ASTRONOMY

## Planet Venus Brilliant

The planet Venus is so brilliant that it appears before any other planet or star in the constellation Leo, although it sets relatively early in the July evening sky.

## By JAMES STOKLEY

AS SOON AS THE SKY begins to darken after sunset on July evenings, you will see the planet Venus shining brightly in the west. It is so brilliant (minus 3.3 on the astronomical magnitude scale) that it appears well before any other planet or star in the constellation of Leo, the lion.

The position of this group is shown on one of the accompanying maps. These depict the sky as it looks about 11:00 p.m., your own kind of daylight saving time, at the beginning of July, an hour earlier at the middle and two hours earlier at the end of the month.

In the early part of July, Venus will have set at these times but as the month progresses, the planet will be visible later in the evening. Thus the map shows its position only for the closing days of July.

Mars is also visible, in Virgo, the virgin, which is to the left of Leo and a little higher. Although Mars is of the first magnitude, it is only about one fifty-third as bright as Venus. On July 14 the U.S. space probe Mariner IV is scheduled to pass within about 5,000 miles of Mars. It will take photographs of a strip of the Martian surface and relay them back to earth. If it is successful, July may be the month when a great addition is made to our knowledge of Mars.

## Mercury Farthest East of Sun

On July 18 Mercury reaches its position farthest east of the sun, and remains visible in the west after sunset. It will be well to the south, however, and will not be very high in the sky so it may be lost in the bright evening twilight. At 8:00 p.m., EDT, on July 3 (and again during the night of July 19) Mercury will pass just to the south of Venus. Mercury will be much fainter, but perhaps you can get a glimpse of it with opera glasses or binoculars.

About midnight (EDT) on the first of

About midnight (EDT) on the first of July and at 10:00 p.m. on July 31st, Saturn rises in the east in Aquarius, the water-carrier. Its magnitude is 1.1, making it slightly fainter than Mars. By the end of the month the planets will be about equal in brightness.

Perhaps the most characteristic of the summer constellations now visible in the evening sky is low in the south. This is the scorpion, Scorpius, with the bright red star called Antares. To its right is the group called Libra, the scales, while Sagittarius, the archer, is to the left.

The big dipper, part of Ursa Major, the larger bear, hangs in the northwest, from the star called Alkaid, which marks the end of its handle. At the other end of the dipper are Merak and Dubhe, the so-called pointers,

which point toward the right to Polaris, the pole star. This is in Ursa Minor, the smaller bear.

If the curve of the dipper's handle toward the south is followed, it will lead to Arcturus, in Bootes, the herdsman. Standing virtually overhead is Hercules, the strong man of mythology

man of mythology.

To the east of Hercules is Lyra, the lyre, with brilliant Vega, the brightest star visible on summer evenings. Below it and farther to the east stands the northern cross, part of Cygnus, the swan. First magnitude Deneb marks the top of the cross. Below and slightly to the west of this group (shown on the southern sky map) is Altair, in Aquila, the eagle.

Aquila, the eagle.

One of the largest of constellations is visible in the south above Scorpius. This is Ophiuchus, the serpent holder. Despite its size, Ophiuchus contains no very bright stars. On the old star maps it was depicted as a bearded man carrying a huge snake. This reptile is represented in the sky by the constellation of Serpens. It is in two parts—one to the right, the other to the left of Ophiuchus. This is the only constellation in the sky that is divided into two parts. The section to the right, next to Bootes, is the head, or Serpens Caput. The other part, next to Aquila, is Serpens Cauda, the tail.

The zodiac is a band across the sky, including 12 principal constellations, through which the sun, moon and planets seem to move. Seven of the 12 groups are visible on July evenings and are shown on our maps. These are Aquarius, the water carrier; Capricornus, the horned goat; Sagittarius, the archer; Scorpius, the scorpion; Libra, the scales; Virgo, the virgin, and Leo, the lion. The others, in the order in which they will rise later in the night, are Cancer, the crab; Gemini, the twins; Taurus, the bull; Aries, the ram, and Pisces, the fishes. During July the sun moves through the constellations of Gemini and Cancer, so these cannot be seen.

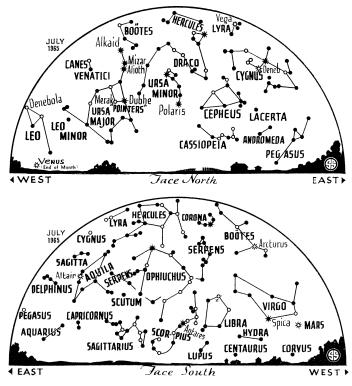
## Libra Is Least Conspicuous

Of all the constellations of the zodiac, Libra is one of the least conspicuous. It contains no stars of the first or even of the second magnitude; the two brightest are third magnitude. But despite this, Libra has several points of interest, so you might like to look at it. It is in the south between Scorpius and Virgo.

In ancient Greece Libra was considered as the claws of the scorpion rather than a pair of scales, and the name of the two brightest stars show this. The upper one (marked on the map with a small z) is called Zubeneschamali, which is derived from the Arabic "Al Zuban al Shamaliyyah," meaning "the northern claw."

