

ASTRONOMY

Smallest Closest Object Discovered in Heavens

A GREAT rock hurtling through space had its photograph taken by astronomers eager to chart its heavenly path before it disappeared from view.

This new minor planet is the smallest object in astronomy's annals except the meteorites which smash into the earth. It came closer to the earth than any other thing in the heavens, except possibly one or two comets.

It is known as the Delporte object, after the Belgian astronomer Prof. E. Delporte who discovered it on February 12.

Here are the Harvard Observatory figures showing the new asteroid's claims to fame: Size—One-third mile or only one twenty-five-thousandth of the earth's size. Weight—Five hundred million tons, about the same as a small mountain. Distance away—When first observed was within two or three million miles of earth.

The "object" might also be considered a comet in the opinion of some astronomers, but it will probably be given planetoid status and a name.

Science News Letter, February 29, 1936

MEDICINE

Case of "Rabbit Fever" Acquired From Pheasants

PHEASANTS can apparently transmit to man the disease known as tularemia or rabbit fever, Drs. R. U. Leser and D. L. Wilbur reported at a recent staff meeting of the Mayo Clinic. At least, the physicians have no other evidence of how their patient acquired the disease.

Tularemia is caused by a "germ" and is widespread among rabbits, squirrels, rats and mice. Man gets the disease chiefly by the blood of infected rabbits running into cuts on the hands or by bites of wood ticks that have fed on infected animals. Pheasants are supposed to be very resistant to the disease and therefore rarely responsible for spreading it.

The disease is nothing to trifle with but usually disappears under treatment. Until more is known of whether pheasants can have the disease themselves or whether they carry infected ticks on their bodies, the physicians advise early treatment for pheasant hunters who de-

velop soreness of finger or arm and a fever.

The patient in this case, a farmer's wife, had developed a small sore at the base of the nail on the right little finger after she had dressed many pheasants. Little attention was paid to it, however, even after she had come to the hospital, as she complained of a cough, fever, chills, nausea, and pains in the chest and knees which were at first considered symptoms of influenza. When her condition did not improve, blood tests were made and showed the presence of the tularemia "germ." Treatment with antitularemic goat serum, prepared according to the directions of Dr. Lee Foshay of the University of Cincinnati College of Medicine, resulted in her recovery.

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ASTRONOMY

Model of Great Telescope To Guide Its Construction

A SMALL telescope, just a tenth the size of the great 200-inch telescope now building for Mt. Palomar, Calif., is being constructed as a miniature "first edition" of the giant instrument with which astronomers a few years hence will extend the limits of the known universe.

This became known here when the Observatory Council of California Institute of Technology announced that the giant mounting that will hold and direct at the sky the world's record 200-inch sky mirror will be built in Philadelphia by the Westinghouse Electric and Manufacturing Company. The tenth scale working model will permit rigorous tests to be made in advance of actual construction.

The designs of the mounting are being made by the California Institute, which is also building the working model. The model tests will insure the necessary extreme rigidity of the large instrument, the best type of bearings, guarantee ease and steadiness of rotation of the polar axis, and the perfection of all parts.

After these tests have been made, the engineers of the Westinghouse company will assist the engineers and draftsmen of the Institute of Technology in the completion of working drawings, for use in their shop.

The scale of the telescope is shown by the fact that the tube, carrying the 200-inch mirror at its lower end, will be about 20 feet in diameter and 55 feet long.

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IN SCIENCE

GENERAL SCIENCE

Conquests of Science Needed in Four Fields

FOUR great fields of conquest for science of the future were outlined by Watson Davis, director of Science Service, in making the opening evening address of the Georgia Press Institute at the University of Georgia. They are:

1. The conquest of two great killers, cancer and organic heart disease, and that troublesome endemic, the common cold.

2. Development of energy resources that will free us from our dependence upon fossil fuel of the past, such as oil and coal. This probably means the harnessing of solar energy to do practical work, or the release of sub-atomic energy.

3. Understanding of mental disease and the make-up of human personality to the extent that peace and fair dealing may dominate the conduct of individuals, communities and nations.

4. Discovery of the secret of life, that is, the difference between inanimate and living matter, and the creation of artificial life.

"We may never see these conquests," Mr. Davis warned, "and it may well take years of research before a glimmer of effective results is obtained."

In the last 15 years science has made notable advances, Mr. Davis told the Georgia editors. One of the most encouraging developments, in Mr. Davis' opinion, is the serious attention that newspapers now give to the reporting of science news.

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PSYCHIATRY

Prizes Offered For Study Of Mental Diseases

PRIZES of \$50 and of \$25 are offered by the New England Society of Psychiatry for the best researches in mental disease conducted by younger workers. Physicians, psychologists, social workers, or others are eligible. Dr. Harlan L. Paine is secretary.

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E FIELDS

MEDICINE

"Trial" Licenses Urged to Weed Out Misfit Doctors

ONE WAY to get better medical care for the public would be to put young doctors on a sort of probation period before they are given permanent licenses to practice medicine.

