North Star.

The Big Dipper is like a great big hour hand, traveling a full counterclockwise circle around Polaris in one day.

You can also find the North Star by locating the

Little Dipper. The North Star is the end star in the handle. The Big Dipper will move throughout the night but aligning those two stars will always point directly to the North Star.

Spend some time outside at night, locating the constellations and the North Star.

Face the North Star, and south is directly behind you, your left arm will point west, while your right arm points east. All of this assumes you don't have cloud cover and can see the stars. If not, better have that compass or GPS.

The height in the sky of the North Star is equal to your latitude north of the equator.

In Montrose, we are roughly at the 38 degrees north latitude of the equator. The North Star is 38 degrees above the horizon.

The North Star is actually a three-star system, Supergiant Polaris A and the smaller companion stars, Polaris Ab and Polaris B, which are both yellow dwarf stars.

The North Star is 4.5

times the mass of our Sun and 2500 times brighter. The diameter of the North Star is somewhere north of 43 million miles.

With that kind of size, you wonder why anyone would have trouble seeing it. The reason is the distance from earth, some 430 light years. Remember that a light year is the distance light travels in one year, roughly 5.88 trillion miles. It's a wonder we can see the star at all.

Due to movement of the earth on its axis, called stellar precession, Polaris did not become the North Star until around the year AD 500. Prior to that, a faint star called Thuban in the constellation Draco was the North Star. In about 13,000 years the bright star Vega will become the North Star.

The earliest navigation methods involved observing landmarks or watching the direction of the sun and the stars. Few ancient sailors ventured out into the open seas. Instead, they sailed within sight of land in order to navigate. When that was

impossible, ancient sailors watched constellations to mark their position.

I am not sure I buy into all of the history of the use of the North Star, as it was not all that long ago, people thought the world was flat. I think there are probably some people around who still think that.

I like walking at night when the sky is clear, and the stars are out. If I keep the North Star over my right shoulder, I know I am heading west, and for me, that is easier than staring into a GPS all night long.

Mark Rackay is a columnist for the Montrose Daily Press and avid hunter who travels across North and South America in search of adventure and serves as a director for the Montrose County Sheriff's Posse. For information about the posse call 970-252-4033 (leave a message) or email info@mcsp.org

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