

MEDICINE

New Rabies Vaccine Is Safer Means of Protection

A NEW and safer weapon against rabies has been developed by Drs. Leslie T. Webster and Anna D. Clow of the Rockefeller Institute for Medical Research, it appears from their report to the journal, *Science* (Nov. 27).

The new weapon is a rabies vaccine made from rabies virus cultivated in the laboratory. It protects mice against rabies "street" virus and promises to give the same protection to dogs from the rabies virus which they may pick up from other rabies-infected animals on the streets or elsewhere.

Rabies vaccines now in use are composed largely of animal brain or spinal cord tissue containing virus in either virulent or inactive form. The presence of nervous tissue in the vaccine, the Rockefeller scientists point out in their report, is not only unnecessary but potentially dangerous. It may produce paralysis or other unfortunate results following vaccination. The new virus does not contain nervous tissue.

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PSYCHOLOGY

Newspaper Readers Want To Read General News

MOST people read the newspapers for news, not for the serial stories, a scientific survey shows.

General news is the most interesting feature in a newspaper to both men and women adult readers. The average university student ranks sports just a bit higher in reader appeal. Journalism students, however, who take their profession seriously, give first place to general news. Neither journalism nor other university students find either editorials or the financial pages as interesting as the adult does. Art, music and the woman's page fail to appeal much to any of the three groups.

These are some of the findings reported by J. R. Gerberich, U. S. Office of Education, and Prof. J. A. Thalheme, University of Kansas (*Journal of Applied Psychology*, August). They secured preferences for different types of newspaper content from 515 individuals of whom 225 were university students, 165 were adult citizens and 125 were student journalists.

Travel and human interest are the two highest ranking types of stories in general news. In descending order come

self-improvement, sports, politics, photographs, war and education. Items most avoided were architecture, engineering, finance, art, animals, law and medicine. Biography, which is heavily represented on book publishers' lists, ranks very low in interest to newspaper readers. Serial stories rank lowest of all.

Sex differences are evident in interest expressed in articles on styles, society and children, and are in general stronger in newspaper than in book-reading interests. Much closer relationship exists between groups differing only in economic or occupational status.

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ASTRONOMY

Cyclones Flaming on Sun Photographed at Harvard

TWO tremendous groups of sunspots, each a flaming cyclone in the solar atmosphere, were photographed recently by Dr. Loring B. Andrews of the Harvard Astronomical Laboratory.

These whirlwinds constitute the greatest activity on the sun for some time, although the present outburst is merely the forerunner of increased activity in the immediate future, building up to the periodic maximum three years hence.

The larger of these solar storms stretches along the surface of the sun for approximately 125,000 miles, while the other is about 70,000 miles in length. Several smaller groups have also been detected. Sunspots vary in number from year to year with the maximum activity coming at eleven-year intervals. The last high point of activity was in 1928 and thus the next one is expected in 1939. Each sunspot, assumedly the result of the whirling of electrically charged particles within it, is a huge magnet.

"Given this manifestation of solar activity," Dr. Andrews explained, "our interest lies in the determination of any possible terrestrial influence. The presence of huge magnetic fields in the sunspots results in their acting as howitzers, pouring forth charged particles of matter into the interplanetary realm. If the earth is in the range of the howitzer, its atmosphere is the recipient of these particles."

The effects of these rays is shown by such terrestrial phenomena as auroral displays, magnetic storms and improved or hampered long distance radio reception, all of which are dependent on the electrical condition of the atmosphere.

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IN SCIENCE

ARCHAEOLOGY

Dog Got Special Place in "Heaven" of Pharaoh

A DOG so highly honored by an Egyptian Pharaoh over 4,500 years ago that the king personally arranged for the dog's place in "heaven," has been discovered by American Egyptologists.

The new hero of dog history is revealed by the Harvard University-Boston Museum of Fine Arts expedition exploring a cemetery near the Pyramid of Cheops, at Giza.

In the cemetery the expedition found an inscription telling of the dog's burial, in its own tomb, with its own coffin given by the king, and all the trappings of a human being's fine funeral in the style of Egypt's sixth dynasty. The dog's name was Abuwtiyuw.

The dog's tomb and the mummy itself have not yet come to light, Prof. George A. Reisner, director of the expedition, reports.

No meat bones, such as dogs delight in, were mentioned in the king's orders for the burial. But the dog that had guarded a king was given fine linen in great quantity, and incense, and perfumed ointment.

By having the animal buried like a human being, Prof. Reisner explains, the Pharaoh made it possible, according to Egyptian belief, for the dog to enter the after-life as an honored spirit before the great god, Anubis, and to continue in attendance on his Majesty.

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CHEMISTRY

Bleachable Ink Used To Permit Re-Use of Paper

FOR YEARS German chemists have sought a bleach which would remove the usual lampblack type ink from newsprint and permit a second use. Since this proved impracticable, a new bleachable ink has been developed whose pigment is made from crude manganese dioxide, according to reports at the American Consulate in Frankfort-on-Main.