The star below it and a little to the right

The star below it and a little to the right is Zubenelgenubi. This also is derived from



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

the Arabic "Al Zuban al Janubiyyah," which means "the southern claw."

The Romans seem to have separated the group from Scorpius during the reign of Julius Caesar as emperor. They showed these stars as the figure of Caesar holding in his hands the scales of justice. Later the emperor disappeared, leaving only the scales as we have them today. However, the old names of the two brightest stars were retained.

Zubeneschamali, or beta Librae as the astronomer usually calls it, is frequently described as being greenish in hue. When you look at it, however, you may not notice this: it may seem bluish white like the other stars. But this may be because it is rather faint; at low levels of brightness, the eye does not distinguish color very readily. Look at it through a small telescope or a pair of binoculars and you may detect a slightly greenish tint.

## **Celestial Timetable for July**

JULY	EDT	
3		Earth farthest from sun; dis-
		tance 94,454,000 miles
	8:00 p.m.	Mercury passes south of Venus
4	5:00 p.m.	Moon passes north of Mars
4 5	3:37 p.m.	Moon in first quarter
13	1:02 p.m.	Full moon
14	1:00 p.m.	Moon farthest; distance
•	-	252,500 miles
18	3:00 a.m.	Moon passes south of Saturn
	7:00 p.m.	Mercury farthest east of sun
19	2:00 a.m.	Mercury passes south of
		Venus
21	1:54 p.m.	Moon in last quarter
25	10:00 a.m.	Moon passes north of Jupiter
28	5:00 a.m.	Moon nearest; distance
	_	222,000 miles
	7:45 p.m.	New moon
29	early a.m.	Meteors visible, apparently
•	•	radiating from constellation
		of Aquarius
30	6:00 a.m.	Moon passes north of Venus

Substract one hour for CDT, two hours for MDT, and three hours for PDT.

• Science News Letter, 87:406 June 26, 1965

CONSERVATION

## **Nations Agree to Save** Whales From Extinction

➤ AN INTERNATIONAL WHALING Commission with representatives from 14 nations met in London and unanimously agreed to start drastic measures to save the whale.

The agreement has been hailed by many organizations, especially the Food and Agriculture Organization of the United Nations, which has been trying for years to get nations to go slow in the orgy of slaughter that has killed all but relatively few of the sea giants.

The most important part of the agreement sets a quota of Antarctic whales to be harvested during the next hunting season, 1965-66, to 4,500 blue whales, 9,000 fin whales and 27,000 sei whales. Humpback whales are under complete protection and are not to be killed at all.

Each year, the Commission agreed, this quota will be reduced until more whales will be born than killed and the whale species will slowly begin to recover.

Science News Letter, 87:407 June 26, 1965

## **Huge Bat Population** Thrives on Trinidad

#### See Front Cover

➤ THERE ARE PROBABLY more bats in the belfries and fruit trees of Trinidad than in any other country of its size.

Representatives of all the nine bat families in the New World are found on this West Indies island, about the size of Delaware, stated Arthur M. Greenhall of the bird and mammal laboratories, University of the West Indies.

Some of these insect- and fruit-eating creatures are seen on this week's front cover. They are becoming so numerous that they are now called house bats, Mr. Greenhall reported in Natural History.

Certain free-tailed bats, Molossus ater and M. major, even prefer the hot underside of metal roofs where temperatures of 130 degrees Fahrenheit have been recorded, to cooler roosts under palm fronds. The houseloving bats infest private houses by the hundreds, annoying people by their noisy thumping and scuttling, and creating dangerous stresses on ceilings from the increasing weight of their droppings over the years.

Trying to control this bat population is complicated because the island is only six miles from the South American mainland.

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# Nature Note

➤ THE THICK-COATED polar bear, one of the largest meat-eating animals on earth, has just been put on the danger list-the list stating that he is in possible danger of becoming extinct.

For many years, these valuable bears, Thalarctos maritimus, have been easy targets. Unsporting hunters in airplanes are using high-powered automatic rifles to kill the bears throughout their North Pole territories.

At present there are no international laws prohibiting or limiting the shooting, and their numbers have been decreasing throughout their arctic habitat that stretches across Alaska, Canada, Labrador, Greenland, Iceland, Norway and Russia.

The white and creamy bears are land animals quite at home in water. With thick oily fur to keep their bodies warm and dry, they sometimes spend much of their lives on ice floes hundreds of miles from land. They eat the sea creatures around them—seals, fish, young walrus and sea birds. In summer they eat the berries and leaves of tundra plants and algae.

On land the bear can run faster than a reindeer, and in the sea he can swim two and a half miles an hour.

The bear is said to have a superb sense of smell and canny intelligence in tracking down prey over the barren regions of snow. Since his coal-black nose does not blend into the background of snow and ice, a bear sometimes will cover his nose with his paw and slide across the ice on his stomach to stalk his prey.

• Science News Letter, 87:407 June 26, 1965

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