



SPRING SKIES OVER THE MIDDLE FORK RIVER

The Middle Fork River Forest Preserve slowly turns to wonderful shades of green in the next few months. Overhead, the stars of spring draw us to the darker skies. Spring is when the familiar Big Dipper is at its highest in our sky. You should be able to look just north of the point straight up on spring evenings see those seven familiar stars. The Big Dipper acts as a guidepost for us, directing us to many of the other stars of spring.

If you can locate the two stars at the end of the Dipper's bowl, they point northward to the north star, Polaris. Polaris is *not* the brightest star but it is situated high above the Earth's north pole and thus, as the Earth rotates, the other stars in the sky will appear to rise in the east and set in the west, but Polaris will stay in the same spot. Polaris is at the end of the handle of the Little Dipper, though most probably won't see these stars from city limits as they are fainter. You can see them from the Middle Fork River campground!

If you follow those bowl stars in the opposite direction from Polaris, below the Big Dipper, you run into a group of stars in the shape of a backwards question mark. This is the face and mane of Leo, the Lion. The star at the base of the question mark is Regulus, or the "king's star." West of the question mark is the faint constellation of Cancer, the Crab. Binoculars will show the large star cluster, M44, also called the Beehive Cluster. The cluster is about 600 million years old and roughly 600 light years away. You might even glimpse it with just your eyes from our dark sky park. Try it!

Notice how the handle of the Big Dipper consists of three stars that make a curve or arc. Use your pointer finger and trace this arc away from the handle and, if you keep curving, you'll come to a bright orange star called Arcturus. Arcturus is the second brightest star in our Midwestern skies. Note its orange color, indicating it isn't as hot as our Sun. Arcturus is part of a kite-shaped constellation called Bootes, our herdsman or ploughman. If you keep tracing this arc past Arcturus, you'll find a bluish star called Spica. Spica is part of Virgo, our princess of the harvest. Spica is the eleventh brightest star in our sky. If you like star colors, look southeast of Spica, for a bright star rising near the horizon. This is the red supergiant Antares, the "rival of Mars." Antares' surface temperature is only 3600K, compared to 4300K for Arcturus, 5800K for our Sun, and 24,400K for Spica! That's warm!

One of our favorite dark sky park targets can be found near the kite of Bootes in the constellation of Hercules. The object is M13, a globular cluster of a half million stars living in the halo of our galaxy. In binoculars, the cluster appears as a fuzzy cotton ball, but it "explodes" into individual stars in a telescope. If you have a telescope at the park, scan between Spica and Leo and pierce the Virgo galaxy

cluster. At point you can see 5-6 galaxies in the same eyepiece field! Each is a pinwheel of roughly 200 billion stars, averaging 65 million light years from our eyes.

If you like looking at planets, Venus will be the brightest object in the west for most of the spring. Venus will trek through the Pleiades star cluster starting April 2 – use binoculars and check it out! By mid-May, Venus is setting during evening twilight and it will be difficult to see by the end of May. On its way sunward, though, Venus has an encounter with Mercury. The two are closest May 21 at only one-degree separation. From mid-May through the beginning of summer, we'll have a good showing of Mercury. Look for it nearer to the horizon, a little north of due west.

As for the other planets, early in the spring, they rise after 4am in the southeast with Mars rising first, then Jupiter, then Saturn. Mars will then pass both Jupiter and Saturn, being 0.7 degrees from Jupiter on the morning of March 20 and within 0.9 degrees of Saturn on March 31. By the latter part of May, Jupiter is rising around midnight. Saturn will be just behind Jupiter, but Mars will trek much farther to the east. If you're camping at the Swartz campground at the Middle Fork, you might be advised to turn in early and set an alarm to catch those morning planets. Jupiter and Saturn will be front and center for summer campers.