PUBLIC HEALTH

Yellow Fever May Play Role In Present African Campaign

More Than 800 Cases Reported in Kardofan Province, Close To Where British Troops Are Pushing Through

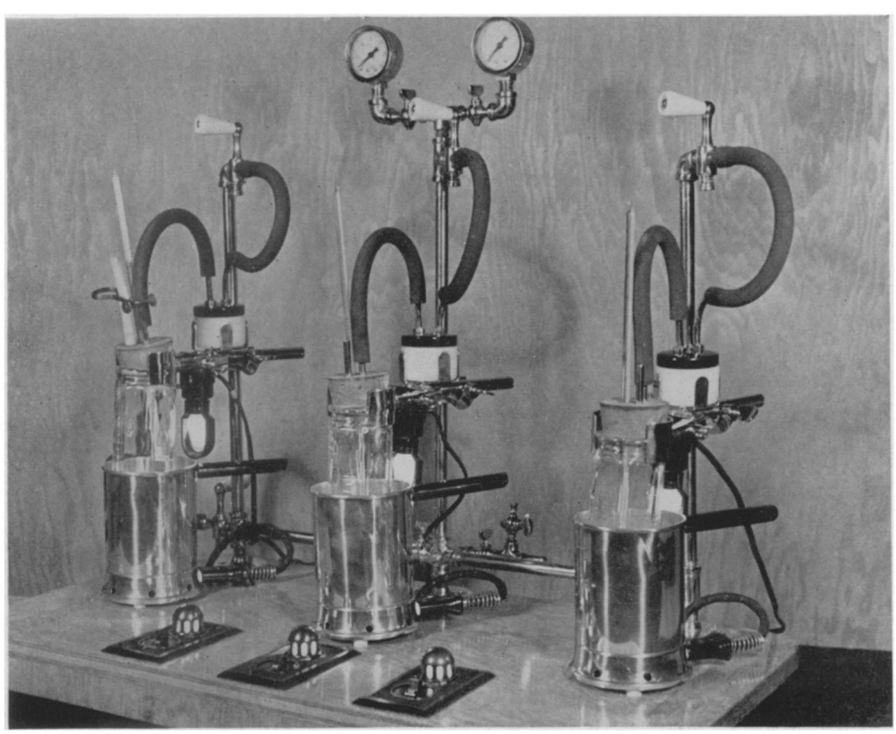
WHAT part will yellow fever play in the great African campaign now opening? Will the Yellow Jack whose very name struck blinding terror into the hearts of our grandparents be the war plague of the present conflict?

Africa is called, by one authority, the original home of yellow fever, although others state it was first seen in the West Indies. Certainly for many years the west coast of Africa was considered one of the few remaining strongholds of yellow fever throughout the world.

During the month of November, 1940, however, more than 800 cases of yellow fever were reported on the other side of Africa, in Kardofan Province, Anglo-Egyptian Sudan. These are the latest figures available at the U. S. Public Health Service in Washington, and there may by now be more or fewer cases of the disease in that region of Africa. Kardofan Province, however, appears uncomfortably close, as the possible center of a yellow fever outbreak, to the regions through which British troops are driving toward Eritrea and Ethiopia.

To the south of this region at Entebbe in Uganda, the Rockefeller Foundation's International Health Division maintains a Yellow Fever Research Laboratory. No yellow fever exists in this region, it is stated, but the latest Rockefeller Foundation report of yellow fever surveys in Africa states that tests showed "yellow fever had recently existed and was probably still present in Africa from Senegal to the Upper Nile, although the disease had not previously been identified in Central Africa."

Scientists who thought yellow fever had been almost completely driven out of the Western Hemisphere, only to discover new and probably numerous centers of the disease in the South American hinterland, would not be surprised to find other, previously unsuspected strongholds of yellow fever in Africa.



HOME-MADE APPARATUS

If yellow fever and the mosquitoes that carry it are lurking in the regions through which troops must travel and fight, the outcome of the present African compaign may well depend more on medical scientists than on military strategists.

The bright spot in the yellow fever picture, regardless of war, is the existence of a vaccine that gives protection against it. Since the Spanish-American War and the discovery that yellow fever is transmitted by the bite of an infected mosquito, protection against the disease, for civilians and soldiers alike, has depended on guarding against these mosquitoes.

The vaccine was developed in the laboratories of the Rockefeller Foundation and has been used to vaccinate more than 1,000,000 persons in Brazil. The Rockefeller Foundation and other laboratories in this country have been collaborating on large scale production of this vaccine so as to have available a sufficient supply for vaccination of American troops in case they should have to be sent to Central or South America on hemisphere defense.

While no information is available, it is logical to suppose that nations with military interests in Africa would endeavor to obtain some of this vaccine, or to develop a similar one themselves, for protection of their troops if the campaign reached known or suspected yellow fever regions.

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MICROLOGY

Household Gear Used in Laboratory Apparatus

QUALITY laboratory apparatus need not be expensive. A little ingenuity can be substituted for much cost. Prof. Robert T. Hance, Duquesne University zoologist, needed some apparatus in which material to be sectioned for microscopic examination could be impregnated with melted paraffin under vacuum. Ordinarily, that would have cost a good deal of money. Prof. Hance cogitated for a while, then visited a "five-and-ten," a hardware shop, and the junk-box in his own basement. Result: a set-up that "looks like a million dollars."

