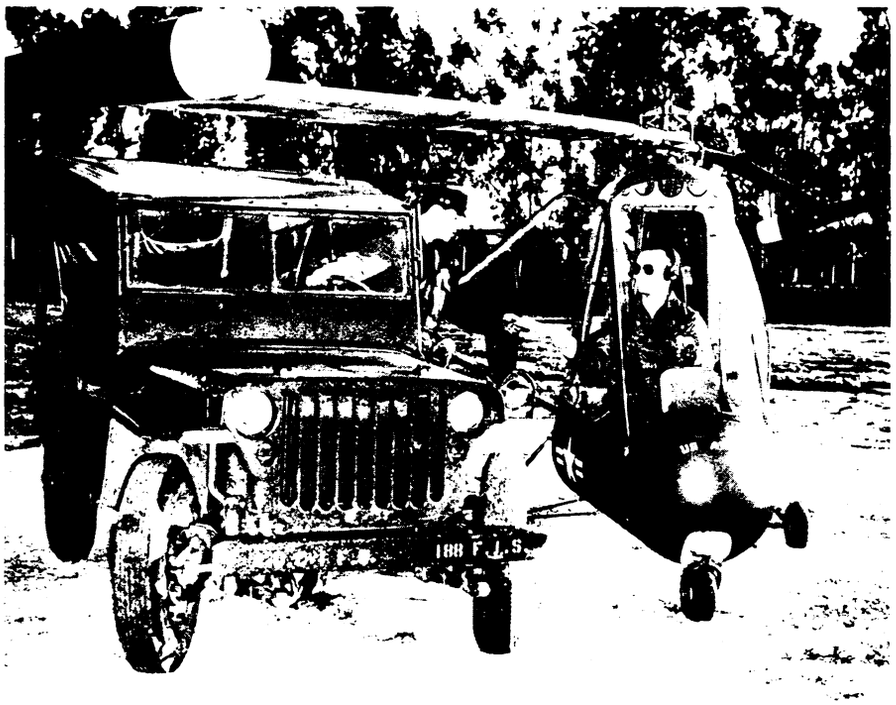

JET-POWERED, ONE-MAN HELICOPTER—In contrast to the giant shown on the cover, the Army's XH-26 is a jet-powered, one-man, collapsible helicopter. The baby craft weighs less than 300 pounds.

AERONAUTICS

Fly Largest Helicopter

See Front Cover

➤ TWO AUTOMOBILES beneath the cockpit of the U. S. Air Force's XH-17, the largest known helicopter in the world, emphasize the dimensions of the ship, shown on the cover of this week's SCIENCE NEWS LETTER.

Built as a ground test model by the Hughes Aircraft Company, the XH-17 was converted into a flight model after tests of the jet-powered rotor mechanism. Its rotor blades extend more than 125 feet and the overall height of the machine is more than 30 feet.

The helicopter is expected to be the forerunner of powerful, cargo-carrying helicopters designed to lift and deliver such heavy equipment as artillery, bridge sections and trucks in areas inaccessible to conventional aircraft.

In contrast to this large ship is the one-man, jet-propelled helicopter, the XH-26. Designed so that it can be dropped from larger planes, unpacked by two men and put in the air in approximately 20 minutes, the craft weighs less than 300 pounds.

Standing less than six feet high, the helicopter can be collapsed into a 5-by-14-foot container. It can carry a load of more than its 300-pound weight at a top speed of 80 miles per hour, and can fly one and a half hours on gasoline, kerosene or diesel fuel oil without refueling. The helicopter, built by the American Helicopter Co., Inc., Manhattan Beach, Calif., is powered by two pulse-jet engines mounted on the tips of two rotor blades.

Science News Letter, November 8, 1952

ENTOMOLOGY

Desert Locust Swarms May Be Increasing

➤ DREADED LOCUST swarms that have blackened the skies of Asia and Africa since Biblical times may be increased with irrigation of desert and sub-desert areas, Dr. B. P. Uvarov of the British Anti-Locust Research Center warned a group of desert experts in London.

Although desert locusts are able to live under near-desert conditions, they thrive and multiply only when they have sufficient moisture in the soil. The increasing number of irrigated areas in deserts and semi-deserts "may provide the desert locust with enlarged and more reliable breeding grounds," he said.

Dr. Uvarov mentioned a similar case in the United States, when desert irrigation in Arizona was followed by a sharp increase in the number of grasshopper pests.

Science News Letter, November 8, 1952

ENTOMOLOGY

Insect Cannibals Destroy Ant Pests

➤ CANNIBAL ANTS of the desert should be put to work controlling ants that destroy farm produce, Prof. F. Bernard of the University of Algiers advised an assembly of desert experts in London.

Prof. Bernard said that if they were introduced in larger numbers to cultivated areas, the cannibal ants would make short work of the grain-eating pests.

Science News Letter, November 8, 1952

EPIDEMIOLOGY

Influenza Virus Changes Make Epidemic Possible

➤ THE INFLUENZA virus's chief means of survival is its capacity for constant mutation, or change.

As a result, no one can yet say whether or when another outbreak like that of 1918-1919 will sweep the world.

So declares Sir F. Macfarlane Burnet, director of the Walter and Eliza Hall Institute for Medical Research, Melbourne, Australia, and one of the world's leading influenza researchers.

Important advances, which some day may make the difference between life and death, will come, he believes, from two lines of research: 1. The genetic approach; 2. An attack on the nature of a substance produced by the virus in the infected body cell. It is called soluble complement fixing antigen, or CFA for short. This substance is produced by the virus and appears very early in the infection. It is physically very much like a substance found in normal body cells, but differs from this substance in being able to stimulate production of antibodies and to react with them.

It seems from present knowledge as if there were substances in normal cells which bear the pattern of the virus. If scientists can at will put into lung cells, perhaps, new patterns to which the cells will respond by producing replicas, "we should possess a tool of great power," Dr. Burnet said.

He described these recent findings on the relation of the influenza virus to the infected cell in the second R. E. Dyer Lecture at the National Institutes of Health. (See opposing page.)

Science News Letter, November 8, 1952

ZOOLOGY

Europe's Zoos Repair Damages From War

➤ EUROPEAN ZOOS are running full blast now, and war damage has been largely repaired, Freeman M. Shelly, director of the Philadelphia zoo, found on an inspection tour of overseas zoos.

At a meeting in Rome, Director Shelly was elected secretary of the International Union of Directors of Zoological Gardens.

Science News Letter, November 8, 1952