

ASTRONOMY

Bright Evening Star

Venus Is Now Most Brilliant; June Brings Longest Day and Beginning of Summer When Sun Enters Cancer

By JAMES STOKLEY

MOST brilliant of all the stars or planets in view during June evenings is Venus, beautiful "evening star," visible in the northwest after sunset. Actually it is not a star, but a planet, and the one that most nearly resembles the earth. The only other planet seen these evenings is Mars, but this is rather faint, and sets soon after sunset, so that it will not be conspicuous. It is not shown on the maps.

Among the stars, the familiar Great Dipper, high in the northwest with handle uppermost, is a good place to start. The "pointers," the two stars in the lower part of the bowl, which indicate the pole star off to the right, are generally known. Not quite so familiar however, is the fact that if you follow the pointers in the opposite direction, you come right into the constellation of Leo, the lion, in the west. This group has two prominent parts. Below is the "sickle," a hook-shaped figure, with first magnitude Regulus at the end of the handle. Above is a triangle of stars, of which Denebola, supposed to indicate the lion's tail, is the brightest.

Still other stars can be found from the Great Dipper, this time with the aid of its handle. By following its curve to the south, one comes first to Arcturus, of the constellation Bootes, then to Spica, in Virgo, the virgin. Beyond is a group that is rather prominent even though it contains no very bright stars. This is Corvus, the crow, sometimes called the "cutter's mainsail," which it resembles more nearly than it does a bird.

Beautiful Vega Above

High in the eastern sky is Vega, of Lyra, the lyre, brightest star now visible. Below is Cygnus, the swan, otherwise known as the northern cross, containing first magnitude Deneb. To the right is Altair, in Aquila, the eagle.

In the northwest, near the horizon, is Capella, in Auriga, the charioteer, and to the left, Castor and Pollux, of Gemini, the twins, now making their last appearance of the season. But to take their place, we can see the scorpion, Scorpius,

to the southeast, in which appears the brilliant and ruddy Antares.

With the exception of Mars, all planets and stars mentioned are shown on the accompanying maps, depicting the skies as they appear at ten o'clock (standard time), at the first of June, and at nine o'clock at the middle. Two other planets, however can be seen later. Jupiter, nearly as brilliant as Venus, rises in the southeast shortly after midnight, in the constellation Aquarius. About 2:00 a. m. Saturn, as bright as a first magnitude star, appears, in Pisces, the fishes.

Summer Arrives

On Tuesday, June 21, at 9:04 p. m. (Eastern Standard Time), comes the summer solstice, the moment which astronomical habit has decreed shall be the beginning of summer. Then the sun is farthest north in the sky, which means that for residents of the northern hemisphere it rises earliest and sets latest, making this theoretically the longest day of the year. Actually, at this time, the sun is changing its north and south direction very slowly, and there is practically no difference in the length of the day for nearly a week.

The greater duration of sunshine now is one cause of the warm weather of

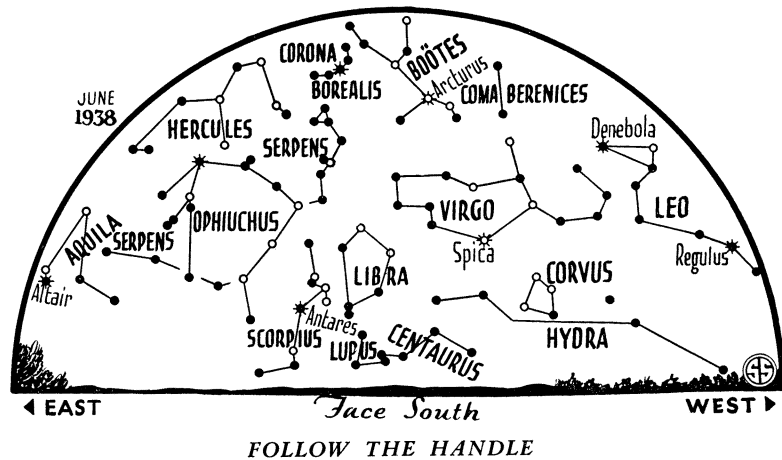
summer, though not the principal one. It is mainly due to the fact that, with the sun so high in the sky during the day, its rays of light and heat fall nearly vertically on the surface of the earth. Hence, they are more concentrated than in December, when they fall at more nearly a grazing angle.

Another way of expressing what happens on June 21 is to say that the sun enters the zodiacal sign of Cancer the crab. The zodiac is a belt across the sky through which the sun, moon and planets move. It is divided into twelve arbitrary areas, which, at present, are purely imaginary, just as much so as the county lines in one of the flat prairie states. Several thousand years ago, the signs of the zodiac corresponded roughly to the constellations along its way, and, in fact, they still bear the same names as the constellations. But, owing to a slow motion of the sky called "precession," the constellations have shifted around to the east so they no longer coincide with the signs.

