

## ASTRONOMY

# Lion in Southern Evening Sky

The constellation Leo was observed by ancient peoples. Greek-Roman mythology teaches that Hercules killed the lion, and Jupiter placed it in the sky.

By JAMES STOKLEY

THE CONSTELLATION known as Leo, the lion, will be visible high in the southern evening sky during April. The accompanying maps show its position, along with the other constellations that you can see about 10:00 p.m., April 1, 9:00 p.m. on the 15th and 8:00 p.m. at the end of the month.

In the right-hand (western) part of Leo is the "sickle," a sub-group of six stars arranged in the form of this agricultural implement. The handle, marked by the first-magnitude star Regulus, is downwards, and the end of the blade points toward the western horizon.

Regulus is one of ten bright stars now visible, although some are so close to the horizon (at the times for which these maps are drawn) that earth's atmosphere absorbs their light, and makes them look considerably fainter than when they were higher in the sky.

To the left of Leo, and a little lower, you can see Virgo, the virgin, with the star Spica. Above the eastern end of Virgo is Bootes, the bear-driver, with Arcturus.

Over in the west some of the constellations that were brilliant in the winter sky are still visible. Some are shown on the southern sky map, others on the northern. Highest of these groups is Gemini, the twins, with Castor and Pollux (the latter of the first magnitude). A little lower and to the left is Canis Minor, the lesser dog, with Procyon. Below this, near the horizon, is the great dog, Canis Major, with brilliant Sirius. A little to the right you will see Orion, the warrior. Only part of this group is still visible: the three stars of his belt, and Betelgeuse, above. Farther to the right is part of Taurus, the bull, with Aldebaran near the horizon. And above this you will find Auriga, the charioteer, with brilliant Capella.

## Northern Constellations

Now look toward the northern sky. High above stands Ursa Major, the great bear, of which the familiar big dipper is part. The dipper is upside down; its handle, extending toward the right, shows the direction of Arcturus. At the left are the pointers, in the dipper's bowl, which direct you downwards to Polaris, the pole star. This is at the end of the handle of the little dipper, which, in turn, is part of Ursa Minor, the lesser bear.

Along the northern horizon you will see Perseus, the champion (below Auriga); Cassiopeia, the princess; Cepheus, the king; and (close to the horizon in the northeast) Vega, in Lyra, the lyre. This star, among

those visible from most parts of the United States and from Canada, is second only to Sirius in brightness, but now it is so low that it seems much fainter. By early morning hours, or in the evening—later in the year—it shines overhead with full brilliance.

No planets shine these April evenings, but Jupiter, in Sagittarius, the archer, rises in the southeast about midnight. Saturn (considerably fainter, but still equal to a first-magnitude star) follows about an hour later, in the same constellation. Mars, still fainter, appears about two hours ahead of the sun, in Aquarius, the water-carrier, just before morning twilight begins. Venus comes up less than an hour before sunrise, and so does Mercury, around the seventh of April. Both of these planets, however, are now so low that they will be difficult to locate in the dawn's light.

It is hard for us today to visualize the imaginary figures which earlier men placed around the stars. Take Leo, for example. We can see the sickle, because these six stars do form the outline of that useful tool. But on the old star maps, which showed the figures drawn around the stars, the blade of the sickle formed the lion's head. Regulus was in his shoulder, and the faint star off to the right was one of his

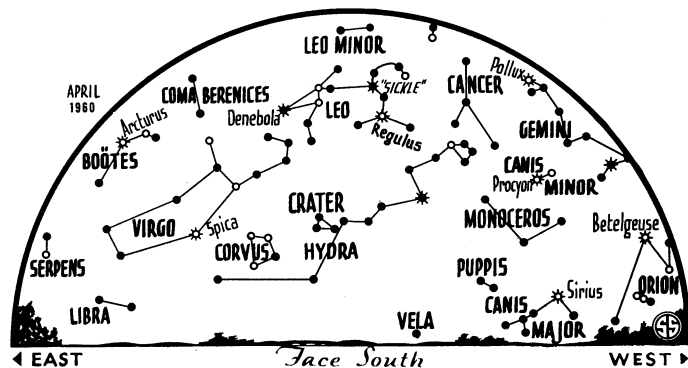
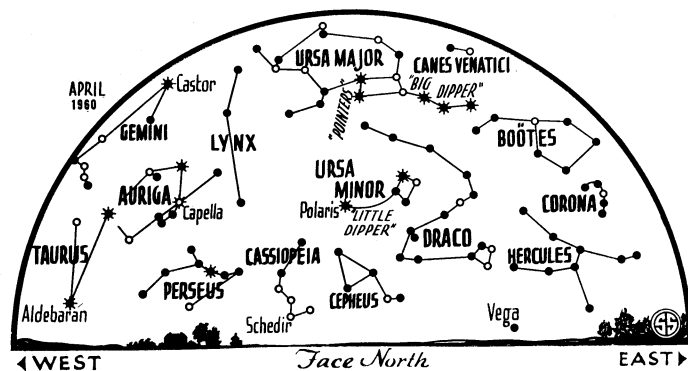
paws. The star Denebola, of the second magnitude, off to the left, was the end of his tail.

