



## FOLLOW THE POINTERS

But this time instead of letting your eye travel to the north star, go the other way to Leo with the sickle and bright Regulus.

able to suppose that a planet would be affected by passing from one into another as it would be to imagine that the passengers on a ship would be influenced at the instant it crosses the equator or some other imaginary line on the surface of the earth. The falsity of astrology has been abundantly proved, and no astronomer gives it the slightest credence. But many false ideas are still current among large numbers of people, and this is one of them.

During the month of June, the moon goes through its phases as indicated by the table below. The first half of the month will be provided with moonlit evenings, for the benefit of excursionists, etc. On June 30, when it is again ap-

pearing as a narrow crescent in the west, the moon passes Venus. They are closest, however, at 8:39 a. m., when both are invisible. But on the evening of the 30th they will still be in the same general part of the sky, the moon above.

## Phases of the Moon

		E. S. T.
First quarter	June 4	11:32 p. m.
Full moon	June 12	6:47 p. m.
Last quarter	June 20	8:52 p. m.
New Moon	June 27	4:10 p. m.
Apogee	June 14	1:00 p. m.
Distance—252,400 miles.		
Perigee	June 27	8:00 p. m.
Distance—222,000 miles		

Science News Letter, May 28, 1938

## MEDICINE

# Common Germs Blamed For Chronic Gall Bladder Disease

## Clearing Up of Infection in Teeth and Throats Is Important Part of Treatment Not Formerly Realized

**G**ERMS of fairly ordinary types are the culprits that cause or at least pave the way for chronic gallbladder disease and they must be taken into account in treating the condition. Research showing this was reported by Drs. Martin E. Rehfuess and Guy Nelson of Philadelphia at the meeting of the American Gastro-Enterological Association.

Chronic gallbladder disease exactly like that which makes life miserable for thousands of men and women today

was produced in rabbits, the Philadelphia doctors reported, by repeated injections of small numbers of germs over a long period of time. The germs were obtained from the nose, throat, teeth and lower part of the digestive tract. They included staphylococci, streptococci and typhoid and colon bacilli. A streptococcus from the human digestive tract produced gallbladder disease in nearly half the animals in one study.

In these animals changes in the gallbladder occurred similar to those found

in human gallbladders removed at operation. In addition, the rabbits showed signs of kidney, heart and joint diseases, conditions which are being noticed more and more in association with gallbladder disease in human patients. In about a third of some 900 gallbladder patients, one of the doctors had noticed involvement of muscles, nerves or joints or impairment of heart and blood vessels.

Repeated attacks on the gallbladder by very small germ armies is enough to cause disease in this organ even if the germs are subsequently vanquished by the body and no trace of them found when the gallbladder is removed at operation. At that, a little less than one out of every two gallbladders removed on the operating table were infected, the doctors found in a survey of over two thousand cases of gallbladder removal.

Cleaning up foci of infections in teeth, throats and elsewhere therefore becomes an important part of treatment for chronic gallbladder disease. Specially made vaccines have been used with unusual success at times, they reported, in controlling these infections and the gallbladder condition. The diet of gallbladder patients must also be watched, it was pointed out, to insure their getting enough vitamins A and D. These vitamins are found in fatty substances which gallbladder patients usually cannot tolerate. Butter is recommended as the safest fat as a source of these vitamins.

## Look Into 700 Stomachs

After actually looking into the stomachs of more than seven hundred patients suffering with "stomach trouble" during the past years, Drs. William A. Swalm and Lester M. Morrison of Philadelphia find that chronic gastritis is a disease that occurs frequently and is now being recognized by the American medical profession.

Evidence is growing which may suggest that gastritis is a possible forerunner, in some cases, of ulcer and cancer of the stomach, they also pointed out in their report. The research reported was done at the Medical School and Hospital of Temple University in conjunction with Dr. Chevalier Jackson.

To look into the stomach they used an instrument called a gastroscope which is a thin tube with a flexible lower section and an ingenious system of lenses. The gastroscope is passed down the patient's throat into his stomach. Its flexibility and the lenses make it possible for the doctor to move it about and see through the curved lower part of the instrument. Thus it is possible for the

operator to observe the effects of treatment in the stomach, especially in cases of gastritis.

Drs. Swalm and Morrison pointed out the importance of the extensive observation of the treatment of gastritis under direct control of gastroscopic visualization of the stomach and its response to therapy. Experience has shown, furthermore, they pointed out, that X-ray diagnosis of gastritis is unreliable since it is not corroborated by direct visualization. They further pointed out, however, that it cannot be gainsaid that the hypertrophic variety of gastritis can often be detected roentgenologically by the mucosal pattern, particularly in experienced hands.

