

MEDICINE

War Against Disease Won

With the aid of vaccines, Army scores almost 100% victory against ills for which inoculation can be used.

► THE United States Army has won in almost 100% battle for its overseas troops in combatting diseases against which the Medical Corps has been able to use inoculations.

Reports to the War Department covering periods up to the year ending in July from the Middle East, North Africa and China-Burma-India Theaters of Operations show this remarkable record:

CBI Theater: Cholera, tetanus, smallpox — no cases. Typhus — 1 case, no death. Typhoid—12 cases, one death.

Middle East and North Africa Theaters: Typhus—4 mild cases, no deaths.

The report from North Africa and the Middle East dealt only with typhus, scourge of armies down through history. It was particularly revealing inasmuch as these two areas are fertile breeding places for typhus which is flea-borne and louse-borne. Several severe epidemics of typhus were reported among civilians in these two theaters where many communities were "100% lousy." American troops, however, remained singularly free of the disease although their operations often forced them to mingle closely with the natives.

Colonel Harry Plotz, specialist on infectious diseases, spent the last seven months in the Near East working primarily on typhus and, on his return to the United States, brought back 69 new living strains of the typhus germ and 4,000 types of serum from civilian patients recovering from the disease. This material will be used in various laboratories for possible development of better vaccines.

Colonel Plotz pointed to the immunity of American forces today as against civilian and military records of the last war which he said showed 10,000,000 known cases of typhus in Europe with 5,000,000 deaths.

Medical authorities in the CBI Theater are particularly proud of their record against cholera, which is always dreaded in the Orient; but they are just as proud of the typhus record.

As in other theaters, protection of troops does not stop at inoculations. There is a constant program of protective and preventive measures. Water sup-

plies are watched and either boiled or chlorinated; unsanitary places are placed off-limits, messes are regularly checked and food handlers inspected; and every effort is made to keep to a minimum the growth and spread of insects and vermin.

Not long ago tetanus was the most common complication of a battle wound, caused principally by contamination from soil. Now, tetanus vaccines and prompt surgical treatment are saving hundreds of lives and restoring soldiers to full health with great rapidity. Every soldier gets three tetanus vaccines when he enters the Army and regular booster shots thereafter.

In the fight against cholera, the soldier going overseas receives two injections seven days apart and as long as he remains in an area where cholera may be prevalent he is given a stimulating shot every six months. Typhoid vaccines, too, are given immediately upon a soldier's entrance into the Army and a stimulating shot is given every six months while he is in a typhoid area. Three injections are given for typhus and a stimulating shot then given every six months.

All in all, the health of American troops overseas has been excellent and, under ordinary battle conditions, may

be expected to improve as new protective and preventive measures are tried out and put into practice.

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MILITARY SCIENCE

"Bazooka" Rocket Gun Now Supplied in Quantity

See Front Cover

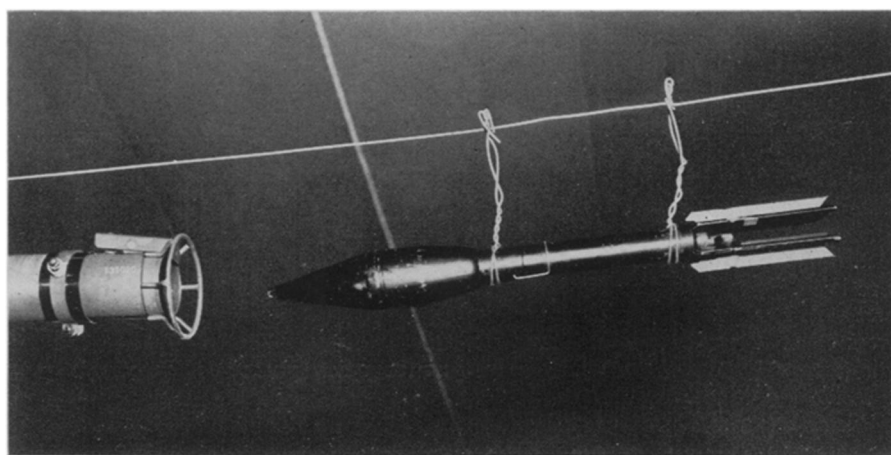
► THE "BAZOOKA," a gun whose rocket projectile is effective against any enemy tank which has been in action against United Nations' forces, now is being supplied in quantity by the United States to American and other United Nations' troops, the War Department has announced.

The "Bazooka" has been in action for several months on various foreign fronts, and is effective against thick brick walls, rock masonry, structural steel and railroad rails as well as against enemy tanks.

During the recent North African campaign, "Bazookas" of one United States Army division alone destroyed at least six enemy tanks.

The "Bazooka" launcher, or gun, is a metal tube somewhat more than 50 inches in length and less than three inches in diameter. It is open at both ends. Attached to the tube are a shoulder stock and front and rear grips for the firer, together with sights and an electric battery which sets off the rocket-propelling charge when the launcher trigger is squeezed. There are also safety devices.