But this was not always the arrangement. Farther to the left, above Bootes, you can see a cluster of faint stars that now form the constellation of Coma Berenices—Berenice's hair. These, originally, formed the brush on the end of the lion's tail. Elijah Burritt, an astronomical writer of the nineteenth century, tells the story thus:

"Berenice was of royal descent, and a lady of great beauty, who married Ptolemy Soter or Euergetes, one of the kings of Egypt, her own brother. When he was going on a dangerous expedition against the Assyrians she vowed to dedicate her hair to the goddess of beauty, if he returned in safety. Some time after the victorious return of her husband the locks, which she had deposited in the temple of Venus, disappeared. The king expressed great regret at the loss, whereupon Conon, his astronomer, publicly reported that Jupiter had taken away the queen's locks from the temple and placed them among the stars in this figure."

So ever since, if this legend can be believed, Coma Berenices has been a separate constellation, and the lion's tail has been curled around in a smaller space!

Leo is probably the most famous of the 12 constellations that form the zodiac, which is the path through which the sun, moon and planets appear to move around the sky. The others that are shown in



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

April are Libra, Virgo, Cancer, Gemini and Taurus.

Every year, as the earth revolves around the sun, the sun itself stands against a changing background of stars. These, of course, are not visible because of the sun's glare. Now, at the beginning of summer, its background is the constellation of Gemini, which we now see in the west in the evening. But many thousands of years ago, as summer started in the Northern Hemisphere, the sun stood against the stars of Leo, and it rose higher in the sky than at any other time of year. As one early writer put it: "The sunne being in that signe is most raging and hot like a lion."

In Egypt, at that time of year, the lions of the desert sought to escape the heat by coming to the banks of the Nile, which attained its greatest height in early summer, and this has been suggested as the origin of the constellation.

According to the Greek-Roman mythology, this was the lion that infested the forest of Nemea. In the first of his famous labors Hercules killed it, and Jupiter placed it in the sky to commemorate that conflict.

The ancient Hebrews also regarded the figure as a lion—the one that symbolized the tribe of Judah. Several centuries ago some astronomers felt that Christians should not use the old pagan names of the constellations, and prepared new groupings. To them, this was one of Daniel's lions. Fortunately, however, such reforms failed and we still use the old and interesting names.

### Celestial Time Table for April

April EST	
2 5:00 p.m.	Moon farthest from earth, distance 251,300 miles
4 2:05 a.m.	Moon at first quarter
7 8:00 a.m.	Mercury farthest west of sun
9 2:12 a.m.	Algol (variable star in Perseus) at minimum
11 3:28 p.m.	Full moon
11:01 p.m.	Algol at minimum
14 2:00 p.m.	Moon nearest, distance 227,100 miles
7:50 p.m.	Algol at minimum
16 2:00 p.m.	Jupiter passes south of moon
17 4:00 p.m.	Saturn passes south of moon
18 7:57 a.m.	Moon in last quarter
21 8:00 p.m.	Mars passes south of moon
25 4:45 p.m.	New moon
27 9:00 p.m.	Planet Uranus in opposite direction from sun and nearest earth—distance 2,724,000,000 miles
30 11:00 a.m.	Moon farthest, distance 251,800 miles

Subtract one hour for CST, two hours for MST, and three for PST.

Science News Letter, March 26, 1960

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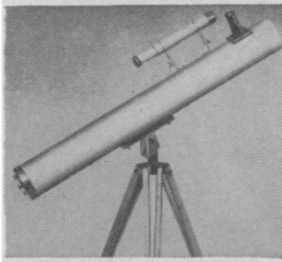
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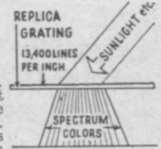
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