

MEDICINE

Vaccination For Influenza

Experiments have shown that this method is more satisfactory than the inhaling of serum. Conscientious objectors used in this and pneumonia studies.

► VACCINATION "offers more hope of protection against influenza" than inhalations of blood serum from persons recovered from the disease, Army experiments upon conscientious objector volunteers have demonstrated.

A War Department announcement tells of a report on influenza made by Dr. Francis G. Blake, of Yale University, president of the Board for the Investigation and Control of Influenza and other Epidemic Diseases in the Army, to the Preventive Medicine Service of the Office of the Surgeon General. It covered studies made on conscientious objectors in Michigan by Dr. Thomas Francis, Jr., and Dr. Jonas E. Salk, of the University of Michigan, Dr. Paul R. Cannon, Dr. Francis B. Gordon and Dr. Clayton G. Loosli, now Capt. Loosli, of the University of Chicago.

Other investigators had previously reported that inhaling sprayed blood serum from persons recovered from influenza would protect against the disease. The experts working for the Army found that it did not in their experiments.

The serum they used for testing the value of this method of giving protection against influenza was not the same as that used in tests at the Naval Laboratory Research Unit at the University of California under the direction of Capt. Albert P. Krueger. In the Navy tests a globulin fraction of influenza immune horse, not human, serum was found to give protection to laboratory animals. Although this is encouraging, nothing conclusive as to results of human immunization is known yet because tests have not been carried out on a large enough scale. After two years of study of the problem, however, Capt. Krueger's group is coming more to the view that injecting the serum under the skin would be more practical than giving it by inhalation because of the greater certainty that the necessary amount would be assimilated.

Besides the influenza work, the Army has been using volunteers among conscientious objectors in Tennessee for study of the kind of pneumonia which

has been causing considerable concern in recent years. This is variously known as virus pneumonia and primary atypical pneumonia. Its symptoms differ from those of pneumonia caused by the pneumococci and it does not respond to treatment with serums and sulfa drugs.

Washings from the noses of seven soldiers at Fort Bragg, N. C., who had this atypical pneumonia were sprayed into

the noses of 12 healthy, sound conscientious objectors who volunteered for the study at the camp at Gatlinburg, Tenn. Ten of the 12 developed respiratory illness and three were quite sick and went to the hospital but recovered quickly.

This, the War Department report states, was the first time primary atypical pneumonia had been transmitted in this fashion and makes important further study of the test material for the purpose of isolating the germ. This work is now in progress.

The pneumonia studies were made by Dr. John H. Dingle, of Fort Bragg, and Dr. Theodore J. Abernethy, Dr. Alexander D. Langmuir and Dr. Charles H. Rammelkamp of the Army's Respiratory Diseases Commission.

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AERONAUTICS

Night Fighter Plane

► THE "BLACK WIDOW," known to the Army Air Forces as the P-61, is the world's largest and most powerful long-range pursuit plane. It is the first warplane designed from the ground up as a night fighter in World War II.

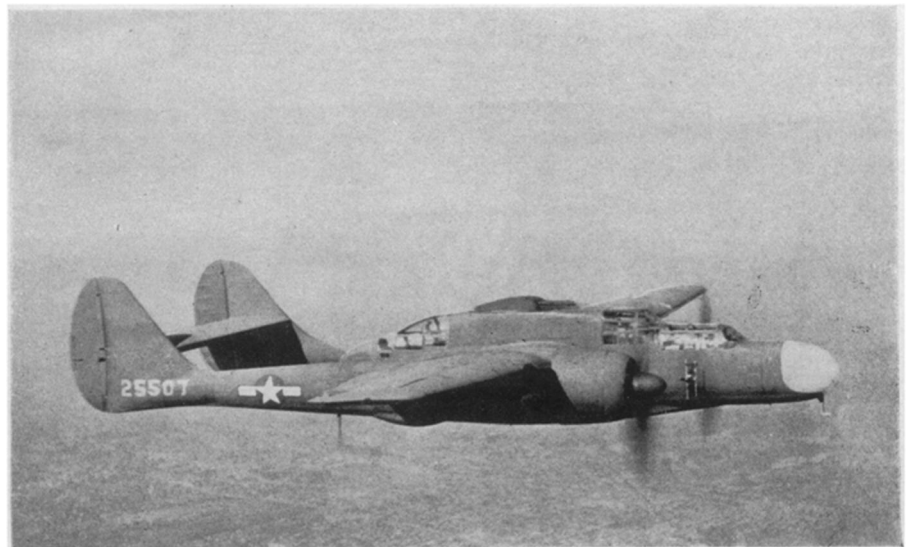
In addition to a battery of 20-millimeter cannon and .50-caliber machine guns, the P-61 is equipped for its job of night fighting with the latest devices.

