

PUBLIC HEALTH

Vaccinations Ordered For Canadian Air Force

TO "keep 'em flying," all Air Force personnel in Canada and Newfoundland are being Schick and Dick tested for susceptibility to diphtheria and scarlet fever. Those found susceptible are being given injections of diphtheria toxoid and scarlet fever toxin.

More than 50% of personnel are susceptible to diphtheria on entering the Service, Flight Lieutenant A. H. Sellers, R.C.A.F. Medical Branch, reports (*Canadian Medical Association Journal*, October).

The number susceptible to scarlet fever exceeds 25% on the average, tests have shown.

"The health of the personnel of the British Commonwealth Air Training Plan has continued to be maintained at a high level," Lieut. Sellers states, "but outbreaks of diphtheria and scarlet fever during the winter and spring of 1940-41 caused sufficient sickness and loss of time to justify the introduction of procedures promising an effective measure of future control."

Science News Letter, October 25, 1941

MEDICINE

New List Available of Japanese Medical Journals

AMERICAN medical research workers and libraries can now obtain for the first time a complete list of Japanese medical journals. This new list has been compiled and issued as a service to American science by the Oriental Science Literature Service, administered by the American Documentation Institute, Washington, D. C. The director of the Oriental Science Literature Service is Joseph G. Yoshioka, Ph.D.

This publication, available at \$1, lists bibliographical data on 382 journals, giving the titles of the journals as transliterations, in Japanese characters, and English translations.

This new publication is only one of the functions of the Oriental Science Literature Service, inaugurated this year, which aims at the wider and more rapid dissemination of hitherto inaccessible Japanese scientific information, mostly in the field of the medical sciences.

Oriental Science Literature Service offers membership at \$3 a year which includes the Far Eastern Science Bulletin, issued monthly, containing abstracts of articles in current medical and bio-

logical journals in the Orient written in native languages. An important part of this service is the reduced rate of translations of such articles to make accessible to research workers scientific information at present not available because of the language difficulties.

Copies of "Japanese Medical Journals" can be obtained by remitting \$1 to the American Documentation Institute, 1719 N St., N. W., Washington, D. C.

Science News Letter, October 25, 1941

MILITARY SCIENCE—AGRICULTURE

British Advise Farmers On Protection of Crops

PRECAUTIONS against air attack on crops in the field have been taken by the British government, Sir John Russell of the Rothamsted Experimental Station, internationally noted agricultural authority, states in a communication to the scientific journal, *Nature* (Aug. 23). This "agricultural ARP" has been made the subject of three special bulletins issued by the Ministries of Agriculture and of Home Security.

Field crops may be attacked with either incendiary bombs and leaves or the more lingering kinds of poison gas, Sir John states. From fire there is little to fear in Britain, except in unusually dry seasons like the summer of 1940. The climate is much too damp, most of the time.

Of Britain's three chief grain crops, barley is the only one commonly left in the field until dry enough to burn. Oats and wheat are usually reaped while they still contain considerable amounts of moisture.

Stubble fields might be set afire after the harvest is in. Stubble fires in themselves are relatively harmless, but they may spread to stacked or stored grain in or near the fields, or to haystacks. For this reason, prompt plowing of stubble fields is advised, or at least plowing in strips dividing the fields into squares, so that the spread of fire will be limited.

Chemical warfare against crops has not yet been attempted, but the responsible authorities are overlooking no chances. It is unlikely that chemicals would be used to do direct harm to the crops. More probable is the spread of vesicants, like mustard gas or Lewisite, which would subsequently harm persons or animals coming in contact with the grain or stalks. Advising local ARP authorities, meanwhile letting the contaminated areas strictly alone, is the indicated treatment.

Science News Letter, October 25, 1941

IN SCIEN

ANTHROPOLOGY

Speaking of Halloween—Ancients Drank from Skulls

WITH Halloween just ahead, comes news from the Smithsonian Institution that early America's cannibals way up North drank from human skulls, real ones. There was no drinking cup shortage.

New examples of these macabre cups, found by Dr. Ales Hrdlicka of the Smithsonian staff at prehistoric village sites on Kodiak Island, Alaska, are described in a publication on recent excavations, just issued. Dr. Hrdlicka suggests that skulls of brave enemies may have been valued as cups through the belief that a beverage in such a cup would transmit valor.

The practice of drinking from skulls was once widely followed over the world, and some prehistoric peoples of North and South America, as well as Europe, did this.

Studying bones of the pre-Koniags, as Dr. Hrdlicka has named the very ancient Kodiak Islanders, the anthropologist says that they had very little disease, no dental decay, fewer broken bones than moderns have, and their main disease curse was senile arthritis. Their medicine men did primitive surgery of boring holes through the skull, and from skulls discovered, it appears that they reserved this operation for women.

Science News Letter, October 25, 1941

AERONAUTICS

Seaplane Landing Lights Float on Rubber Doughnuts

See Front Cover

THE GREAT array of curious looking glass domes shown on the front cover of this week's SCIENCE NEWS LETTER is part of a much larger number of lamps intended to mark out landing places on the water for seaplanes. They are floated on rubber "doughnuts" and can be turned on and off either by radio or by hand. They are shown in the picture being given a final inspection before being put to use.

