

Eclipse, Saturn and Mercury In May

Astronomy

By JAMES STOKLEY

The first eclipse of the sun this year, the return of the ringed planet Saturn to the evening sky, and the appearance of the seldom-seen Mercury as an evening star; all these things go to make the month of May interesting to the student of the stars. It is particularly interesting because the last few months have brought forth little in the way of astronomical interest.

A total eclipse of the sun, when the moon in its travels passes in front of the solar disc revealing the otherwise invisible corona, usually attracts the attention of astronomers from all parts of the world. Many a time has a party of astronomers traveled thousands of miles to take a chance that the weather would be clear for two or three minutes on a certain day months in advance. Not quite so often have they been disappointed by the eclipse itself being eclipsed by clouds at the crucial moment.

At the eclipse on the 19th of May, however, it is unlikely that there will be much disappointment even if the weather is cloudy at the place where it will be visible, because no astronomers will travel to see it. Even if they wanted to get there they would probably need to use airplanes to do so. The path of totality, in which the sun is completely obscured by the dark disc on the moon, is at approximately latitude 50 degrees south and 20 degrees east. This is over a thousand miles south of the southern tip of South Africa. It is a region where there are no islands or other places

on which to set up instruments and so for at least once, astronomers will rest content at having an eclipse happen in some other part of the world.

The region over which the sun will be partly obscured, in other words, where there will be a partial eclipse, is much larger. In practically all of South Africa and in the southern part of South America, the partial eclipse will be seen.

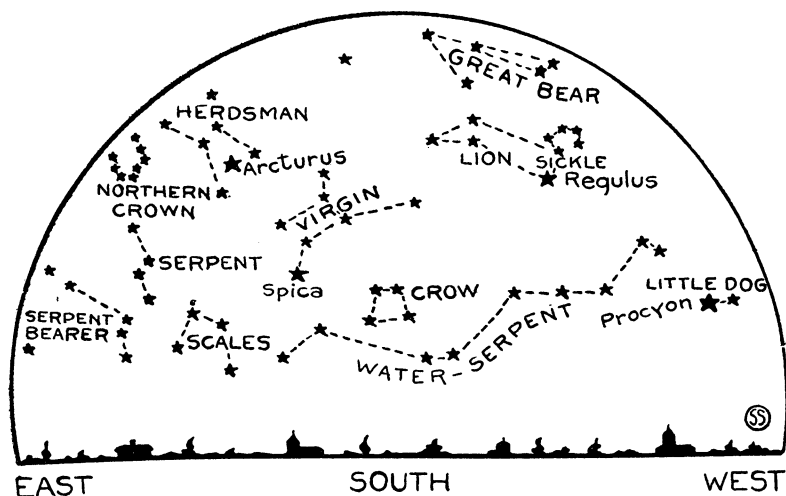
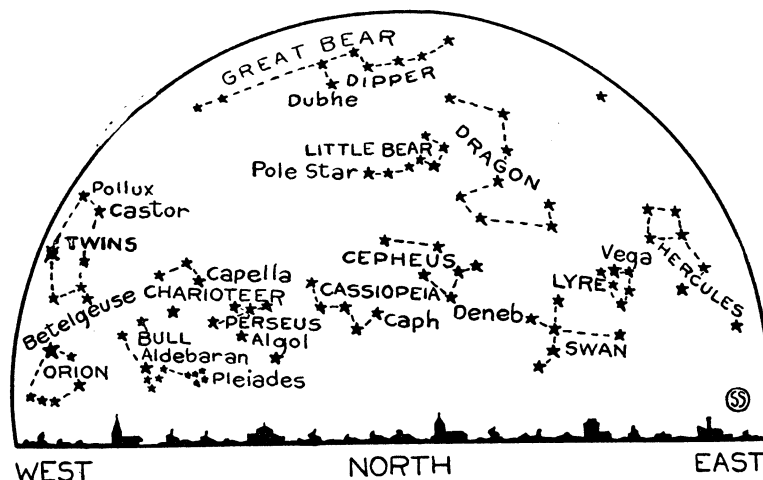
It will be necessary to wait just about a year for the next really good eclipse for observing purposes. That will take place on May 9, 1929. The path of totality then will cross the Indian Ocean, the Malay Peninsula and several of the islands in the Philippine group. The next really convenient eclipse does not take place until 1932. In that year there will be one of which the path of totality will cross parts of the Province of Quebec and the States of Vermont, New

Hampshire, Maine and Massachusetts. As this happens at 3:30 o'clock on the afternoon of August 31, it will undoubtedly be a popular attraction. If the weather is clear, it should break all records for the number of people observing an eclipse.

