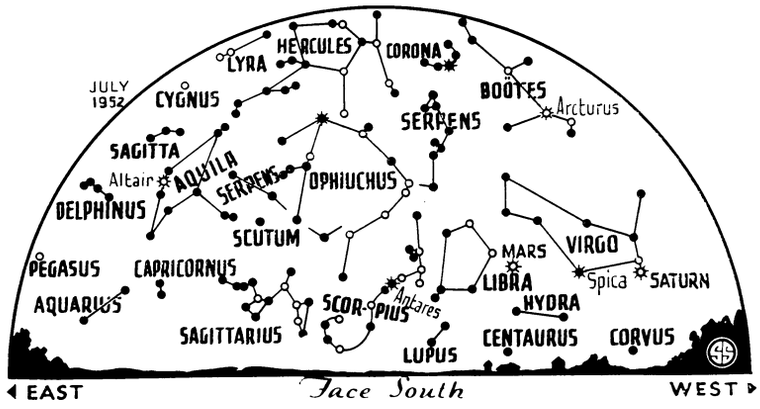

☼ ✸ ○ ● SYMBOLS FOR STARS IN ORDER OF BRIGHTNESS

west, just above Bootes. This has a star of the second magnitude, as well as four of the fourth, so five are indicated. Thirty-four are shown on a map that goes down to the sixth magnitude.

The arrangement of the brighter stars makes readily apparent why the ancients termed this first a wreath and later, a crown. Mythologically this was identified with the crown that Bacchus presented to Ariadne, daughter of Minos, second king of Crete.

Legend of the Crown

According to the legend, Theseus, King of Athens about 1200 B.C., was shut up in the famous labyrinth at Crete, where dwelt the ferocious Minotaur. It was this animal's habit to feed on the young men and women that the Athenians furnished each year as a tribute.

Theseus killed the Minotaur and, with the aid of a thread that Ariadne had furnished him, was able to find his way out of the labyrinth. He married Ariadne and took her away to the island of Naxos, though later he ungratefully deserted her!

According to Plutarch, she lived for many years after this and was loved by Bacchus, who gave her a crown of seven stars. After her death, this was placed in the sky.

To some tribes of American Indians, this group was a council of chiefs around a campfire. In the center of the circle there is a faint star, and they said that this was a servant, standing over the fire, and cooking the meal.

Zodiac Constellation

Though it is one of the 12 constellations of the zodiac through which the sun, moon and planets appear to move, and can hardly be called a constellation that is not well-known, the group of Libra, the scales, contains no stars brighter than third magnitude. It stands in the southwest between Virgo and Scorpius, and Mars is within its boundaries for the early part of the month.

Originally, Libra was part of the scorpion and represented that creature's claws. In fact, the two brightest stars in Libra have names that recall this connection. The one to the north is called Zubeneschamali and the other Zubenelgenubi. These mean, respectively, "the northern claw" and "the southern claw," which hardly makes sense in a pair of scales.

Perhaps the change came in the time of Julius Caesar, for the Romans are said to have placed him in the sky, holding a pair of scales. Later, according to this theory, the figure of Caesar was dropped and only the scales remained.

However, there is evidence that much earlier these stars were also considered as a pair of scales, so perhaps the Romans merely revived an older concept.

Celestial Timetable for July

July	EST	
2	10:32 a. m.	Moon passes Mars
	9:00 p. m.	Earth farthest from sun, distance 94,451,000 miles
7	7:33 a. m.	Full moon
8	6:00 a. m.	Moon nearest, distance 222,800 miles
13	10:42 p. m.	Moon in last quarter
15	4:00 p. m.	Mercury farthest east of sun
	11:19 p. m.	Moon passes Jupiter
21	6:30 p. m.	New moon
22	11:26 a. m.	Moon passes Venus
23	3:00 a. m.	Moon farthest, distance 252,500 miles
	11:28 p. m.	Moon passes Mercury
27	11:03 p. m.	Moon passes Saturn
28	early a. m.	Meteors visible radiating from constellation Aquarius
29	8:51 p. m.	Moon in first quarter
30	1:32 p. m.	Moon passes Mars

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

Science News Letter, June 28, 1952

The *octopus* may change color when startled, frightened or otherwise emotionally aroused.

To save *paint* on indoor wood, seal the wood surface with a thin coat of fresh, white shellac and allow to dry before painting.

BIOCHEMISTRY

Chemical Supplies Cancers With More Blood and Food

➤ A CHEMICAL from cancers that brings increased blood and nourishment to the malignant growth has been discovered by Dr. Kenneth G. Scott and associates at the University of California, San Francisco.

The chemical was extracted from cancers. Its chemical nature is still not completely known, but it is part of a protein molecule and resembles the adrenal gland hormone, adrenalin, or epinephrine.

Blood vessels supplying tumors are enlarged by this chemical and the clotting time of the blood is increased from four minutes to more than half an hour. Both these changes make it possible for growing tumors, or cancers, to rob normal tissues of nourishment from the blood.

In normal animals, Dr. Scott and associates found, blood makes up 5.4% of the body weight. In cancerous animals it makes up 7.1%.

Dr. Scott is now trying to identify the cancer chemical that gives the cancer more than its share of food. If this identification can be made, a way of destroying the chemical faster than the cancer can produce it might prove effective in checking the growth of cancers.

Science News Letter, June 28, 1952

ENGINEERING

Radioactive Cutting Tools Aid Research Engineers

➤ RADIOACTIVE CUTTING tools used in research machine shops are giving design engineers clues to the wearing qualities of the tools, and to the effectiveness of different cutting fluids, work materials and cutting conditions.

This was reported to the American Society of Mechanical Engineers meeting in Cincinnati by E. J. Krabacher, research engineer, M. E. Merchant, assistant director of research, and Hans Ernst, director of research, of the Cincinnati Milling Machine Co. They said that the application of radioisotopes to tool testing seems to hold promise for speeding up and simplifying the process of obtaining such machine-shop data.

The method permits many more measurements to be taken in a given time and at less cost and with much less material.

Basically the testing process works like this: Cutting tools are irradiated in a nuclear reactor by neutrons. The tools then are used on metal-working machines to cut metal. A Geiger counter measures the radioactivity of the chips from the workpiece. The amount of the measured radioactivity is a direct measure of the rate of tool wear.

Since the rate of wear is essentially constant throughout the tool's life, a short test can yield a reasonable estimate of the tool's entire life.

Science News Letter, June 28, 1952