SCOPE On the skies

A Roman goddess that controls the crops and some highlights to watch for this summer.

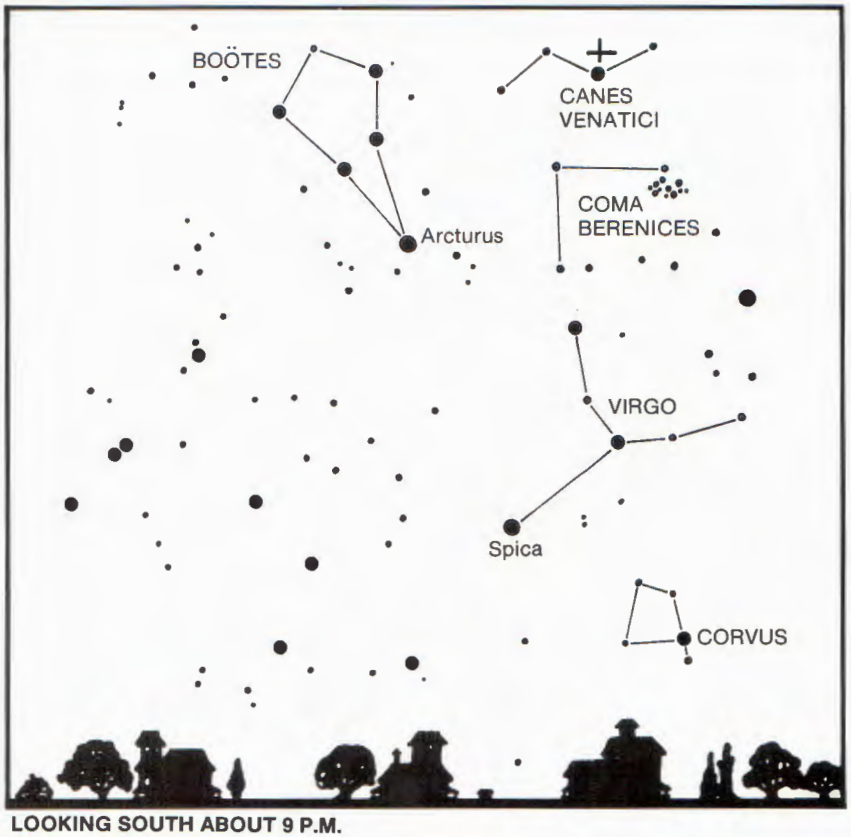
A spectacular summer

"Follow the Arc" might sound like a thriller mystery involving a detective following Noah to find a criminal's hideout. However, to the backyard astronomer, these words are just part of a short mnemonic device used to locate two prominent, bright stars visible during the spring.

Follow the arc to Arcturus,
then speed to Spica.

Arcturus is a reddish-orange star located in the constellation Bootes; while Spica is a brilliant white star in the constellation Virgo. Both constellations are visible during May high over the southern horizon. To locate them, you need only look overhead for the distinctive star pattern known as the Big Dipper. The three bright stars comprising the dipper's handle arc toward the southeastern horizon. Following an imaginary line that extends outward from the arc will bring you to Arcturus. Extending this imaginary line further will take you closer to the horizon and the bright star, Spica.

In agrarian cultures, Bootes has been identified as the inventor of the plow. Ceres, the goddess of agriculture, honored Bootes by placing him among the stars. He is known as the Plowman, with the bowl of the Big Dipper serving as his plow. The plow horses are what astronomers usually depict as the three stars of the Big Dipper.



LOOKING SOUTH ABOUT 9 P.M.

Seasonal fertility

Virgo, like Bootes, has agricultural origins. Virgo has also been identified as Ceres, the Roman goddess of Agriculture. In one myth, Proserpina, Ceres' daughter, is kidnapped by Pluto, the god of the underworld. The kidnapping so upset her that she neglected the Earth's crops. In order to avert famine as crops worldwide began to fail, Jupiter decreed that Pluto allow Proserpina to be with her mother Ceres for six months of each year. This resulted in a cycle that continues today, with Virgo only visible between March and August, as the crops grow, ripen, and are harvested. The rest of the year, when Virgo (or Ceres) is separated from her daughter, she is not visible, and the fields lie barren.

Southern luminescence

You and your students will be able to easily observe the planets this spring and summer because the three brightest planets will dominate the evening skies. Venus, Mars, and Jupiter will shine brightly over the southwestern horizon. Even if you just casually observe them throughout the spring and summer, you will notice that they seem to get closer to one another. Venus, because it is closest to the Sun, revolves the most quickly of the three, and by the middle of June, will have caught up with the other two. You may not want to cover the intricacies of Kepler's Laws of Planetary Motion at the middle level, but it would be good to point out to students that the inner planets revolve faster about the Sun than the outer planets.

Throughout the spring and early summer, watch these planets as they, first, move close together, then separate. Also, watch for the crescent moon to glide by the planets, making the skies more spectacular. The accompanying diagram shows a view of the four-day-old moon just south of Jupiter, Venus, and Mars. The view is as it will appear when looking west at 9 p.m. local time on June 15.

Evening planets

Venus: sets about 3.5 hours after sunset and is very noticeable over the western horizon during May.
Mars: located over the southwestern horizon at sunset and sets about four hours later.
Jupiter: very visible over the south-southwestern horizon at sunset and sets about five hours later. (Jupiter appears east of Mars during May.)

Summer features

Solar eclipse—On July 11, the moon will pass between the Earth and the Sun, blocking our view of the Sun. Sky watchers in Hawaii through central Mexico on down to Central America can see a total eclipse that could last up to seven minutes in some locations. In other locations in the continental United States, the moon will occlude the Sun only partially: in San Francisco, 50 percent; in St. Louis, 23 percent; and in Richmond, 10 percent.
Meteor shower—In August, look for the meteor shower Perseid. The peak night is August 12. To view the meteor shower, look northeast. This year, it will be more visible because the new moon occurs two days before the peak night.

Moon Phases

Last Quarter - May 6
New Moon - May 13
First Quarter - May 20
Full Moon - May 28

Bob Riddle is the planetarium director for the Kansas City School District at Southwest Magnet Math & Science High School.