

Rabbit Fever in Japan

A FORM of rabbit fever known as "yato-byo," similar to the tularemia known in the United States, exists in Japan, reported Dr. Hachiro Ohara of the Fukushima Experiment Station.

Although tularemia and yato-byo are caused by the same organism, the records of the two diseases are quite different, for the death-rate from yato-byo is zero. Dr. Ohara ascribed this not to a lower virulence on the part of the bacterium, but to "the constitution of the Japanese." The Japanese malady is carried only by wild rabbits, whereas in America tularemia is carried by many other species of rodents, and is also transmitted by the bite of blood-sucking insects and arachnids, such as the horsefly and wood ticks.

Cancer Caused by Viruses

CANCER, at least of certain types, is caused by filterable viruses, and thereby joins a numerous and varied group of human ills including smallpox, influenza and infantile paralysis: such is the conclusion toward which points the evidence presented to the meeting.

Three converging lines of evidence were presented by Drs. James B. Murphy and Albert Claude of the Rockefeller Institute for Medical Research, by Drs. Jacob Furth and Elvin A. Kabat of Cornell University Medical College, and by Dr. F. Duran-Reynals of Yale University.

Fluids from malignant transplantable tumors of chickens were whirled in the ultra-centrifuge, passed through fine-pored filters, and otherwise treated after the manner of virus-containing fluids in known animal and plant diseases. Materials obtained from these cancer-fluid filtrates, injected into the tissues of healthy chickens, produced typical cancerous growths.

In the researches reported by Dr. Duran-Reynals, chicks responded to doses of a tumor virus by developing fatal hemorrhages and degeneration of tissues, without the development of tumors. However, extracts obtained from such chicks produced the characteristic growths when injected into healthy adult fowls.

Similar evidence for virus causation of cancers in rabbits was reported in communications by Dr. Jerome T. Syverton of the University of Rochester and Drs. John C. Kidd and Peyton Rous of the Rockefeller Institute. A virus was indicated as the probable cause of kidney

cancer in frogs, by Dr. Balduin Lucké of the University of Pennsylvania.

Fever From Monkeys

AFRICAN monkeys may become immune carriers of yellow fever without being bitten by mosquitoes, was the warning that came from London in a paper by Drs. G. M. Findlay and F. O. MacCallun. They introduced yellow fever virus artificially into the stomachs of monkeys, and found that it retained its virulence. Other animals, including man, could not be thus converted into carriers. Apparently the high acidity of their gastric juices inactivated the virus.

"If non-biting arthropods with a long life span carry yellow fever virus and are occasionally eaten by monkeys, a solution would be found of the continuance of yellow fever in dry seasons when mosquitoes are absent or rare, the London researchers pointed out. "Attention is drawn to the survival of yellow fever virus in cockroaches."

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ENGINEERING

New Instrument Aids in Making Airplanes Safe

See Front Cover

IF THERE is moisture in the supposedly dry annealing gases, high-carbon steel decarburizes and becomes unsatisfactory for many uses. Airplane gears made when the moisture was present will not stand up in service.

The portable dew-point potentiometer shown on the front cover of this week's SCIENCE NEWS LETTER was devised by General Electric engineers to detect such damaging moisture.

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GENERAL SCIENCE

Genetics Congress Members Find They Are "Entangled"

AMERICANS at Edinburgh's war-clouded International Genetics Congress found themselves literally entangled when Scottish soldiers strung barbed wire around their dormitory.

Explanation: Dormitory would be needed after Americans left, for internment Germans.

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A new device tests the smoothness of a metal or painted surface, detecting variations as slight as one millionth of an inch.



Treeline Stays Put

IF THE American climate is changing, the timberline trees of the northern Rockies have not found out about it yet. Their "farthest up" seems to be neither advancing nor retreating, studies by Prof. Robert F. Griggs of George Washington University indicate.

Prof. Griggs' earlier investigations in Alaska showed that the northern boundary of the forest, at Kodiak, is actively migrating into the Arctic. He therefore wanted to know whether mountain trees in more southerly latitudes were showing a corresponding tendency to venture higher upslope.

Presence of large numbers of young trees in certain parts of the mountains had given rise to reports that such was the case. Closer investigation, however, disclosed fallen trunks of much larger trees, usually charred, among the younger growth. The young trees therefore are only replacements, following fire or other devastation. The mountain treeline is not advancing.

Timberline trees sometimes achieve great age, Prof. Griggs reports. In the Teton mountains, at about 10,000 feet elevation, he found an erect whitebark pine with a girth of nearly twelve feet. Estimates based on known growth rate give an age of about 1,800 years for such hardy giants as this.

The familiar alternation of timbered and bare strips running straight up mountain slopes Prof. Griggs relates to snow accumulation in the ravines. Trees do not thrive in the moist ravines, as might at first thought seem likely. They follow the ridges instead. This is because the deep snow masses in ravines, by sliding and creeping, tear out most of the young trees that sprout there during the summer. On the ridges, however, there is less snow and therefore little sliding, so that trees can survive.

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