MEDICINE

New Vitamin Discovered

Experiments with mice indicate that it increases the body's resistance to infection. This protective quality is believed to apply to man also.

➤ DISCOVERY of a new vitamin in wheat which increases natural resistance to infection, or germ-caused disease, was announced by Dr. Howard A. Schneider of the Rockefeller Institute for Medical Research, New York, at the meeting of the American Public Health Association in Boston.

Existence of this vitamin and its proved relation to disease resistance in mice goes far toward establishing the idea that being well nourished is a protection against germ-caused diseases. Well nourished takes on a special meaning in this connection, that of eating regularly a diet including the new vitamin.

The evidence so far is only for mice and their resistance to a naturally occurring disease of these animals, mouse typhoid, or Salmonellosis as scientists term it. But Dr. Schneider thinks it likely that what is true for mice will also in this case prove true for man.

The vitamin is believed to be a new one since tests showed none of the other known vitamins or other nutrients can replace it in the mouse diet with the same effect on disease resistance.

It occurs generally throughout the cereals and grasses as well as in wheat germ. Alfalfa contains it. Rockefeller scientists are now trying to isolate and identify it chemically.

The vitamin was discovered in an eight-year study of factors influencing the spread of infection among herds of mice. All kinds of diets of natural and synthetic foodstuffs were used, as well as virulent and non-virulent strains of the disease germs and mice of various hereditary strains.

Among mouse populations of mixed heredity, such as human populations have, the new vitamin increased resistance to mouse typhoid. But among inbred mouse populations with unmixed heredity, it did not matter what diet the mice ate. Their resistance to disease and the issue of their living or dying was found to be solely a matter of heredity.

Science News Letter, November 20, 1948

ASTRONOMY

Spot Bright New Comet

See Front Cover

➤ A BRIGHT new comet with enormous trailing tail was spotted Nov. 6 in the early morning sky. One of the brightest comets of our generation, it could be seen with the unaided eye an hour or so before sunrise low in the southeast.

Picked up in the constellation of Virgo, the virgin, the comet was far enough north to be seen, at least faintly, by most people in the United States. It was photographed with the 18-inch Schmidt camera at Palomar Observatory, Calif., and is shown on the cover of this week's SCIENCE NEWS LETTER. Henry L. Giclas of Lowell Observatory, Flagstaff, Ariz., and Dr. Dinsmore Alter, director of Griffith Observatory in Los Angeles, were among the first (Nov. 9) in this country to see the comet.

With a second magnitude nucleus, the comet was as bright as the stars forming the Big Dipper. It was thus brighter than Halley's comet in 1910, its most recent visit to the vicinity of the earth. Its tail was reported by some to extend 15 degrees across the sky, by others to cover 20 degrees. This means it was 30 to 40 times the diameter of the full moon.

The comet will undoubtedly go down in history as comet 1948 l, because not one man, but a large number of people discovered it independently. Its closeness to the sun prevented an earlier discovery of this brilliant object. The letter "l" denotes it is the 12th comet spotted this year.

First report of the comet to reach the United States was from Dr. J. S. Paraskevopoulos, superintendent of Harvard's South African station at Bloemfontein. He said the comet was spotted Nov. 7 ten degrees south of the bright star Spica.

A subsequent report from Australia showed the comet was discovered there on Nov. 6.

The comet was also found independently by Luis Rivera and Lauro Herrera, according to a later telegram from Director Luis Enrique Erro of the National Astrophysical Observatory, Tonanzintla, Mexico. It was also spotted by the Second Officer of the steamer Mendoza in the North Atlantic ocean.

Most enthusiastic reports from astronomers and amateurs in the United States reaching Harvard College Observatory, astronomical clearing house for the Western Hemisphere, were from those in the southern part of the country. There the comet could be picked up earlier in the morning than in the far north and thus seen with greater brilliance.

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SMOKE DETECTOR—Highly sensitive to smoke, one puff from the cigarette sets into operation the electronically-controlled smoke exhaust system.

ENGINEERING

Smoke Control System Cuts Panic Danger During Fire

➤ A COMBINATION electric-eye smoke detector and automatic exhaust system is designed to lessen danger from panics, or from toxic gases, in public buildings. This installation is in a department store.

The technique employed uses a Walter Kidde and Company smoke detector and a Westinghouse exhaust apparatus. The system for combatting smoke was installed in the Sage-Allen store, Hartford, Conn., to supplement the store's existing sprinkler equipment. Smoke spreads faster than fire and therefore is a bigger threat to a completely sprinklered building. Superheated, air and toxic gases from a fire passing to floors above may cause loss of life, and smoke may cause a panic.

Each floor of the building has an independent detection unit. Through six tiny inlets on each floor, continuous samples of air are drawn by a small fan in the basement. The electric eye, a photoelectric cell, in each unit will note even a slight amount of smoke present. It automatically activates the exhaust system, starting the exhaust fan, opens the collection duct damper on the floor where smoke is detected, closes all other floor dampers, and opens the fresh air intake.

To provide a controlled path for smoke removal, the system utilizes collection ducts surrounding the stair wells on the various floors. These ducts lead to an exhaust fan on the roof which can suck out 32,000 cubic feet of air a minute.

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