Such a scheme of "trial" licenses for young doctors, to be made permanent when the young medicos have proved themselves, was suggested by Dr. Irvin D. Metzger of Pittsburgh, president of the Federation of State Medical Boards of the United States.

"Exploiters could be eliminated before they became socially grounded," Dr. Metzger pointed out in explanation of the plan. "Quasi-ethical nuisances could be curbed before they brought reproach on the entire profession. Amateur specialists could be halted before they demoralized the faith of the community in the integrity of the profession. Bunglers in practice, because of irresponsibility or lack of adaptability, would be offered an opportunity to seek a more suitable vocation. All would be urged by this subsequent check-up, to do their best in improving their ability to serve their community and their state."

One of the reasons social workers and politicians call for medical regulation by the state, Dr. Metzger asserted, is that too many recent physicians have too much of the business-like attitude.

A means of discovering the deeper factors of personality desirable in a physician will have to be found before long by administrators of medical laws, he said. One step in this direction would be the "trial" license granted for about five years, after which a renewal for permanency would be required.

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ZOOLOGY

Giant "Raccoon-Bears," Displayed At Museum

See Front Cover

PANDAS, among the rarest and most puzzling of large fur-bearing animals, will be represented at the Ameri-

can Museum of Natural History by a pair of handsome specimens which have been placed on display.

A photograph of the pair appears on the cover of this week's SCIENCE NEWS LETTER.

Pandas live in the higher plateaus of interior Asia. They are about the size of black bears, which they resemble in many respects, but they are apparently more nearly related to the raccoons. Their fur is strikingly divided into golden-yellow and dark-brown areas, and they have curious spectacle-like rings around their eyes. Their fur is much valued by Chinese natives, but owing to the rarity of the animals it does not enter Western commerce.

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CHEMICAL ENGINEERING

Use Smelly Gas in Mains To Prevent Disasters

A CHEMICAL cousin of the fluids which give the skunk its powerful odor is being used to tell the presence of leaks in gas mains. Such leaks recently caused two deaths and 41 illnesses at Belleville, Ill.

Dr. A. C. Fieldner, chief chemist of the U. S. Bureau of Mines here, declared that calodorant, which is now being used in Belleville to prevent recurrence of the disaster, is an evil smelling product obtained in the manufacture of petroleum products.

One of its pungent constituents is the chemical known as ethyl mercaptan, a sulfur compound, whose odor is best described as a mixture of garlic, onions, decayed cabbage, sewer gas and ancient eggs. Ethyl mercaptan is chemically related to the odor-producing fluid of the skunk, except that the latter is higher-powered.

Ethyl mercaptan, purer but more costly than calodorant, has such a powerful odor that only eight pounds of it in a million cubic feet of gas will show up any slow leaks in gas joints or fixtures in the home.

If forty pounds per million cubic feet of gas is used, engineers can detect leaks in the mains far underground. The chemical, in fact, was used for this very purpose after the serious Los Angeles earthquake of three years ago.

Odorizing gases, recommends the U. S. Bureau of Mines, should be used in all gas lines which carry carbon monoxide as a constituent of their gas.

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METEOROLOGY

Pessimistic Thermometers Needed by Weather Bureau

NEW and more pessimistic thermometers for winter use loom as a likely necessity for U. S. Weather Bureau purchase, if we are to have any more winters like the present one. The cheerful souls in the Bureau's instrument department have hitherto graded their standard winter-time thermometers only to 60 degrees below zero, and these have already been taxed nearly to capacity; several stations in the blizzard-swept Northwest have turned in reports in the lower minus-fifties.

For temperatures as low as this, mercury thermometers are of no use. Mercury freezes—turns into a solid metal like lead or silver—at around 40 degrees below zero Fahrenheit. Mercury thermometers are contemptuously referred to as "summer thermometers" in parts of the country where winters are something to brag about.

In such places alcohol thermometers are the only kind that can be used. Alcohol is a difficult stuff to freeze, as everyone knows who has poured it into his automobile radiator. The freezing point of pure ethyl alcohol is 117.3 degrees below zero Centigrade, which is approximately 211 degrees below on the commonly used Fahrenheit scale. If a night got that cold, most of us wouldn't be bothering much about it.

Thermometers do not have so much difficulty with the upper end of the ordinary weather range, except when their tubes are made too short and they burst. Weather Bureau thermometers used in such dependably hot places as Death Valley and some parts of Nevada are graded as high as 140 degrees above zero Fahrenheit. Summer temperatures have climbed into the hundred-thirties in these back porches of Purgatory, but so far none of these 140-degree instruments has been burst by an over-ambitious mercury column.

To get back to the present: the Weather Bureau stated that they have had some special low-temperature alcohol thermometers, used by Antarctic expeditions, that read as low as 90 degrees below zero. They did not state whether they intended having a batch of these made up to send out over the country generally.

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