

ASTRONOMY

# Bright Stars

## Ten First Magnitude Stars Decorate the Heavens During April—a Maximum for the Whole Year

By JAMES STOKLEY

IF ONE wishes to see bright stars in the evening sky, this is the time of year to look. A comparison of the number of those of the first magnitude which are shown on these maps during different months will reveal that, on the average, just under eight are shown in each pair. August is smallest, with five. But during April there are ten. This month and March are the only two months with so high a score, though four months—January, May, June and December—each have nine.

Brightest of all April stars is Sirius, the dog-star, in Canis Major the great dog. Shown on the maps (in the position for 10 o'clock on the first of April, 9 o'clock on the 15th, and 8 o'clock on the 30th), it is low in the southwest. Almost directly west, at these times, is Orion the warrior. The three stars in a row, forming the belt, are characteristic. Above these is Betelgeuse. A little earlier, about 9 o'clock on April 1, an eleventh first magnitude star, Rigel, appears below the belt stars.

Near Orion to the right, is Aldebaran, part of Taurus the bull. Higher and still farther north, is Capella in Auriga, the charioteer. Directly above Orion are the Twins, Gemini. Pollux, brighter of the two, is to the south. Below this group to the left is the sixth bright star, Procyon of Canis Minor, the lesser dog.

Now turn to the south. High in the sky is the lion, Leo, part of which forms the Sickle. Another bright star, Regulus, is at the bottom of the handle of this agricultural implement.

A good way to find the next two bright stars is to look at the ever familiar Great Dipper high in the north. By following to the south the curve of the handle you come first to Arcturus, in Bootes the bear-driver, then to Spica, in Virgo the virgin. The last bright star is Vega, in Lyra the lyre, seen very low in the northeast. Since the stars rise, as the sun does, this will more easily be seen about an hour or two after the times of the maps.

No planets this month are in a position to be shown on the maps, though

they can be seen earlier. About April 2, elusive Mercury may be glimpsed more easily than at any time this year. Then it sets nearly two hours after the sun, and is visible low in the southwest. Venus will also be seen, below Mercury, and still more brilliant. Mercury appears for only a few days and then draws again into the solar glare. Venus is now drawing away from the sun, and coming into better view in the evening sky. Mars, much fainter than the other two, is also visible in the early evening to the southwest, where its red color may distinguish it. Saturn, this month, is too close to the sun to be seen at all. Jupiter is now seen in the morning sky, rising in the east about two hours before sunrise.

In April evenings, the best known of all star groups is in its best position of the year. This is the "Great Dipper," now shining in the north nearly overhead. The dipper is upside down, the handle to the right. The two lefthand stars in the bowl, Dubhe below and Merak above, are the pointers which show the direction, downwards, of the Pole Star.

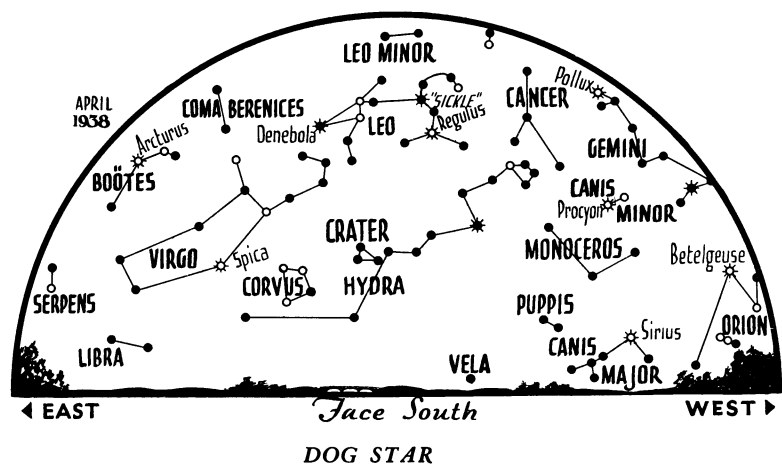
Though we know the stars as the dipper, there are many other names given to them. In England, for example, they are either "the Plough," or "Charles' Wain," that is, "Charles' wagon," re-

ferring to King Charlemagne. The Germans have a name which means the same thing, "Karlswagen." Sometimes, however, they call it "Himmelswagen" which means "the heavenly wagon." In some parts of France it is "le casserole," or "the saucepan."