No Actual Being

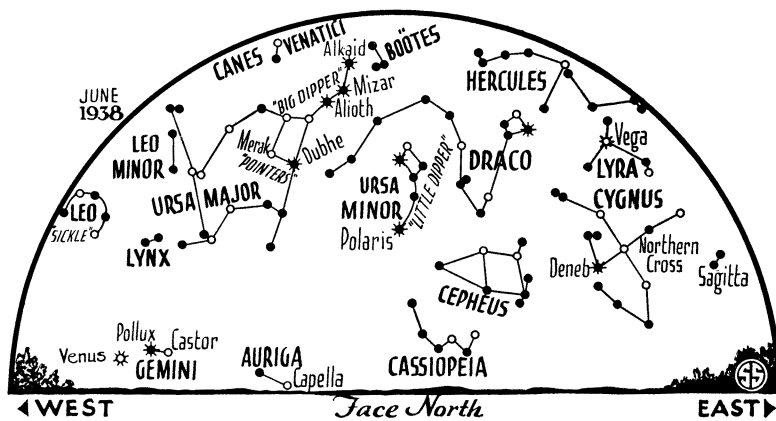
This is one of the many things that shows how ridiculous are the ideas of the astrologers, who profess to predict the future from the position of the stars and planets. One of the important data for their predictions is the sign in which a planet happens to be. Since the signs have no actual being, it is just as reason-

☆ * ○ ● SYMBOLS FOR STARS IN ORDER OF BRIGHTNESS



When you have located the famous Great Dipper, follow the path made by the stars of its handle and extend it to bright Arcturus in Bootes and then to Spica in Virgo. Below is the "cutter's mainsail."





FOLLOW THE POINTERS

But this time instead of letting your eye travel to the north star, go the other way to Leo with the sickle and bright Regulus.

able to suppose that a planet would be affected by passing from one into another as it would be to imagine that the passengers on a ship would be influenced at the instant it crosses the equator or some other imaginary line on the surface of the earth. The falsity of astrology has been abundantly proved, and no astronomer gives it the slightest credence. But many false ideas are still current among large numbers of people, and this is one of them.

During the month of June, the moon goes through its phases as indicated by the table below. The first half of the month will be provided with moonlit evenings, for the benefit of excursionists, etc. On June 30, when it is again ap-

pearing as a narrow crescent in the west, the moon passes Venus. They are closest, however, at 8:39 a. m., when both are invisible. But on the evening of the 30th they will still be in the same general part of the sky, the moon above.

Phases of the Moon

	E. S. T.
First quarter	June 4 11:32 p. m.
Full moon	June 12 6:47 p. m.
Last quarter	June 20 8:52 p. m.
New Moon	June 27 4:10 p. m.
Apogee	June 14 1:00 p. m.
Distance—252,400 miles.	
Perigee	June 27 8:00 p. m.
Distance—222,000 miles	

Science News Letter, May 28, 1938

MEDICINE

Common Germs Blamed For Chronic Gall Bladder Disease

Clearing Up of Infection in Teeth and Throats Is Important Part of Treatment Not Formerly Realized

GERMS of fairly ordinary types are the culprits that cause or at least pave the way for chronic gallbladder disease and they must be taken into account in treating the condition. Research showing this was reported by Drs. Martin E. Rehfuss and Guy Nelson of Philadelphia at the meeting of the American Gastro-Enterological Association.

Chronic gallbladder disease exactly like that which makes life miserable for thousands of men and women today

was produced in rabbits, the Philadelphia doctors reported, by repeated injections of small numbers of germs over a long period of time. The germs were obtained from the nose, throat, teeth and lower part of the digestive tract. They included staphylococci, streptococci and typhoid and colon bacilli. A streptococcus from the human digestive tract produced gallbladder disease in nearly half the animals in one study.

In these animals changes in the gallbladder occurred similar to those found

in human gallbladders removed at operation. In addition, the rabbits showed signs of kidney, heart and joint diseases, conditions which are being noticed more and more in association with gallbladder disease in human patients. In about a third of some 900 gallbladder patients, one of the doctors had noticed involvement of muscles, nerves or joints or impairment of heart and blood vessels.

Repeated attacks on the gallbladder by very small germ armies is enough to cause disease in this organ even if the germs are subsequently vanquished by the body and no trace of them found when the gallbladder is removed at operation. At that, a little less than one out of every two gallbladders removed on the operating table were infected, the doctors found in a survey of over two thousand cases of gallbladder removal.

Cleaning up foci of infections in teeth, throats and elsewhere therefore becomes an important part of treatment for chronic gallbladder disease. Specially made vaccines have been used with unusual success at times, they reported, in controlling these infections and the gallbladder condition. The diet of gallbladder patients must also be watched, it was pointed out, to insure their getting enough vitamins A and D. These vitamins are found in fatty substances which gallbladder patients usually cannot tolerate. Butter is recommended as the safest fat as a source of these vitamins.

Look Into 700 Stomachs

After actually looking into the stomachs of more than seven hundred patients suffering with "stomach trouble" during the past years, Drs. William A. Swalm and Lester M. Morrison of Philadelphia find that chronic gastritis is a disease that occurs frequently and is now being recognized by the American medical profession.

Evidence is growing which may suggest that gastritis is a possible forerunner, in some cases, of ulcer and cancer of the stomach, they also pointed out in their report. The research reported was done at the Medical School and Hospital of Temple University in conjunction with Dr. Chevalier Jackson.

To look into the stomach they used an instrument called a gastroscope which is a thin tube with a flexible lower section and an ingenious system of lenses. The gastroscope is passed down the patient's throat into his stomach. Its flexibility and the lenses make it possible for the doctor to move it about and see through the curved lower part of the instrument. Thus it is possible for the