

tralian astronomer in 1927, will make its first return since then and may become bright enough to be seen with binoculars. It should turn up during the first part of the year in the general direction of the constellation of the scorpion. As this is best seen from the southern hemisphere, Mr. Gale, or some of his countrymen, may again pick it up first.

Another comet due back, but which will probably not be seen, is Schorr's, found in 1918 by a German astronomer. It has supposedly returned twice since then but has been observed on neither occasion. The return of Kopff's comet, which happens every 6.56 years, is also expected, but this is not a favorable one. However, it has been seen four times already, its orbit is well determined, and its recovery is not important.

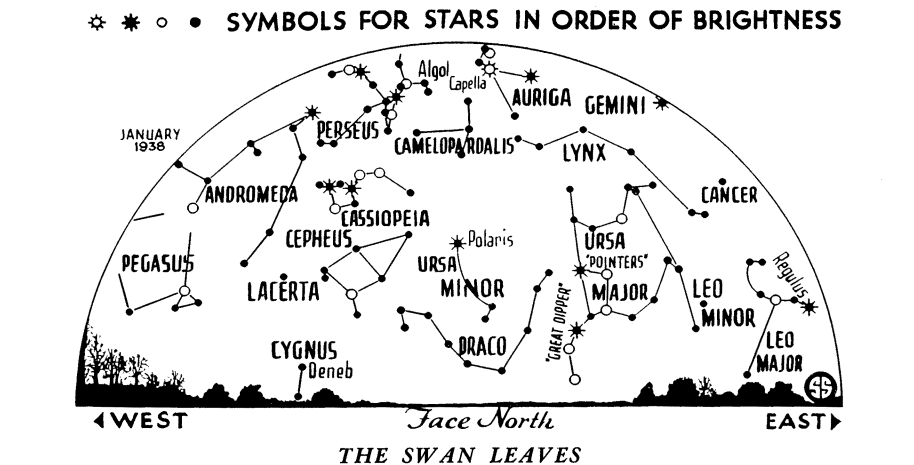
The Planetary Program

As for the planetary program in 1938, Mercury will be seen in the evening sky about July 30 and November 25. Venus will begin to appear in the evening sky about March, and will be farthest east of the sun, and visible longest into the night, September 11. On October 16 it will be at greatest brilliance, then it will quickly approach the sun, and by early November will be out of sight. Jupiter will appear as a morning star, before sunrise, during the spring and early summer, after which it will be seen during evening hours, in the constellation of Aquarius. It is gradually approaching Saturn, which is a little farther east, in the constellation of Pisces. Saturn will be visible in the evening sky at the beginning of the year. In the summer it will appear as a morning star, while in the autumn it will appear in the evening again.

Jupiter in Line With Sun

January brings to a close the appearance in the evening skies of the three planets that were so prominent only a few months ago. Jupiter is almost in line with the sun, and cannot be seen either morning or evening. Mars is still visible low in the west soon after sunset, but is so near the horizon that it does not show on the maps. Saturn appears a little higher, and is the only one indicated.

These maps reveal the aspect of the skies at 10:00 p. m., January 1, 9:00 p. m. on the 15th and 8:00 p. m. on the 31st. Even the early morning skies are devoid of their planetary decorations, for Venus, which has been the brilliant morning star, is also coming into line with the sun and is no longer visible. For a day or two, about January 20,



Deneb, low in the northwest, is all that remain visible of the constellation Cygnus. But the glorious constellations of winter evenings are now shining high above.

however, Mercury will be seen in the east in the morning twilight.

But despite the poor showing of the planets, this month does reveal the glorious constellations of a winter evening. Orion is high in the south, the three stars in a row representing the belt of this great warrior. Betelgeuse, above, is one of his shoulders, and Rigel, below, one of his legs. Below, and to the left, is Sirius, most brilliant star in the nighttime sky, and one of the closest. This is the so-called "dog-star," part of Canis Major, the great dog. A little higher, and farther east, is Procyon, in Canis Minor, the lesser dog. Still higher are the twins, Castor and Pollux, of the constellation of Gemini. Pollux is slightly brighter than his brother.

Creamy-White Capella

Directly overhead is creamy-white Capella, in Auriga, the charioteer. As we follow around still farther, we find high in the south, to the right of Orion, the group of Taurus, the bull. Aldebaran, a star that is distinctly red in color, forms an eye of the animal. This is in a V-shaped group of stars, the Hyades, which outline the face. Farther over, in the shoulder, is a little cluster of stars, six of which can be seen with the normal eye, called the Pleiades, the "seven sisters" of mythology.

To the northeast, the great dipper, part of Ursa Major, the great bear, is swinging around into a higher position than it held during the late autumn, and the handle points downwards. The top two stars are the pointers, which show the direction of the pole star, Polaris, to the left. On the opposite side of Polaris is the figure of Cassiopeia, shaped like a W on its side.

Just north of the east point, the

"sickle," in Leo, the Lion, with brilliant Regulus at the end of the handle, is making an appearance. Very low in the northwest, where it is rather difficult to find, is Deneb, another first magnitude star, all that now remains visible of Cygnus, the swan.

The moon is nearest the earth on January 14, 9:00 p. m., 222,850 miles; farthest January 27, 1:00 p. m., 252,200 miles.

Phases of the Moon

		E.S.T.
New	Jan. 1	1:58 p.m.
First Quarter	Jan. 9	9:13 a.m.
Full	Jan. 16	12:53 a.m.
Last Quarter	Jan. 23	3:09 a.m.
New	Jan. 31	8:35 a.m.

Science News Letter, January 1, 1938

GEOLOGY

Expedition To Seek Age Of the Panama Isthmus

SEEKING the birthdate of the Isthmus of Panama, which may have been as much as 20,000,000 years ago, two University of Chicago geologists, Drs. Paul C. Miller and Paul O. McGrew, are enroute to the province of Gracias, Honduras, where they hope to unearth the desired evidence.

Digging in the tertiary strata of the isthmus, these two geologists, who will later be joined by Everett C. Olsen, a student of fossils, hope to determine just when South American animals were able to walk to North America. Once, before the isthmus existed, this was not possible. If the fossil remains of South American animals can be found and dated in Honduras, the birthdate of the isthmus can be determined.

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