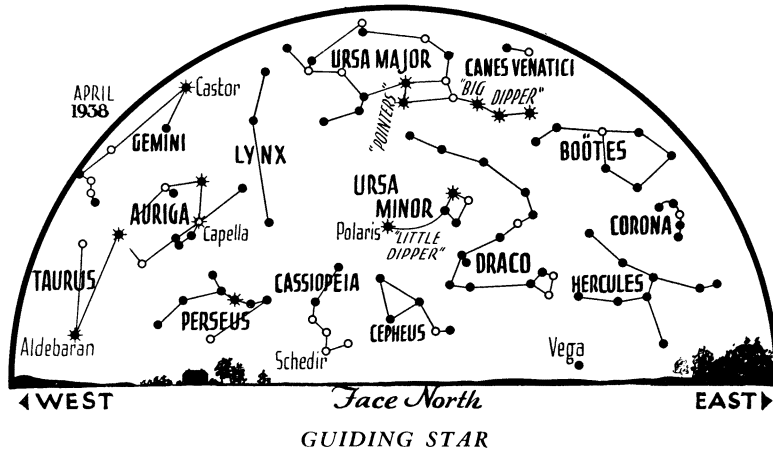
To the Arabs it was quite different, for they pictured it as a funeral procession. The four stars of the bowl of the dipper formed the bier and the stars of the handle were the mourners. Apparently it was the custom to have paid mourners in such a procession, and some member of the family brought up the rear to see that they did their work properly. Hence, the last star in the handle was called "Kaid Banat al Naash," means "the chief mourner." Today two names are given to this star, each of which is derived from the Arabic name. One is "Alkaid" and the other "Benet-nasch."

Next star in the handle is Mizar. Close to it is a dimmer star called Alcor, one of the faintest to have a commonly used proper name. Through a telescope, Mizar itself is seen to consist of two separate stars, and a fourth star appears close by, between them and Alcor. Now it is known that a very large proportion of all the stars in the sky are double, but Mizar was the first to be so recognized. In more recent times, studies made with the spectroscope have shown that each of the stars of which Mizar consists, and Alcor as well, are double in turn. So here, where one star

☼ \* ○ • SYMBOLS FOR STARS IN ORDER OF BRIGHTNESS



*Sirius, brightest of them all, shines low in the southwest.*



*Polaris, directly north, is but one of the many bright bodies illuminating the northern heavens during April.*

can be noticed at first glance, there are really seven.

Actually, the great dipper is not a constellation but only part of a constellation, that of Ursa Major, the great bear. It is certainly difficult to see the resemblance but it was called a bear by people in widely scattered parts of the earth, the Greeks, the Finns, the Babylonians, and the American Indians. To the latter, familiar with bears, the three stars of the handle of the dipper, the Arabic mourners, marked three hunters pursuing the bear, which was formed by the four stars of the dipper's bowl. The others, however, imagined that the handle formed the bear's tail, despite the fact that bears do not have such long tails.

All the stars of the dipper, except the two at each end, have an interesting connection with a number of other stars in the sky, including Sirius. These are all moving through space at the same speed and in the same direction. Beta Aurigae, the bright star to the southeast of Capella, is another of this group.

Thus, the seven stars of the dipper merely happen to form that figure at the present time. As the end stars move

in one direction, and the rest in another, the dipper will gradually change shape. But not for many thousands of years will the motion be enough to alter the appearance to any great extent.

During this month, the moon goes through its phases as shown in the table below. In the evening of April 1 it will appear as a very slender crescent between Mercury and Venus. On April

20, when it is nearing last quarter, people in the eastern part of the country will see it cover, or "ocult," the fourth magnitude star mu Sagittarii, which is in the constellation of Sagittarius, the Archer. At Washington, the star will disappear at 2:01 a. m., E.S.T., and will reappear at 3:24 a. m. For other places the times will be different by several minutes. With the naked eye it will not be very easy to see a star of this magnitude so close to the moon, but a good pair of binoculars should reveal it. The disappearance will be behind the bright, sun-lit portion of the moon but the edge from which it will reappear will be dark, and so the star will suddenly pop out, apparently from nowhere.

The moon is closest the earth, at perigee, at 11 p. m. April 4, with a distance of 229,000 miles. Apogee, the time at which it is farthest, comes at noon on the 20th, with 251,400 miles.

**Phases of the Moon**

		E.S.T.
First Quarter	April 7	10:10 a. m.
Full Moon	April 14	1:21 p. m.
Last Quarter	April 22	3:14 p. m.
New Moon	April 30	12:28 a. m.

*Science News Letter, March 26, 1938*

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