ASTRONOMY

# Mars, Saturn Still Visible

**These two planets are visible in the south and Mercury can be seen for the first few days in the west. Hydra, the water snake constellation, is also evident.**

By JAMES STOKLEY

➤ THOUGH it is drawing away from us and getting fainter, the planet Mars is still brighter than any other planet or star to be seen in the evening sky. Its position is shown on the accompanying maps, which depict the sky as it appears about 10:00 p.m. at the first of May or about nine o'clock at the middle of the month. (Add one hour if you are on daylight time.) The magnitude of Mars at the beginning of May is minus 0.4, though by the end it will have faded to plus 0.2, about one and three-quarter times as faint.

Mars is in the large constellation of Virgo, the virgin. Just to the west in the neighboring group of Leo, the Lion, we see another planet, Saturn. Its magnitude is plus one, less than half the brightness of Mars. Also in Leo, is the first magnitude star Regulus, which stands at the end of the handle of a sub-group known as the sickle, the blade of which curves downward and to the west. Virgo likewise contains a star of the first magnitude, one even brighter than Regulus. This is Spica which is considerably eastward of Mars.

### Great Bear Conspicuous

Though it contains no stars as bright, one of the most conspicuous constellations now visible is Ursa Major, the Great Bear, standing high in the north. Part of this group is the familiar great dipper, of which the well-known "pointers," in the bowl away from the handle show the direction to Polaris, the pole star. Probably it is not as well known, however, that the dipper's handle is also a useful guide to other groups.

If the curve of the handle is followed and continued, it brings us to brilliant Arcturus, in Bootes, the bear-driver and farther to Spica.

Low in the northwest are two remaining wintertime constellations, Gemini, the twins, and Auriga, the charioteer. In the former is seen Pollux and in the latter Capella, both of magnitude one. Similarly in the northeast there are two constellations just coming into view that also contain first magnitude stars. The lower, only part of which is shown on the map, is Cygnus, the swan, with Deneb, which looks fainter than it deserves because it is so near the horizon. Above it is Lyra, the lyre, with Vega.

Next to Gemini to the left (shown on the chart of the southern skies in the west) is Canis Minor, with Procyon, also of first magnitude. Completing the list of stars of this brightness that are depicted, there is Antares in Scorpius, the scorpion, near the southeastern horizon. This just barely gets into view. Thus it is indicated with a symbol that is used for third magnitude stars. When so low in the sky, its light has to pass through a greater thickness of the earth's atmosphere than when it is high overhead. This causes a considerable diminution in its brilliance. Later on May nights, and on summer evenings, it will be considerably higher in the south and conspicuous for its red color.

### Mercury in West

As for the other naked-eye planets, in addition to those mentioned above it may be possible to glimpse Mercury in the first few days of the month low in the west right after sundown. It was at its best position, setting longest after the sun, on April 22 but, on May 1, it still remains in the sky about an hour and a half after the sun. Venus is a morning star in the constellation of Pisces, the fishes, rising about an hour and three-quarters before the sun on the first of the month. Jupiter in Aquarius, the water carrier, is to the west of Venus and rises, on the first, about an hour earlier. Jupiter is very bright, of magnitude minus 1.9, but Venus, with minus 3.7, is five and a quarter times as brilliant. For early morning risers they make a beautiful pair in the southeastern sky.

On evenings of late spring we have the best opportunity of seeing a constellation which, though the longest in the sky, is not a very familiar one. It is Hydra, the water snake, whose head is in the west near Procyon, while the tip of the tail is in the south below Spica. The group extends for 102 degrees from east to west, more than a quarter of the whole way around the heavens. No other has stars so widely separated. Brightest star in Hydra is Alphard, near the western end, which marks the serpent's head.

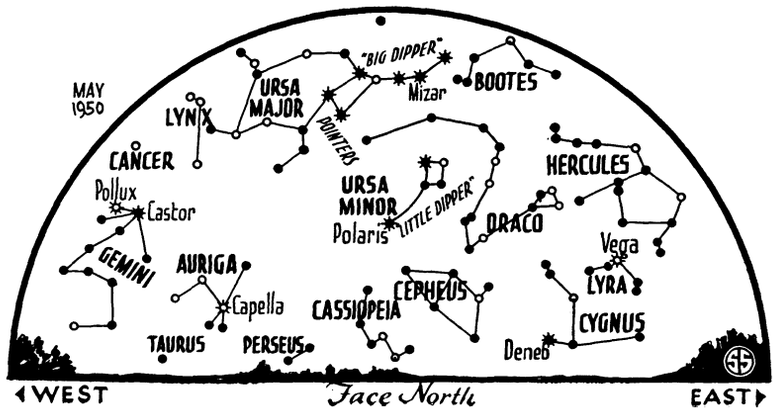
Two small constellations, associated in mythology with Hydra, are seen just above the eastern half. One is Corvus, the crow, a quadrilateral of stars just to the right of Spica. Farther to the right are two stars of Crater, the cup.

