

PUBLIC HEALTH

Malaria-Carrying Mosquito Now Being Battled in Brazil

African Insect, First Found in South America in 1930, Now Infests Some 12,000 Square Miles of Territory

A DETERMINED defense against a foreign invader, dreaded malaria-spreading gambiae mosquitoes, more to be feared than yellow fever, is being waged in Brazil with American support, Dr. Raymond B. Fosdick, president of the Rockefeller Foundation, announced in his annual report.

This African insect, first discovered in South America in 1930, now infests 12,000 square miles of territory. It is declared to threaten all American countries, the United States included, with a catastrophe in comparison with which ordinary pestilence, conflagration and war are but small and temporary calamities. Even penetration of yellow fever into the Orient might be a lesser evil.

The malaria-carrying mosquito was pushed back in 1939, although some 114,000 people were treated for the disease. Two thousand doctors, technicians, scouts, inspectors, guards and laborers were used in the campaign. The mosquitoes were pushed back to their central strongholds in the main river valleys and on the narrow coastal shelf. If held there

during the coming rainy season, eventual eradication of the mosquitoes from the whole region may be attempted.

"The plans of the campaign against gambiae sound like the plans of an army on defense," Dr. Fosdick explained. "The frontiers of the infested region are defined by fumigation posts on all the outgoing roads. These are the forts of this new kind of Maginot Line.

"A 10-mile zone beyond the gambiae's farthest limit of advance is to be kept non-infectible, which from the mosquito's point of view is the 'scorched earth' policy. Within this zone, as well as within the area already infected, all breeding places of the mosquito must be eliminated or treated with Paris green or other larvicide.

"The whole region is being mapped from the air so that no pools, ponds or other collections of water will be overlooked. The adult mosquitoes are being sought and killed in the houses with insecticide sprays to diminish the chances of their laying eggs and thus perpetuating the species in the region.

"Every automobile and train that leaves the infested area is being stopped, inspected and fumigated. A maritime service has been organized at points along the coast to disinfect every boat or plane bound for clean ports.

"It is war in a very real and grim sense, and, unlike other types of war, its purpose is the preservation of human life."

Science News Letter, May 11, 1940

Non-Cancerous Tumors Prevented by Male Hormone

A RTIFICIAL male sex hormone treatment has prevented the growth of non-cancerous breast tumors which occur in female animals, Dr. Francis Carter Wood, director of the Crocker Institute of Cancer Research of Columbia University, announced.

When the breast tumors were transplanted from one female rat to another, the tumors failed to grow in the second animal when testosterone, synthetic male sex hormone, was injected. Injections

of female sex hormone or of pituitary gland hormone, on the other hand, caused growth of the breasts with changes very similar to cancer.

The growth of cells in the organs of an animal which determine its sex characteristics is stimulated by injection of the hormone corresponding to the animal's sex and retarded by injections of the hormone corresponding to the opposite sex, Dr. Wood said.

The question of whether or not hormone treatments can cause malignant growths is of practical significance because of the wide usage of skin ointments containing oestrin (female sex hormone), Dr. Wood says. "There are a number of cases in human beings where it is suspected that the appearance of cancer occurred after the use of these ointments and was due to the stimulating effect of the application.

"So far, however, there is no evidence that cancer has been produced by these hormone injections, though other students of the problem have claimed positive results. Although hyperplastic areas in the breast were produced in female rats by the injections of oestrin, no true malignant growths occurred. Small portions of the hyperplastic tissue were removed and grafted into other rats to determine whether a change into cancer had taken place but the results were negative.

"This is one aspect of the problem which the Institute is at present working on. One of the facts that has been definitely established is that the female sex hormone does stimulate the breast and should be used with great discretion in the treatment of human beings."

Science News Letter, May 11, 1940

An Italian chemist reports a process for obtaining *fuel* from the wild figs, prickly pears, and eucalyptus of Eritrea, East Africa.

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