The launcher is operated by a two-man soldier team—one the firer, the other the loader. When the launcher is



"BAZOOKA" ROCKET—Plainly a rocket, with fins like an aircraft bomb, is this projectile used in the new "Bazooka" gun. This photograph, taken by Fremont Davis, Science Service staff photographer, shows the rocket as it was exhibited by the Army in Washington, D. C.

held in firing position, the loader is at one side and to the rear of the firer as shown in the illustration on the front cover of this week's SCIENCE NEWS LETTER. The launcher may be fired from any position which may be used normally by a rifleman in combat.

After the loader has inserted the rocket in the launcher, he turns a contact lever to the "fire" position, signals "ready" to the firer, and then drops down and away from the rear end of the launcher

and grasps a new rocket.

When the firer squeezes the trigger, the rocket-propelling charge is ignited and flashes from the rear of the launcher tube.

The rocket itself is heavier than the hand grenade and is nearly two feet long. It looks like a small, elongated aircraft bomb. It has an explosive head, propelling charge powder tube and a finned tail to provide accuracy in flight.

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ASTRONOMY

New Comet Discovered

Diamaca, named after its Roumanian discoverer, will probably be visible with small telescope in northern evening sky near Hercules.

► A NEW comet, named Diamaca after the Roumanian astronomer who discovered it, was reported low in the northern part of the evening sky near the constellation of Ursa Major, the great Bear.

The comet was first noticed in Roumania early in the morning of Sept. 10. Due to the difference in time, this was actually 10 p.m., EWT, on the night of Sept. 9. It was found to be moving toward the northeast.

At the time of its discovery, the comet's right ascension was 8 hours, 35.4 minutes, according to the cabled report received by Dr. Harlow Shapley, director of Harvard Observatory, American clearing house for astronomical reports, who has relayed the discovery news to American observatories. Its declination was plus 53 degrees, 1 minute.

The comet was observed on Sept. 18 in America by Leslie C. Peltier, amateur astronomer of Delphos, Ohio, who found it had dimmed from the reported eighth magnitude to tenth magnitude and it was moving about twice as fast as the original report indicated. Mr. Peltier made his observation independently before he had heard of the Roumanian report. The predicted position for the evening of Sept. 24 is 16 hours, 45 minutes, and 34 degrees which places it inside the Keystone in Hercules.

Evening is the best time to observe the comet through a telescope, of course. In fact, the comet will soon begin to set a few hours after the sun.

Care should be taken not to confuse the comet with the numerous bright galaxies or spiral nebulae in this part

of the sky near which the comet may pass.

The message of the discovery came from Zurich, Switzerland, via the observatory at Copenhagen, clearing house for astronomical information in Europe. Usually such messages are relayed to the United States via Sweden. It is not known whether the Nazi control of Denmark prevented its transmission to Sweden, or whether German-Swedish communications are limited.

Science News Letter, September 25, 1943

ANTHROPOLOGY

Scientists Help Troops to Get Natives to Cooperate

► ACTIVE assistance of natives in some of the most remote regions where our troops are now fighting is being secured by anthropologists.

They are also helping organize tribes to gather rubber so vitally needed for our war production, and to help stimulate local crop production to feed our troops in these distant sections, Dr. Ruth F. Benedict, associate professor of anthropology at Columbia University, stated in Science Service's "Adventures in Science" program over the Columbia Broadcasting System.

Approximately 5,700 tons of *steel* has been saved by limiting to two inches or less the length of women's hair pins and bobby pins.

Electricity for lighting store windows and fronts is banned in Australia.

Anthropologists have first-hand knowledge of strange parts of the world, which is proving most useful to the Allies. They know what native foods may be safely eaten and have detailed knowledge of the topography of little-known regions. Based on native practices, some are offering valuable suggestions as to how to clothe or shelter our troops most expeditiously and comfortably. Others are giving courses in languages never before taught in America.

"The fact that anthropology is so useful in down-to-earth, practical operations came as a shock even to many people who know a good deal about anthropology," stated Dr. Benedict, who is herself helping Uncle Sam win the war. More than half of these scientists are devoting their full time to the war effort and another quarter are doing part-time war work.

"The anthropologist has one great qualification for post-war planning for he finds cultural differences interesting," Dr. Benedict pointed out. "He looks over the contemporary cultures of the world and it seems quite possible to him that the special values of each of them could be maintained and enhanced in a post-war world."

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MEDICINE

Flea Bite Allergies Are Relieved By Vaccine

► SUCCESSFUL vaccination against the hives and asthma some people get from flea bites has been achieved by a flea antigen developed at the University of California, Dr. Barbara C. McIvor and Dr. L. S. Cherney of the University Medical School announced.

Fleas are a serious threat to health because they may carry the germs of typhus fever and plague. The flea antigen is not directed against this danger, but to the severe reactions some people have from bites of non-infected fleas.

In California, North Africa and probably other parts of the world the flea is a pest aside from its disease-carrying danger, just as mosquitoes are. In such regions the antigen should prove a boon to hypersensitive persons.

In the University investigations 115 out of 128 patients were relieved of symptoms by the vaccination. Three failed to complete the course of treatments. Trials by 41 doctors in other parts of the country showed that all but five of 92 patients were helped.

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