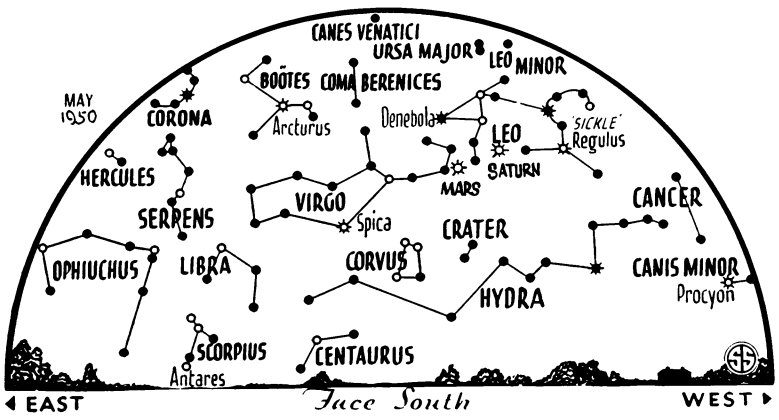
### Three Stars of Centaurus

Below the end of Hydra's tail are shown three stars of Centaurus, the centaur, about all that appears in most of the United States though it is really a prominent and conspicuous constellation. One has to travel to more southerly countries to see it fully. From the latitude of southern Florida may be seen the brightest star in this group, Alpha Centauri, almost directly south of Spica. Alpha is sometimes referred to as Rigil Kentaurus (that is, the foot of the centaur since it marks the right front hoof of this manhorse). It is the nearest naked eye star in the night sky, as well as the third brightest. Its distance is 4.3 light years, i.e., 4.3 times the distance that its light travelling 186,000 miles every second will go in a year.

Actually the nearest star (except for the sun) is another which is near Rigil Kent., but is of the tenth magnitude, about a hundredth as bright as the faintest visible to the unaided eye. Named Proxima Centauri, it is only a small fraction of a light year this side of the naked eye star, which really consists of two separate bodies revolving around each other.

Just west of Alpha Centauri, forming in fact the hind legs of the centaur, is the famous Southern Cross. This too can be






☼ ✱ ○ ● SYMBOLS FOR STARS IN ORDER OF BRIGHTNESS

seen just above southern horizon if the sky is clear enough, from southern Florida, but is better from more southerly points. From Rio de Janeiro, for example, at this time of year it can be seen in the southern evening sky about halfway from the horizon to the zenith. One would have to go beyond the southern tip of South America to see it directly overhead.

### Coma Berenices Legend

Two other of the minor constellations are shown on our maps high in the south, with one actually directly overhead. These are Coma Berenices and Canes Venatici.

The first name means "hair of Berenice." According to legend she was the queen of Ptolemy Eurgetes, or Ptolemy III, king of Egypt from 246 to 221 B. C. It is said that when he went on a dangerous military expedition against the Assyrians, she vowed that she would sacrifice her beautiful hair to the Goddess of Beauty if he returned safely. He did, and she did, but the court was shocked soon afterwards when it was found that the tresses had vanished from the altar in the temple of Venus where they had been placed.

However, Conon of Samos, who was the royal astronomer, came to the rescue when he pointed out a group of faint stars in the sky and said that Jupiter had been so pleased that he had placed her locks in the sky. Before that these stars had been considered the hairy brush on the end of the tail of Leo, the lion, but since that time men have called them the hair of Berenice.

### The Hunting Dogs

Canes Venatici, the hunting dogs, are contained within the curve of the handle of the Great Dipper. This constellation is a relatively modern one, invented by the Polish astronomer, Johannes Hevelius. In his book of star maps, published in 1690, he introduced several constellations mostly made of fainter stars to fill up spaces in the sky which the ancients had left blank. Leo Minor, the lesser lion, which is just above the big one, and Lyncis, the lynx which is shown in the western sky below the great bear, are other groups that he added.

TIME TABLE FOR MAY

| May | EST | |
|---|---|---|
| 1 | 10:19 p. m. | Full moon |
| | 12:00 midnight | Moon nearest, distance 221,800 miles |
| 4 | early a. m. | Meteors visible radiating from constellation of Aquarius |
| 8 | 3:32 p.m. | Moon in last quarter |
| 9 | 8:42 p. m. | Moon passes Jupiter |
| 12 | 6:55 p. m. | Moon passes Venus |
| 14 | 11:00 a. m. | Mercury between sun and earth |
| 15 | 3:00 p. m. | Moon farthest, distance 252,600 miles |
| 16 | 5:54 p. m. | New moon |
| 24 | 2:28 p. m. | Moon in first quarter |
| 25 | 7:32 a. m. | Moon passes Saturn |
| 26 | 4:50 a. m. | Moon passes Mars |
| 30 | 9:00 a. m. | Moon nearest, distance 222,600 miles |
| 31 | 5:43 a. m. | Full moon |

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

Science News Letter, April 22, 1950

CHEMISTRY

## Fumes of Modern Air Crumble Athens' Acropolis

➤ THE Acropolis of Athens is slowly crumbling away because the acid-producing sulfur dioxide polluting today's air is disintegrating its marble, Dr. A. J. Sofianopoulos of the University of Dayton told the American Chemical Society. The remedy is periodic washing with pure water. Previous centuries of pure air left Athens' marble monuments relatively untouched.

Science News Letter, April 22, 1950

INVENTION

## Wheel-Mounted Dustpan Operates with One Hand

➤ ONE hand is all that is needed to operate a wheel-mounted dustpan with a rotating brush for which a government patent was issued during the past month. No stooping is required with it. By means of a single handle, it is operated in an upright position.

The feature is a rotating brush at the forward edge of the dust pan. It gathers in the sweepings without the use of an ordinary broom. Each of the small wheels on which the pan is mounted carries a belt that passes over pulleys on the ends of the brush axle. When the device is pushed forward, the belts cause the brush to rotate to drive pick-up material back into the pan.

The device is not a carpet sweeper as the term is generally used. However, it can be employed to gather scattered debris on a carpet. The rotating brush can be swung upward to make emptying the pan easy. The inventor is Victor Filonowicz, Detroit, and the patent is 2,502,936.

Science News Letter, April 22, 1950