The electrically heated water-baths, that shine so resplendently, are ordinary coffee percolators with the "perking" part discarded. The glass flasks in which the tissues are steeped in melted paraffin are babies' nursing bottles of Pyrex, with large rubber stoppers in

their mouths. All standards or pillars are common black gas pipe, polished and chromium plated by a local craftsman.

The white jars, which trap fugitive drops of paraffin that get through the tubing, are common ointment or cold-cream jars. The white-handled cocks at the top are from an old gas stove. Other cocks are from ordinary hardware-store stocks.

Lights behind the bottles are night lights bought in the "five-and-ten." Switches and pilot lights at the front of the base are the common type used to show when the cellar light is on.

The only strictly laboratory items are the clamps supporting the bottles, the rubber stoppers, the chemical thermometers inserted through them, and the six short pieces of thick-walled rubber tubing.

The vacuum pump (not shown) is a "reformed" double-cylinder beer pump. It can be changed into an air-pressure pump simply by reversing the motor.

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PSYCHOLOGY

Defense Duty of Universities Broader than Problem Solving

For Long-Term National Welfare, College Must Train Scientists, Teach Scientific Method, Preserve Culture

"THERE would be no London now but for three British scientists who through brilliant research found ways to cope with German bombers," President Alan Valentine, of the University of Rochester, told the New York State Association for Applied Psychology meeting at Rochester, N. Y. American scientists can do as much, he declared.

First obligation of the college to national defense is the creation of ideas and knowledge, President Valentine said. But the universities also have responsibility for training new technological and scientific experts.

"That educational work is so important," he said, "that our leading college and university professors and instructors should be permitted to render their immediate defense service where they can also continue their educational service—in the shops and laboratories of their own colleges, utilizing equipment and personnel already established there, with the nature of which they are most familiar.

"Only in exceptional cases is it wise," he declared, "to move such men from their colleges into new research laboratories or Army camps. We must avoid the waste of robbing our colleges of talent, for men with that talent, if left in colleges, can create more talent to a greater extent than they can produce it anywhere else."

For long-term national welfare, the college must do more than train new scientists. It must give to a much larger proportion of American youth an understanding and appreciation of scientific method. Only thus can a nation have unity, President Valentine believes. The non-scientist can also use the scientific method in the solution of his own problems—he can learn how to collect the necessary data, to analyze it, to experiment, demand proof.

Finally, the college and university must give American youth access to those intangible cultural satisfactions that are more than knowledge, more than machines.

"What," asked President Valentine, "would life in America be like if there were no literature, no music, no understanding of history, no interest in painting, sculpture, or architecture, no desire to determine the values and the blessings of intangible things, no aspirations, no ideals, no affections? Such an America would not be worth living in or fighting for; such an America would not endure."

The strength of America, President Valentine emphasized, lies not only in factories and farms and in the muscles of men. It lies in the free loyalty of its free citizens. Mobilizing in freedom the many minds of free citizens is a work more difficult and more noble, he said, than the creation of armies and airplanes.

"Free men must know for what cause and what ends they curb their freedom. For what purpose do we marshal force without stint or limit? To what end do we organize men and minds? Surely we do not forge swords that our children shall live by the sword. Surely we do not conscript to make conscription the permanent American order. Our fathers did not come to America for this; our experience and education did not lead us to this end.

"No, we are compelled by those who live by force to oppose their domination in the only terms they understand. We forge swords to defend ourselves from those who would rule by the sword. We arm ourselves so that we may be free not to arm again. To avoid the rule of force we are compelled to create it. As we do so, we must not forget that our purpose is to preserve freedom and the ways of peace. We must not fall in love with force, and glorify it, and we must not fall in love with giving or receiving commands.

"A nation so strong in arms that all the world fears it and does its bidding is not and must not be the ideal of American democracy."

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Basis of Morale

MORALE, both of soldiers and civilians, has its basis in physical and economic well-being as well as in mental fitness, Dr. Douglas H. Fryer, of New York University, told members of the New York State Association for Applied Psychology at their annual dinner.

Dr. Fryer was a morale officer attached to the Morale Branch of the U. S. Army's General Staff during the World War.

Among the causes of poor morale which the Morale Division had to correct then, Dr. Fryer said, were reports of poor food, delayed mail and pay, inadequate uniforms, pedantic orders, profiteering by local merchants, unnecessary restrictions on passes, incompetent officers, false rumors, home worries, pacifism, non-English speech, homesickness and cowardice.

The program of improving morale was aimed at convincing the men of America's war aims and giving each one a chance to participate actively in group programs. Instruction was provided in English and in athletics. Entertainers of all kinds, including jugglers, magicians, singers, boxers, wrestlers and tumblers were selected from among the recruits and formed into a company for camp entertainment.

Individual recruits were given friendly instruction and help in adjusting to Army routine. Information given concerning inoculation reduced the faintings due to fear from 40 to two or three per hundred.