Drs. Swalm and Morrison further pointed out that certain forms of chronic gastritis can respond satisfactorily to treatment, but that there are two forms which are unresponsive to present methods of treatment. These are the two forms which are particularly suspected to be possible forerunners of cancer and ulcer of the stomach.

In conclusion Drs. Swalm and Morrison made a strong plea for special investigation into new methods of treatment for these two conditions of the stomach. They may be proved later to be of particular importance in cancer prevention.

*Science News Letter, May 14, 1938*

#### OCEANOGRAPHY—PHYSICS

## Guide Earthquake-Producing Apparatus to Sea Bottom

### Kites and Balloons Leave the Sky for the Sea Depths In New Service for Science; Lava Rivers Do Not Run

**A** NEW way of mapping the bottom of the ocean has been devised by science. Novel apparatus will create artificial earthquakes on the ocean floor and record the vibrations of the underlying strata as a clue to their make-up.

Kites and balloons, normally inhabitants of the ether up above, will be sent below the surface of the sea to guide mile-long equipment to the bottom and to return it automatically for scientists to inspect when its recording task is done.

A mile-long cable, to which are attached dynamite charges, microphones, recording equipment and clockwork control mechanism, will be strung out along the bottom of the sea, guided only by the kite. The cable serves as the kite's tail. An oil-filled balloon will float the apparatus, freed automatically of ballast, to the surface at the conclusion of the experiments.

Dr. Maurice Ewing and Allyn Vine of Lehigh University, who have already conducted experiments with earthquake-producing equipment moored to a surface craft by means of a long cable, described their new plans before the American Geophysical Union meeting.

Credit for the idea of using the oil-filled balloon as the means of returning the valuable apparatus and the records is given by the two scientists to Auguste Piccard, celebrated stratosphere flyer now preparing for bathysphere exploration.

The kite-and-balloon scheme has been tested in the swimming pool at Lehigh University by means of scale models and is expected to be applicable to any depth required for the ocean-floor studies, they declared. A balloon six feet in diameter and displacing about 100 cubic feet of water will be used with the full-size equipment.

Not only does this ingenious means of placing the earthquake-producing charges and recording apparatus on the bottom save the cost of the extremely long cable ordinarily required, but since the apparatus rests on the bottom free of any connection with a surface ship, the test equipment is free of vibration from surface waves, Mr. Vine pointed out.

The earthquake-producing equipment, which they used off Woods Hole, Mass.,

last summer, consists of three charges of dynamite, microphones to pick up the vibrations of the ocean floor when the dynamite is fired, batteries and clockwork controls. The dynamite fire is controlled by clockwork, as is a release device which drops the ballast required to drag the equipment to the bottom when the charges have been fired.

#### Lava Rivers Flow Very Slowly

Volcanoes do not pour their rivers of lava down the luckless countryside in a clear hell-broth that runs like water over Niagara to waste forests and plantations with flame. "No thin broth, but a very thick porridge," was the simile used by Dr. T. A. Jaggar, noted volcanologist who lives in a house on the edge of Kilauea's crater.

Rivers of lava do not run; they creep. A mile a day was the speed of the lava flow that threatened the town of Hilo some time ago and had to be stopped by airplane bombs, Dr. Jaggar stated.

The forward creep of one of these streams of thick lava is an impressive and very strange thing to watch, the speaker continued. As it is extruded from the volcano—usually from a crack on its side rather than from the crater—it oozes forth in one big stream. This break up into a large number of smaller streams that flow in close ranks side by side, like a hank of rope. This ropy type of lava is called by a name originated in Hawaii, pahoehoe—pronounced pah-hoe-y-hoe-y.

As each streamlet of the pahoehoe pushes itself forward, it roofs itself over with a thick, solid crust, so that the entire stream comes to flow in a tunnel of its own making. Even the forward end of the lava is covered with a thin crust or membrane, which it constantly breaks through and as constantly reforms. The moving tip of a pahoehoe streamlet Dr. Jaggar likened to an elephant's toe.

Stopping the recent flow that menaced Hilo was not a military man's idea,

## ● Earth Trembles

Information collected by Science Service from seismological observatories and relayed to the U. S. Coast and Geodetic Survey resulted in the location of the following epicenter:

Thursday, May 17, 12:08.7 p. m., E.S.T.

In Makassar Strait, between Islands of Borneo and Celebes. Latitude 1 degree north, longitude, 119 degrees east.

For stations cooperating with Science Service in reporting earthquakes recorded on their seismographs see SNL May 21.

## Books

SCIENCE NEWS LETTER will obtain for you any American book or magazine in print. Send check or money order to cover regular retail price (\$5 if price is unknown, change to be remitted) and we will pay postage in the United States. When publications are free, send 10c for handling.

Address Book Department

SCIENCE NEWS LETTER  
2101 Constitution Ave. Washington, D. C.