The plane weighs more than eight tons; much of this weight is due to its

heavy armor. It carries a crew of two or three.

It looks somewhat like the P-38 Lightning, since it has twintail booms, and a long central crew nacelle. Other distinctive features include 2,000 horsepower Pratt and Whitney engines turning four-bladed Curtiss propellers, and the long crew nacelle nose.

While no information as to speed has been released, it may be assumed that the speed is greater than 300 miles an



BLACK WIDOW—Said to be the world's largest pursuit plane, the P-61 has a battery of 20-millimeter cannon and .50-caliber machine guns and weighs more than 8 tons.

hour, since the Martin B-26 has the same power plant and moves through the air at this speed though it is a heavier plane.

In general, night fighters are heavily armed. For operations in a localized area, special radar equipment is used. Enemy planes, first detected on a long-range radio set, are reported to the ground station at the airport where the night fighters are based. Directions are

given to the night fighter pilots which will enable them to bring their planes to positions fairly close to the enemy bombers, preferably behind them. The radar operators aboard the night fighters then switch on their interceptor equipment, which spots the enemy planes at fairly close range, keeping pilots advised of their location until it is time to fire.

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GENERAL SCIENCE

Languages in a Hurry

Malayan, Arabic, Burmese, Chinese and French quickly learned by speaking language in class and by training oneself to "think" in the foreign tongue.

► **TEACHING** 15,000 Americans to speak such languages as Malayan, Arabic, Burmese, Chinese and French was speeded by having them speak the foreign language in class from the first day, eliminating or postponing the study of little-used constructions, and having them "think" in the foreign language. Students in these classes conversed with natives from all walks of life—economists to pearl divers.

Searching for ways in which the procedures followed in the Army Specialized Training Language Program could be adapted to peace-time teaching of foreign languages, a special committee working under the Commission on Trends in Education of the Modern Language Association of America found that although no single method of presenting the language had been universally adopted in these intensive courses, several outstanding tendencies marked the classes.

The students were given a chance to progress according to their several abilities. The classes were kept relatively small and frequent promotions and demotions made so that the trainees with aptitude were not handicapped by those who learned more slowly. Every one in the group was called on frequently to speak in the foreign language.

The problem of whether fluency or accuracy was more important was met by compromise in most of the classes. Fluency was usually the primary objective in the early stages, but accuracy was stressed with the more advanced groups.

Designed to give students command of the colloquial spoken form of a foreign language, the Army Specialized Train-

ing Language Program, given at many colleges and universities throughout the country, was intended to make up as quickly as possible for our weaknesses as a nation in practical knowledge of foreign languages.

The first language course began in April, 1943, and by the end of the year approximately 15,000 trainees were studying languages under this system.

The curriculum was based primarily on experience derived from the Intensive Language Program of the American Council of Learned Societies which had been in operation for two years.

The course was designed to give the students 10 to 12 hours a week of oral practice in the foreign language, in small sessions with a native speaker, and three to five hours a week of formal instruction in the structure of the language studied.

"The people who were engaged to conduct the drill sessions represented, without doubt, the most heterogeneous group ever assembled anywhere to teach languages," the report states. "Besides some teachers of languages, there could be found economists, political scientists, lawyers, judges, poets, novelists, Army officers, school girls, housewives, barbers, a pearl diver, and even a former numbers-racket specialist."

A number of unusual techniques were used to capitalize on the feeling that language is not merely something to learn about, but something which we speak.

Songs and proverbs were used frequently in some classes because their melody and rhythm make them easy to learn. Good phonograph records were also employed. Lively plays, with



GORILLA SIZE—That Dr. Franz Weidenreich's estimate of *Meganthropus paleojavanicus* as "big as a big male gorilla" (*SNL*, June 24, p. 409) is not exaggerated can be judged by comparing the jawbone fragment (upper right) with the homologous part of a modern gorilla's jaw (right). Below are similar parts of chimpanzee (left) and human jaws (right)