But, while the circumstances of this eclipse are already known, and if they desired astronomers could set up their instruments now for use in 1932, they are not bothering to do so. They are, however, beginning to think of the next satisfactory eclipse for observing which is the one in the Philippines on May 9, 1929.

At the end of the month of May it will be possible for amateur star gazers to see one of the most important members of the solar system, yet one which few people have ever seen. It is the planet Mercury, nearest of all the known planets to the sun. The average distance of the earth from the sun is about 93 million miles. Mercury remains on the average of only 36 million miles from the ruler of the solar system. It revolves around it once in 88 days instead of 365 $\frac{1}{4}$ days as the earth.

Because of its rapid revolution around the sun, combined with its short distance, Mercury seems to oscillate from one side of the sun to the other as the latter body travels among the stars in its annual path. Mercury cannot be seen when the sun is above the horizon because of the glare. A large part of the time, when the two are close together, they both set at about the same moment in the evening, and rise about the same time the next morning. Thus, at such times, (Turn to next page)



HOLD THIS PAGE IN FRONT OF YOU and face north or south. The upper or lower map will then reveal the May evening sky as it appears on a clear night

The Heavens in May—Continued

Mercury cannot be seen at all. Once in each of its revolutions in its orbit, Mercury gets to its maximum distance eastward of the sun and then about six weeks later in the same distance westward. The former is called greatest eastern elongation and the latter greatest western elongation. The eastern elongation is its best position, so far as we are concerned. Then the sun sets first and Mercury an hour or so later, so that it can be seen in the twilight.

It will be an eastern elongation that will bring Mercury into the evening sky at the end of this month. Actually the elongation itself occurs, not in May, but on the third of June. However, for perhaps a week at the end of May the planet should be seen. It will be very low in the western sky and, therefore, rather difficult to observe, but a pair of binoculars, or even a good pair of opera glasses, should aid in finding it. Then when it is seen the observer will have the satisfaction of having seen an important member of our family of planets and one which even the great Copernicus is said never to have observed.

The alternate appearance of Mercury in the evening and morning skies was first observed by the ancient Greeks. However, they did not realize that it was a single planet that performed these gymnastics. They thought that there were two planets, and called the one in the evening Mercury and the one in the morning Apollo. Somewhat similar was the case with Mercury's next-door neighbor in the solar system, the planet Venus. This also appears first in the evening and then in the morning skies, though at greater intervals than does Mercury. The Greeks had two names for it, Phosphorus when it appeared in the morning and Hesperus when it was seen in the evening sky.

The other planet that is coming into the May evening sky is not so difficult to observe as Mercury, and will not be visible until later in the evening. This is the planet Saturn. It rises in the east about two hours after the sun sets in the west; about 1:30 in the morning it is directly south. It appears as a bright star, with a rather steady yellowish light as distinguished from the twinkling of the stars.

Saturn, of course, is of chief interest because of its remarkable system of rings. In order to see the rings of Saturn satisfactorily a small sized telescope is required, one magnifying perhaps 30 or 40 times.

The rings were first seen by the Italian astronomer, Galileo, who had an instrument inferior even to a modern pair of opera glasses. However, he was not able to see the rings as such and he never realized just what they were. To him it looked as if Saturn was attended by two smaller bodies, one on either side. These seemed to wax and wane depending upon whether or not the earth was directly in line with the rings. Some years later the Dutch astronomer, Huyghens, observed the rings with a large telescope and discovered for the first time what they were.

The stars in the evening sky reflect the coming of the middle of spring. Late in the evening the bright Vega, in the constellation of Lyra, the Harp, can be seen in the eastern sky. Below it to the right appears Altair, in Aquila, the eagle, and, to the left, Deneb, and the other bright stars that form the group of the northern cross, or Cygnus, the swan. By next month these three stars will be conspicuous throughout the evening.

High overhead now, shortly after sunset, is the familiar sickle, in Leo,

the lion, with the first magnitude Regulus, at the end of the handle, to the south. East of this group is the faint group of stars known as Coma Berenices, or Berenice's hair. According to legend this was originally part of the tail of the lion, but the constellations were changed in honor of an ancient queen.

Orion is now leaving us for the season, as this group is very low in the west, just after sunset. Somewhat higher are the two twins, Castor and Pollux. In the northeast is Capella, in Auriga, the chairoter.

Science News-Letter, May 5, 1928

Bones of at least 2,000 hippopotami killed by prehistoric hunters were found in a single cave in Sicily.

Statistics indicate that the average life of football players is greater than that of baseball players.

The old Greek philosophers condemned suicide, but made an exception of the custom of old people drinking poison hemlock.

Consumption of candy in this country has increased until it now amounts to five pounds per person each year.

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