

## ASTRONOMY

# Bright New Comet

The comet which was spotted in the northeast sky by a Washington, D. C., business man has been named Pajdusakova-Rotbart.

➤ A BRIGHT new comet was discovered in Washington, D. C., early Thursday morning, May 30, by an amateur astronomer, David Rotbart, a Washington business man. Looking through binoculars at 2 a.m., EST, Mr. Rotbart spotted the sixth magnitude comet in the constellation of Cygnus, the swan. Just bright enough to be seen with the naked eye, the tail was less than one degree and the comet had a nucleus.

Discovery of the comet was confirmed at the U. S. Naval Observatory early Friday morning, May 31. The comet was found to be moving quite rapidly toward the northwest.

Word of discovery of this comet by an observer in Europe had just been received at Harvard College Observatory, clearing house for astronomical information in America. A cablegram from Dr. Elis Stromberg at Copenhagen reported that

it was located at 7:30 p.m., EST, Wednesday, May 29, by a European astronomer named Pajdusakova. The comet at that time was estimated to be about the eighth magnitude, too faint to be seen with the naked eye.

This new heavenly object will be called the Pajdusakova-Rotbart comet, the two men having discovered it independently. This is the first comet that Mr. Rotbart has reported. He has a wide-angle telescope and three pairs of binoculars he uses in his observations.

When found, the comet had a right ascension of 20 hours, 36.8 minutes, and a declination of 30 degrees, 4 minutes. Rough observations made twenty minutes apart at the Naval Observatory by Alfred Mikesell showed the comet moving westward about one hour per day and northward eight degrees daily.

Located in the constellation of Cygnus, the swan, the comet sped across the constellations of Lyra, Hercules and Bootes, the herdsman, toward the constellation of Coma Berenices, Berenice's hair. The rapid motion of the comet through the heavens may be accounted for by the fact that it is moving around the sun in the opposite direction from the earth, states Leland E. Cunningham of the University of California, who computed its orbit.

It was closest to the sun on May 11, when it made what astronomers call its perihelion passage. It was then about 95 trillion miles from the sun, just a little more than the average distance of the earth from the sun.

Bright enough to be picked up with binoculars when first spotted, the comet faded rapidly. The moon interfered with the comet during the week-end of June 9, and it will probably be too faint to be seen with small telescopes after full moon, June 14.

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Wood on land is attacked by decay-producing fungi and such insects as termites, and wood under water by the marine wood-boring teredo and other forms of life that seek shelter or food.

## ORNITHOLOGY

## Sparrows and Starlings Build Duplex Nest

➤ HERE'S A story of housing shortage in the bird world. Birds do share duplex apartments. A pair of English sparrows and a pair of starlings built their nests together like a double house, each having its own side, Lewis E. Potts reports to the American Museum of Natural History.

The birds fought continuously while building their nests. After a month of squabbles, peaceful neighborliness reigned.

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**NEWEST COMET**—Comet Pajdusakova-Rotbart as it appeared in the northeastern sky on June 4, photographed at the U. S. Naval Observatory, Washington, D. C., with their 10-inch photographic equatorial telescope. The star trails are "wiggly" because of guiding done on the comet during exposure.



**COMET-DISCOVERER** — *David Rotbart is shown in his home observatory. The binoculars he is holding are the ones with which he spotted the new comet, which will bear his name along with that of its co-discoverer, Pajdusakova, a European astronomer, who cited it on May 29.*

## GENERAL SCIENCE

## Seven Blind Spots Still Unsolved by Scientists

➤ SEVEN SECRETS or mysteries, major unknowns that need scientific attention and exploration to conquer, were pointed out at the Southwest Chemurgic Conference by Watson Davis, director of Science Service, Washington, D. C.

The conquest of some of these blind spots may not come for years or decades, he said. The acceleration of science's achievements may bring some in a relatively short time.

First is the secret of photosynthesis. This is the greatest unknown. It is what the green leaves do when they capture the energy of the sun and store it in the form of food.

Second is the secret of life, and third, the secret of the universe, and then the secret of the chemical elements. The other three Mr. Davis called mysteries. They are the mystery of disease, the mystery of mind and emotions, and the mystery of war. "War is a major problem worthy immediately of our best research," he added.

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these units, the high fuel cost per landing, is being overcome by a new thermal installation nearing the test stage at Arcata, but the Navy is looking to the possibility of sound replacing heat in the fight against fog.

Even if the sonic system does not prove practical for airports, officials of the Office of Research and Invention declare that new and important information about sounds and their uses will be gained from the rainmaker.

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## SURGERY

## Removing Brain Tumor Restores Sight

➤ AN UNUSUAL case of recovery from blindness that had lasted six months is reported by Dr. J. Grafton Love and Dr. C. Wilbur Rucker of the Mayo Clinic. The recovery was due to removal of a brain tumor that "interrupted" the left nerve of sight and practically all the nasal fibers of the right one.

On the morning of the operation the patient was totally blind in the left eye and could not see enough with his right eye to count fingers held 12 inches from his eye. Two weeks later examination showed "excellent improvement and return of vision in the nasal portion of the field of the left eye." Improvement of eyesight also occurred in the less seriously affected right eye.

Within three months after the operation the patient was back at his work as repair foreman in a railway yard, a job he had had to quit six months before the operation because of the blindness, which had been coming on for a year.

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## AERONAUTICS

# Rainmaker Aids Landings

➤ A RAIN-MAKING machine now under construction may solve the problem of clearing fog-bound landing fields and prevent many of the fatal air crashes now caused by "ceiling zero" visibility at airports.

The rainmaker sends out sound waves that drive the fog particles together, forming rain drops. The rain falls, clearing the air field. This attack on the fog problem proved effective in tests during the war at the Navy's Landing Aids Experiment Station at Arcata, Calif., where sirens were used to blast the fog, but the new machine may do a more subtle job.

Sirens not only turned the fog to rain but also made personnel on the field sick and knocked birds out of the sky, so the new machine will be able to generate sounds of such high frequency that they cannot be heard by human or animal ears.

The rainmaker, being built by Ultrasonic Corporation, is a high-powered sound generator equipped with a wide frequency range for experiments to determine how much sound of what fre-

quency will do the best job clearing different types of fog.

The Navy's Office of Research and Invention expects to spend \$100,000 for the construction and experiments with the rain machine that is scheduled to be tested at Arcata, where the Army, Navy and civilian air groups now test all-weather landing aids. The Navy hopes to try out the instrument in September at Arcata before the fog season there ends.

An air jet-type, acoustic generator, the rainmaker will be about eight feet in diameter with a parabolic reflector. An earlier model gave good results in the laboratory, but lacked the controlled frequency range of the new machine.

Tests to be made at Arcata with the acoustic generator include experiments with the effects of sound waves on the structure of airplanes and on personnel in planes.

Most successful wartime fog dispersal systems, the famous FIDO (fog, intensive dispersal of), used controlled fires along the runways to clear the fog over landing strips. The greatest disadvantage of

## NUTRITION

## Baby Food to Be Kept In Freezer, Not a Can

➤ BABIES WILL eat frozen foods in the near future. Dr. Leonora Hohl, food technologist on the Berkeley campus of the University of California, says that frozen foods are better for babies than some types of canned foods.

The frozen foods retain a large percentage of the vitamins over long periods. They have more eye-appeal and are more palatable in many cases. Only what is wanted for a serving need be thawed at one time.

Hospitals and other large institutions will be the first large users of frozen baby foods, Dr. Hohl predicts.

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