SCIENCE NEWS

Science Service, Washington, D. C.

DDT AND MALARIA

THAT DDT, already acclaimed for success in aborting the typhus epidemic in Naples, now is helping to control malaria and fly-borne diseases, is reported by Major George C. Brother, of the Medical Corps, attached to the Fifteenth Air Force. Units of enlisted airmen directed the killing of adult mosquitoes and flies in the area, using a 5 per cent. DDT solution in kerosene, applying it with power paint sprayers, hand spray guns and paintbrushes to prevent the spread of malaria and diseases carried by flies. The mixture is applied by two-man teams to military mess halls, kitchens, latrines, and civilian as well as military sleeping quarters.

DDT arrives in Italy in hard, waxy lumps, which are pulverized in a meat grinder. The solution is made up by adding the pulverized DDT to kerosene and pouring it into five-gallon oil cans. Cans of this mixture are stacked in the sun to hasten solution and are rolled around on the ground every twenty-four hours. A good solution is obtained in about four days.

Spraying teams, after a half-day of schooling in malaria control, begin applying the poisonous solution to walls, doors and screens of buildings. The men wear protective masks. These teams also seek out near-by breeding places of flies and of mosquitoes which might infect soldiers with malaria.

Some reports indicate that the insecticide did not have immediate results. However, after several days medical officers were convinced of its effectiveness. Observations show that areas have to be re-sprayed about every month or six weeks.

According to Major Brother, the results have been spectacular from the standpoint of pest control, and DDT can be considered valuable in the prevention of both malaria and enteric diseases.—ROBERT N. FARR.

ITEMS

A MEMORIAL to be erected in honor of the defenders of Leningrad will include new buildings for Pulkova Observatory, according to Professor Grigori Neuimin, director of the observatory. Pulkova Heights was one of the keypoints in the defense of Leningrad, so it is fitting that the memorial, which will form an architectural whole with the observatory buildings, be erected there. The staff of Pulkova Observatory, which was evacuated to Tashkent, Turkestan, nearly three years ago and conducted observations with instruments belonging to Tashkent Observatory, is now preparing to return home. Several years will probably be needed, however, to put the observatory back into shape, although the instruments will be in use long before that time, according to the Soviet Information Bureau at Moscow. Part of the observatory buildings will be restored to their former appearance, the rest will be modernized.

ALMOST twice as many cases of undulant fever have been reported to the U. S. Public Health Service so far this year as during the corresponding period of 1944. The total up to February 3 was 354, compared with 184 for the same period last year. Undulant fever is also known as Malta fever and brucellosis. It is not often fatal but is a long drawn-out sickness, lasting sometimes for years. The suffering, disability and economic loss are considerable. People get undulant fever, usually, from drinking raw goat's milk or raw cow's milk that contains the germs. Pasteurizing milk is a sure safeguard against undulant fever from this source. Humans may also get the hog variety of brucellosis, but this is not very common. Farmers, vegetarians, slaughterhouse employees, butchers and even cooks can get it from handling infected meat or from close contact with infected animals. Reporting of cases of undulant fever is now required in all 48 states and the District of Columbia. Last year, however, was the first in which all states reported the disease. It is possible that during this first year not all cases were reported while more are being reported this year. This might account for some the the increase.

A PARALYSIS that afflicts honeybees, causing wholesale death in the hives, has been found to be caused by a filterable virus, just as infantile paralysis in human beings is caused by another virus. The bee disease was traced to its microscopically invisible cause by Dr. C. E. Burnside, of the Bureau of Entomology and Plant Quarantine. Loss of hair from the bees' bodies, hitherto considered a symptom of honeybee paralysis, was found to be undependable as a means of diagnosis, for the bees to which he purposely gave the disease in his experiments did not become partially naked and shiny. Dr. Burnside is inclined to believe that loss of hair is not a true symptom at all, but is probably due to the tendency of other bees to bite and pull at the sick ones in an effort to get them out of the hive. Much more dependable symptoms, he reports, are sprawled legs and wings and a general trembling of the whole insect. Now that the disease has been traced to a virus, means of prevention or cure can be sought for more intelligently, and with greater hope of ultimate success.

SYNTHETIC rubber now can replace natural rubber in another field—in the production of chlorinated rubber for ship-bottom paints, anti-fouling paints, and non-inflammable paints. Chlorinated synthetic rubber can be used also in the preparation of sand-core binders for molding operations, adhesives and other products. The new synthetic chlorinated rubber is a development of the Goodyear Tire and Rubber Company in its laboratories at Akron, Ohio. The new chlorinated synthetic rubber is a creamy white powder containing from 60 to 70 per cent. chlorine. It is equal to the natural rubber product in every way, it is claimed. It is soluble in all aromatic hydrocarbons, including benzene and toluene, and also in esters like ethyl acetate and in chlorinated hydrocarbons. It is non-inflammable, is resistant to both acids and alkalis and has excellent anti-corrosion qualities.