

## MEDICINE

# Lung Disease Fungus

► STARLINGS in two parks of Washington, D. C. have been blamed in contaminating soil that has produced the fungus causing histoplasmosis, a frequently serious lung disease.

The fungus, *Histoplasma capsulatum*, had previously been found in the soil of two parks in smaller cities, Milan, Mich., and Mexico, Mo., but this is the first time it has been found in Washington, or in any other large city. It has been found many times in nearby Maryland and Virginia.

Dr. Chester W. Emmons, chief of the medical mycology section of the National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Md., reports the findings in Public Health Reports, 76:591, 1961, a U. S. Public Health Service publication.

Dr. Emmons was searching for the cause of another serious fungal disease, cryptococcosis, which has been isolated many times from Washington soil contaminated by pigeon droppings.

Histoplasmosis is caused by humans in-

haling contaminated soil or dust. It varies from a harmless condition to an incapacitating lung lesion, or it may take a fatal form characterized by chronic lesions of various internal organs.

Dr. Emmons said that although the park area from which the contaminated soil was taken had been recently cleaned and showed no obvious bird excreta, the soil under sycamore trees where the collections were made is regularly contaminated with the bird droppings.

"It is obvious," he said, "that roosting starlings can create a soil environment suitable for the growth of *Histoplasma capsulatum* even though bird excreta do not accumulate and remain on the surface of the soil."

Dr. Emmons said that histoplasmosis is an important medical problem in Washington and surrounding areas. In certain Maryland and Virginia communities, he said up to 83% of the population showed evidence of past exposure to the disease.

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## MEDICINE

# May Reduce Stillbirths

► USE OF A RADAR technique holds promise of reducing the number of stillbirths and newborn deaths through better fetal electrocardiograms.

Andrew G. Favret, Department of the Army, Washington, D. C., reported that more widespread use of the fetal electrocardiogram appears possible using a technique highly developed in the radar field.

Very weak "echoes" could now be detected that otherwise have been buried in "noise," Mr. Favret told the Rochester (N. Y.) Conference on Data Acquisition and Processing in Biology and Medicine.

Fetal electrocardiograms have been made for years under controlled conditions, but the combination of an inherently weak fetal signal and variety of competing electrical signals (noise) has prevented "the widespread use of this important tool by hospitals and obstetricians," Mr. Favret said.

Valuable information can now be provided on the condition of the fetus in early stages of pregnancy as well as during labor through use of the fetal ECG.

► TWO NEW CONCEPTS in mathematical models of the neuron were reported by Dr. Eugene Agalides of General Dynamics, Rochester, N. Y., to the Conference on Data Acquisition in Rochester.

Chemical transmission in which one chemotransmitter acts upon two chemoreceptors, he said, means that the chemotransmitter could eventually make permanent changes in the linkages of the proteins of ribonucleic acid.

"This brings us to a new kind of adaptive memory," he explained in describing his second new concept. "This is not made by

one neuron, or prosynapse, but makes possible different interconnections. It increases the number of phosphated pathways and makes possible a new combination of ideas."

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## IMMUNOLOGY

# Health Service Sees Measles Vaccine Soon

► FEAR OF THE DEAFNESS and brain damage sometimes following measles will soon be a thing of the past when vaccines reach the standards set by the U.S. Public Health Service.

In a few years, at least, measles vaccination will be as common as polio inoculations.

Measles takes several hundred lives in the U.S. each year. Although death from the disease is rare, close to 100% of American children can be expected to get measles.

Complications are common because of secondary bacterial infections, unfavorable effects on pre-existing illness, or even due to the virus itself.

Because measles is a world-wide problem, an international conference on measles immunization will be held this fall at the National Institutes of Health in Bethesda, Md., Surgeon General Luther L. Terry of the Public Health Service has announced.

At a three-day meeting Nov. 7 to 9, a number of experiments with the attenuated (weakened) measles virus strains developed by Dr. John F. Enders, Nobel Prize winner, Harvard University, will be discussed at sessions covering data on field trials, problems of production and biologic control and aspects of the disease in other countries.

The conference is under the joint sponsorship of the University of Colorado, the National Institute of Allergy and Infectious Diseases, and the NIH Division of Biologics Standards.

Dr. C. Henry Kempe, University of Colorado Medical Center, who has been working over a period of years on measles immunization and other problems of infectious diseases of children, will direct plans for the conference.

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# Heart Damage Findings Disprove Previous Theory

► HEART DISEASE does not develop in rheumatic fever patients unless the first attack of rheumatic fever damages the heart, Dr. Alvan R. Feinstein, an Irvington-on-Hudson, N.Y., physician, has found.

The discovery explodes a long held theory that one-fourth of the patients whose hearts show no damage after the initial attack may develop heart disease later.

Dr. Feinstein disclosed his findings, for the first time, at the American Rheumatism Association meeting in New York. The doctor and five co-workers at Irvington House, where he is director, studied the hearts of 447 rheumatic fever patients, children and adolescents, for an average of seven years.

All the patients were being given some kind of prophylactic agent to reduce the rate of recurrent rheumatic fever attacks. Despite treatment, 48 recurrences occurred in 39 patients, or about nine percent of the total.

In the recurrent attacks, carditis (inflammation of the heart) did not appear in patients previously free of it. In patients who already had carditis from the first acute attack, the recurrences often, but not always, made the heart worse.

Among 180 patients free of heart damage in the first attack of rheumatic fever, no heart damage developed, with or without a recurrence of rheumatic fever.

Dr. Feinstein said the study should lead to new concepts of treatment for rheumatic fever. Patients with no initial heart damage need not be subjected to extended bed rest, with all the discomfort and restlessness this involves for children.

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# Questions

**SURGERY**—In what type surgery are clamps said to be especially superior? p. 67.

**AGRICULTURE**—Why must grasshoppers be sprayed quickly after they mature? p. 69.

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