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E FIELDS

PALEONTOLOGY

Ancient Cup Animals Linked Sponges With the Corals

FORMING an evolutionary link between sponges and corals, cup-shaped animals inhabited a sea that covered the present site of the Appalachian Mountains 500 million years ago. A great mass of their fossil remains has just been found near Austinville, Va., by Dr. Charles E. Resser of the Smithsonian Institution.

These animals secreted limestone, as many sea creatures do, and with lime-loving seaweed of their age (the Cambrian) they were the world's first reef-formers. They are known to science as Archaeocyathineae, which is Greek for "old cup-bearers."

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CHEMISTRY

Waxed Coal Permits Use Of Cheap Fuel Without Dust

A WAXING process for coating soft bituminous coal which makes it useful for household heating without the present dirtiness of dust from the coal bin was described at the meeting of the American Chemical Society in Pittsburgh.

While modern domestic and commercial stokers have virtually eliminated the smoke nuisance which formerly existed in burning soft coal, declared Dr. H. R. Fife and P. W. Edeburn of the Mellon Institute for Industrial Research, the problem of soft coal dust still remains.

How much it remains is shown by the Institute figures indicating that in one Pittsburgh apartment house basement over eight pounds of dust per square yard settled each month. This was 15,000 per cent more dust than settled from the air in this city district in the same period. Moreover, the total dust which settled was found to average slightly over twenty pounds per ton of coal used.

Since the total dust settling in the basement amounted to only 20.48 pounds per ton of coal, the coal must get the unenviable credit of causing 97

per cent of all the dust settled in the basement.

When the same coal was treated with petrolatum, which is a paraffin-like by-product of oil refining, a wax like surface was obtained that gave a permanent coating and eliminated the coal dust, said Dr. Fife and Mr. Edeburn.

Storage tests on the waxed coal show no dust after two and a half years.

"The wax," reported the scientists, "has the unusual combination of being non-volatile and non-spreading, hence no odor developed in the basement and the floor was not oiled or discolored."

How heat-treating coal dust can turn such virtually waste material into useful fuel "bricks" was described by Prof. F. H. Fish of Virginia Polytechnic Institute at the same sessions of the Gas and Fuel Division of the Society.

Eight years of research has shown that coal slack dust can be made into a solid mass, without the use of a binding material, which has a breaking strength of 250 pounds to the square inch.

A container, or bomb, is filled by hand and sealed with a cover. The bomb and its contents are heated to temperatures varying with the different kinds of coal used. With the temperature rise, the swelling of the coal forces the liquid portion of coal through the coal body and around the harder portions.

On cooling the high strength briquet is removed. No deterioration in storage for three months under water has been noted.

A full chemical life-story of fires in anthracite mines—the causes, behavior and control—is being worked out by chemists of the U. S. Bureau of Mines, it was also revealed to the American Chemical Society.

Drs. G. S. Scott and G. W. Jones of the Explosives Division of the Pittsburgh Experiment Station said that spontaneous combustion must be considered among the causes of hard-coal mine fires.

High-grade, screen anthracite coal, they pointed out, is generally believed not to undergo spontaneous combustion even after long periods of storage. But underground in the mines quite different conditions naturally exist. The rock roof, coal, bone, slate and timber all combine to offer a mass of material which can generate gases and create temperatures needed for spontaneous combustion.

Special apparatus was constructed which measured the generation of carbon monoxide by mine materials at temperatures below, up to, and above the ignition temperatures of coal.

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PUBLIC HEALTH

Can Save Workers' Eyes By Care of Minor Injuries

SUCH an apparently trivial thing as the way a speck of dirt or sand is removed from a worker's eye may mean the difference between sight and blindness for that worker, Dr. Claude S. Perry of Columbus, Ohio, told industrial engineers, nurses and eye physicians attending the conference of the National Society for the Prevention of Blindness.

During the year 1935, 133 eyes were lost by Ohio workers, Dr. Perry said reports from the Industrial Commission of Ohio showed. In the same year there were 25,798 cuts or abrasions to workmen's eyes in the state, as shown by claims filed against the Industrial Commission.

Unless properly cared for, each of these cuts and abrasions, and the many more that may not have been reported, might result in partial or total loss of vision. Infection getting into the wound might require removal of the entire eye. Besides infection, there is the danger of ulcers and scars forming when even slight eye injuries are not given proper care, and such ulcers or scars may partially or totally destroy the sight of the eye.

The custom of letting a fellow worker, with work-soiled hands and the handkerchief or toothpick from his pocket, remove a speck of dirt from an eye was heavily censured by Dr. Perry. The nurse or doctor should be consulted even for these minor injuries, in order to prevent possible serious results.

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BIOCHEMISTRY

Pleasant Tasting Vitamin Prepared from Wild Rose

VITAMIN C is being prepared from the wild rose in Soviet factories and the concentrate obtained is said to be more effective and has a pleasanter taste than the vitamin which has heretofore been obtained from pine needles.

Two vitamin factories for the extraction of vitamins have been reconstructed to increase the output of vitamin C, so that it can be used as an anti-scurvy preparation throughout the far north. Three million doses of this vitamin were manufactured last year in the Soviet Union.

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