

## ASTRONOMY

# Comet Is on Schedule

Famous Pons-Winnecke comet, known for more than a century and last observed in 1939, is making its return this year as expected.

► FAMOUS Pons-Winnecke comet, known for more than a century and last observed in 1939, is making its return this year right on schedule. The Harvard astronomical clearing house has received a telegram from Dr. V. M. Slipher of the Lowell Observatory, Flagstaff, Ariz., stating that Henry L. Giclas, Lowell astronomer, had observed Pons-Winnecke.

Its position and motion agree well with positions predicted on the basis of the path followed by the comet in 1939. It is not exactly the same, however, for the comet has a period of revolution around the sun about one-half that of Jupiter. The big planet takes 12 years and the comet slightly more than six, so on alternate revolutions the comet passes near the planet. Jupiter's gravitational pull is so great it has been constantly enlarging the orbit of Pons-Winnecke.

In 1819, the year Pons at Marseille discovered it, the comet's nearest approach to the sun was about 72 million miles; in 1909 it passed within only 90 million miles, and in 1939 it was 102 million miles from the sun at nearest approach. This year about July 8 it is expected to approach within 108 million miles of the sun, which is 15 million miles farther out than the average earth-sun distance.

Mr. Giclas found the comet on May 3 to be of the 14th magnitude, making it invisible except in large telescopes or on long-exposure photographs. The comet will probably get brighter, but in 1939 it reached only the ninth magnitude, and this year it has not approached the earth as closely as in 1939 so tenth or eleventh magnitude is probably the brightest we can expect it to become. It will probably remain of observing interest only to professional astronomers and to amateurs with large telescopes.

Comet Pons-Winnecke is associated with a meteor shower last seen in 1916. We may see the shower again in 1946.

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## Rediscovered Comet Kopff

► ONLY a few days after he had rediscovered one periodic comet which was

returning to the sun right on schedule Henry L. Giclas, astronomer at Lowell Observatory, Flagstaff, Ariz., duplicated his discovery for comet Kopff, which is also running close to schedule.

Dr. V. M. Slipher, director of Lowell Observatory, telegraphed the Harvard Observatory clearing house reporting Mr. Giclas' second discovery and giving the position for comet Kopff on May 7 in the zodiacal constellation of Libra the Scales.

The motion of the comet will bring it into continually favorable observation for northern hemisphere observers. However, it is of the 13th magnitude, nearly as faint as comet Pons-Winnecke, located by Mr. Giclas earlier at the 14th magnitude.

Coincidence abounds in this re-discovery of these two periodic comets. They both take slightly more than six years to go around the sun and were last seen in 1939. They both are so faint as to be visible only in large telescopes, and neither is expected to be of anything like naked-eye visibility on this return. Pons-Winnecke passes the point in its orbit nearest the sun in July, and comet Kopff passes that position in its own orbit about a month later. Neither comet is following exactly the path computed for it because on its latest circuit of its orbit it passed very close to Jupiter, and was considerably perturbed by the gravitational action of that massive planet.

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## MEDICINE

## Streptomycin May Be Remedy for Typhoid

► STREPTOMYCIN, one of the newest of the penicillin class of anti-germ chemicals, may turn out to be a remedy for typhoid fever that will both get the patient well quickly and keep him from becoming a typhoid carrier.

Its use in five cases has been reported by Dr. Hobart A. Reimann, Dr. William F. Elias and Dr. Alison H. Price of Philadelphia. (*Journal, American Medical Association, May 19*)

Three of the five patients recovered

during the streptomycin treatment, apparently as the result of it. In two cases there was an abrupt end of the fever and recovery quite unlike the usual course of events in typhoid.

The value of the drug cannot safely be judged on the basis of results in five cases, the doctors point out, particularly in typhoid fever, which is a disease of unpredictable severity and duration.

The drug was not available in time to give it early in the disease. The size of the doses and the way to give it, whether by mouth or by hypodermic injection, had to be worked out as the patients were being treated. These matters may have affected the results.

The evidence from the five cases shows, the doctors state, that streptomycin "offers much promise" as a substance capable of routing the typhoid germs from the blood and urinary tract when injected hypodermically in big enough doses and of eliminating typhoid bacilli from the intestinal discharges when given by mouth. This last suggests that the drug may keep typhoid patients from being carriers when they recover.

*Science News Letter, May 26, 1945*

## MEDICINE-NUTRITION

## Diet May Influence Resistance to Viruses

► RESISTANCE to virus diseases such as infantile paralysis can be influenced through diet but the exact method of doing it has not yet been worked out, Dr. C. A. Elvehjem of the University of Wisconsin told members of the American Chemical Society at a meeting in Milwaukee.

Mice starved of vitamin B<sub>1</sub> are definitely more resistant to infantile paralysis virus than mice getting optimum or excessive amounts of the vitamin.

However, he pointed out, we cannot try to prevent infantile paralysis by producing universal beriberi, the disease which results from lack of vitamin B<sub>1</sub>.

When all the facts are known, Dr. Elvehjem said, the effect of diet on disease resistance will undoubtedly not be related to the amount of a single vitamin or nutrition factor but more likely to the ratio of several different ones.

He warned against drastic changes in the diet until the effects on the total nutrition are known. Nutrition programs that are harmful instead of beneficial may result, he said, if "we use too extensively the fragmentary knowledge which is now available."

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