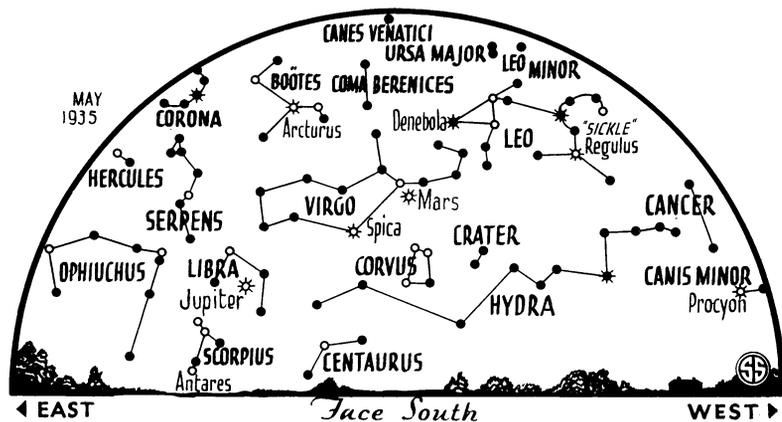


☼ * ○ • SYMBOLS FOR STARS IN ORDER OF BRIGHTNESS



HIDES HIS MOONS

If you have a small telescope and live in the eastern states, you may see, on May 8, three of Jupiter's four moons disappear into his brilliance.

The phases of the moon are caused by the fact that as it makes its circuit of the earth every month, we see varying amounts of the sun-illuminated lunar hemisphere. When sun and moon are on opposite sides of the earth, the entire bright half is turned towards us, and we see it full. When between the sun and the earth, the bright half is away from us, we cannot see the moon at all, and it is the time of new moon. The moon travels from west to east among the stars, and a few days after new, it has moved far enough to remain in the western sky a few hours after sunset, and by this time a narrow segment of the sun-lit hemisphere is turned towards us, which we see as a crescent.

Consequently because the moon is travelling eastward when it overtakes Venus on the fifth, the planet, though moving in the same direction, will vanish behind the moon's dark edge. However, the dark side of the moon will probably be faintly visible because of earthshine, sunlight reflected from the earth to the moon and thence back to us. As it takes an appreciable length of time before the moon completely covers the planet, the latter will disappear gradually. This will be especially interesting through a telescope magnifying as much as thirty or forty times enough to show Venus as an appreciable disk, itself in a gibbous phase similar to that of the moon between first quarter and full. The re-appearance will also be gradual, but this will be from behind the bright edge and will not be so noticeable. Probably the planet will not be seen with the unaided eye until entirely clear of the moon's disk.

May's second occultation comes on the nineteenth, and will be visible all over the United States, but the people in the East, making up for their favored position on May 5, will have to stay up until the small hours to view it. This is of the star Antares, in the scorpion, which at this time of night is seen well above the horizon to the south, as it is during the evenings of summer. Antares has a brilliant red color. Extending from it to the left is a hooked row of stars, which forms the scorpion's tail. The moon will be very bright, just a day past full. At 3:15 a. m., eastern standard time, from Washington, the star will be covered, and at 4:12 a. m., it will reappear. The star will disappear and reappear suddenly, instead of emerging gradually as did Venus. This happens because the star, even through a powerful telescope, has no appreciable disk, but appears as a point of light. As soon as it comes out at all, it is entirely visible. There is no atmosphere around the moon to produce absorption and to cause the star to appear slowly. In fact, this immediate disappearance and return of stars at occultations afford the very best proof that the moon has no layer of air surrounding it.

For those equipped with small telescopes in the eastern states, another interesting event during May will happen on the evening of May 8, in connection with Jupiter. With only a small instrument, the four large moons of this planet, which has nine altogether, can easily be seen. Sometimes one of the four will disappear behind Jupiter, or into its shadow, or else it may vanish as it passes directly in front of the planet, because they are of so nearly the same color.

Almost every night something of this kind can be observed, but on the evening of the eighth, three of the four will be gone at once. From 8:55 to 10:20 p. m., eastern standard time, only satellite number 4 will remain in view, to the west of the planet. In the western parts of the country, Jupiter will not have risen until 10:20 p. m., eastern standard time, and so they will miss this unusual sight.

Our moon is new on the second, at first quarter on May 10, full on the eighteenth and at last quarter on the twenty-fifth. On May 11, at 9:15 a. m., eastern standard time, it will be farthest from the earth, with 251,200 miles separating us. This is called apogee. Perigee, when the moon is closest the earth, happens on the twenty-fifth, at 11:30 a. m., and then we shall be only 229,650 miles away.

Science News Letter, April 27, 1935

EUGENICS

Sterilization Is Urged To Prevent Blindness

STERILIZATION was urged as a measure to prevent blindness at the meeting of the International Association for Prevention of Blindness.

For this purpose facilities should be made available everywhere for sterilization of persons suffering from hereditary eye diseases and pre-marital certificates regarding the freedom from such diseases should be required of brides and grooms, Dr. A. Franceschetti of Geneva, Switzerland, declared.

The chances of becoming blind are greatest in the first two years of life, Dr. M. Van Duyse of Ghent, Belgium, told members of the conference. The conditions responsible for the high proportion of blindness in the early years of life are babies' sore eyes, scientifically known as *ophthalmia neonatorum*, and injuries or sores of the cornea.

Cases of blindness from babies' sore eyes have been reduced 75 per cent. in the United States during the past 25 years, Lewis H. Carris of New York, managing director of the American National Society for the Prevention of Blindness, reported. This reduction has come about, Mr. Carris explained, as a result of state laws requiring physicians and midwives to wash the eyes of every new baby with a prophylactic solution.

Dr. Park Lewis, of Buffalo, N. Y., presided at the international conference in the absence, due to illness, of the president, Prof. F. de Lapersonne of Paris.

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