

Antares, 140; Betelgeuse, 2,900; Procyon, 5.6; Aldebaran, 100, and Pollux, 29.

Looking ahead on the 1959 celestial program, we find that there is a total eclipse of the sun—the first visible in any part of the United States since 1954—on Oct. 2. Even though the path crosses Massachusetts, it is rather doubtful how well it will be observed; it happens just after the sun has risen. Thus, the sky would have to be clear at sunrise, right down to the eastern horizon. If not, the eclipse will not be seen, from that part of the world at least.

From the New England coast, the track of the moon's shadow, in which the eclipse will be total, crosses the Atlantic Ocean and northern Africa, ending in the Indian Ocean south of Arabia at sunset. The locations in Africa are much more favorable than Massachusetts. Many astronomers will be located in Africa to make the observations that can be made most easily when the sun's bright disc is momentarily hidden by the moon.

### Celestial Time Table for January

Jan.	EST	
1	8:00 p.m.	Sun nearest earth for year, distance 91,344,000 miles.
2	5:50 a.m.	Moon in last quarter.
5	6:24 a.m.	Moon passes Jupiter.
	3:00 p.m.	Moon nearest for month, distance 228,100 miles.
9	12:34 a.m.	New moon.
	4:23 a.m.	Algol (variable star in Perseus) at minimum brightness.
12	1:11 a.m.	Algol at minimum.
14	10:00 p.m.	Algol at minimum.
16	4:26 p.m.	Moon in first quarter.
17	noon	Moon farthest, distance 251,200 miles.
	6:50 p.m.	Algol at minimum.
18	5:38 p.m.	Moon passes Mars.
24	2:32 p.m.	Full moon.
31	1:00 a.m.	Moon nearest, distance 230,100 miles.
	2:06 p.m.	Moon in last quarter.

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

Science News Letter, December 27, 1958

### EDUCATION

## Fall College Enrollment Rises 7th Straight Year

➤ AN ALL-TIME high enrollment of 3,258,556 full and part-time students in U.S. colleges and universities for the fall of 1958 has been reported.

This was the seventh consecutive year that new records were set for fall enrollments.

Enrollment for the fall of 1957 was 3,068,417 students. Thus, the 1958 enrollment exceeded the past year's by 190,139, U.S. Commissioner of Education Lawrence G. Derthick said.

The 1958 enrollees included 2,110,426 men and 1,148,130 women. The survey includes all degree-credit students. These are students whose current program consists principally or wholly of work normally creditable toward at least a bachelor's degree.

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### BIOLOGY

## "Snails" Link With Past

➤ BELIEVED extinct for 300,000,000 years, four little snail-like creatures have been dredged up from the depths of the Pacific Ocean.

One of them is being flown to New York while scientists aboard the Columbia University research vessel "Vema" try to keep three of its fellows alive. Dr. J. Lamar Worzel, chief scientist on the "Vema," is bringing back the specimen together with pictures of the ocean floor where the animals were found.

The tiny *Neopilina* has been hailed as the oldest living representative of the primitive ancestors of a "really successful animal group"—the snails and chitons, and possibly the clams.

Only one other animal link with the prehistoric times can claim such a long past. This is the *Lingula*, a shell-bearing brachiopod living in the shallow waters off Japan.

Dr. John Imbrie, associate professor of geology at Columbia, described the snail-like *Neopilina* as about one and one-half inches long with a conical shell resembling a miniature dunce cap.

"This type of animal happens to be important biologically," Dr. Imbrie said, "because it is representative of a group known as the monoplacophora, called 'monoplacs,' a primitive group of snail-like creatures that began their history 500,000,000 years ago and until recently were thought to have become extinct 300,000,000 years ago.

"In their heyday they lived in shallow water along the shores and they are the ancestors of snails and 'chitons,' coat-of-mail snails that cling to rocks on the sea-

shore and are quite common today . . . It might be said that the 'monoplacs' have been replaced by their more advanced descendants."

In the millions of years since the "monoplacs" were common they apparently retreated from the shores to the ocean floor more than 10,000 feet down.

The specimens found by the Columbia researchers were caught in nets at a depth of more than three miles. They were taken from an ocean trench some 200 miles west of Lima, Peru.

Although the animals experienced a temperature change of about 60 degrees (it is near freezing at the ocean depths), the change from pressure found three miles down to that found at the ocean surface is not expected to affect the specimens. *Neopilina* have no air sacs and so could not "explode" because of pressure changes.

The tiny sea creature has changed little from its ancestors of the Cambrian period.

Before this time animals that lived in the seas had no skeletons and we have no direct knowledge of what they looked like. With the "monoplacs," Dr. Imbrie explained, a few shell fish appeared and "for the first time we had living in the seas animals possessing skeletons which could be preserved."

The research vessel "Vema" left New York on Oct. 15 for a ten-month scientific voyage that is expected to provide a major contribution to the knowledge of biology, geology and oceanography of the South American area and of the South Atlantic Ocean.

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### MEDICINE

## Plan Medical Year

➤ LOST IN the hubbub around his recent return from Moscow was Sen. Hubert Humphrey's agreement with Premier Khrushchev on international medical research cooperation.

The Soviet leader's offer to "help" implement the medical program put forth by the Minnesota Democrat was all but ignored.

Sen. Humphrey reported that during his eight-hour conference at the Kremlin, Mr. Khrushchev said, "I will help," in answer to various proposals and gave his "enthusiastic approval" to the overall program. The program includes:

1. "Full speed ahead" on plans for an International Medical Year on research and public health, possibly to begin in June 1961 and continue for 12 to 18 months.

2. An increase in the flow of medical data between East and West.

3. Greater personal contact between U.S. and Soviet medical scientists through correspondence and visits, and more participation in international meetings and in panels of experts of the World Health Organization.

4. Broadening of the medical provisions of the Lacy-Zarubin Agreement which covers U.S.-Soviet exchanges in the fields of science, technology and education.

5. Collaboration in intensified perinatal research, covering the period from the 20th week of pregnancy to the first month after birth. (This was one of the proposals that elicited Premier Khrushchev's personal response to help.)

Most of Sen. Humphrey's program is included in a bill submitted by Sen. Lister Hill (D., Ala.) near the end of the last Congress. The bill is expected to pass in the next session.

The International Medical Year would differ in character from the now-ending International Geophysical Year in that it would be a kind of "launching platform" for research in the years ahead. It would consist of broadening epidemiological reports throughout the world, a drive for raising national health research budgets, more international meetings, increases in fellowship awards and attempts to single out one or two diseases for eradication.

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