Science News Letter, October 25, 1941

CE FIELDS

ARCHAEOLOGY

Yo, Ho, Ho! Science Explores Pirate City

YO, HO, HO! And what's under the jungle vines where the wicked pirate city of Basseterre stood on the tropic isle of Tortuga?

Ruins of a buccaneer fort that is a military masterpiece is the answer revealed by Dr. Alfredo Metraux, Smithsonian Institution anthropologist, who has given the famous pirate capital its first archaeological survey for science.

The ruins, ten miles north of Haiti, were plenty lively in seventeenth and early eighteenth centuries, when French and English privateers each wanted Basseterre as their magazine for munitions and stores seized on the Spanish Main. British and French captured the fort from each other nine times. Brass cannon and cannon balls were found by Dr. Metraux buried in mud or smothered in vines.

Noted for wild gambling and drinking orgies, Basseterre has preserved no trace of the thatched houses where the pirates and their native families lived.

Pirates cannot be blamed, Dr. Metraux believes, for large caves filled with skeletons, which he examined. These are bones of Arawak Indians, such as met Columbus when he reached America—not storage of pirate victims.

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PHYSIOLOGY—PSYCHOLOGY

Day Without Vitamin A Increases Night Blindness

IF YOUR diet is extremely deficient in vitamin A for just one day, night blindness may result that will increase your accident-hazard in night driving. This discovery was made by psychologists at the University of California under the direction of Dr. C. W. Brown, associate professor of psychology.

Ten students were the guinea pigs for these tests, and Dr. Brown divided them into two groups. One group ate foods with high vitamin A content for 12 days. The other group omitted A-containing foods from their diet. Then each group reversed the diet program for

another 12 days. At the end of each 12-day period students' eyes were tested by an apparatus developed by Dr. Brown for quick testing of glare blindness. A light was flashed in front of students' eyes for a short period, then the time for "vision recovery" was measured in a nearly dark room. Those who had been on a high vitamin A diet recovered from glare blindness in 18.03 seconds, while those with vitamin A deficiency took 22.70 seconds to adjust their eyes to dim illumination.

After one group on the excessive A diet switched to the deficient foods, their more rapid recovery time from glare blindness was lost within one day. When the other group began their deficiency diet, the glare-recovery time became longer gradually until the fifth day, then remained the same throughout the rest of the 12-day test.

The difference between the glare recovery time of the two groups was not great: 4.76 seconds, but enough to be significant. While the small number of students used in the tests does not permit any final conclusion on the exact time required for vitamin A deficiency to affect night blindness, the results are significant, Dr. Brown believes.

Science News Letter, October 25, 1941

PHYSICS

Most Energetic Particles Made With Cyclotron

ATOMIC BULLETS as powerful as some of the cosmic rays and the most energetic man has ever produced—96,000,000 electron volts—have been manufactured with the University of California 225-ton cyclotron, Dr. Ernest O. Lawrence, Nobelist, made known at the University of Chicago Fiftieth Anniversary Celebration.

This is six times the highest energy previously achieved, that of deuterons (heavy hydrogen) at the same maximum speed.

With carbon bullets Dr. Lawrence expects to be able to take six steps up the atomic ladder in transmuting elements. If iron were bombarded it would become arsenic.

With the giant new cyclotron now building at Berkeley, carbon bullets of 600,000,000 electron volts will be possible.

The research accelerating carbon atoms from carbon dioxide gas was done by Dr. Emilio Segre and Cornelius Tobias in the University of California Radiation Laboratory.

Science News Letter, October 25, 1941

MEDICINE—ENTOMOLOGY

Army Is Working on Anti-Chigger Weapon

ANNOUNCEMENT by the U. S. Army of a new weapon, for use against chigger blitzes, will be made soon. Reports that the battle of the chiggers had been won during the Louisiana maneuvers, however, were premature, officials in the Surgeon General's office at the War Department state.

Several ointments to repel chigger attacks are being tested and, as in the case of other Army weapons, specific suggestions for improvement are being made to the manufacturers. None of the preparations, however, has so far been officially approved.

For the benefit of civilians, U. S. Public Health Service skin disease specialists point out that chemicals in modern insecticides, such as pyrethrum, derris and rotenone, will probably kill chiggers as well as mosquitoes and flies and might be incorporated into a skin ointment. A pyrethrum ointment for treatment of scabies is now on the market. Since the itch mite which causes scabies bores beneath the skin like the chigger, this scabies ointment might also prove useful as a chigger ointment.

Science News Letter, October 25, 1941

MEDICINE

Find Why Fatal Pneumonia Starts With Severe Chill

GEORGE WASHINGTON had a severe chill before he died of pneumonia. That was over 100 years ago.

Today physicians know why fatal pneumonia often starts that way. Prof. Oswald H. Robertson of the University of Chicago explained the reason to the University of Chicago's 50th Anniversary Celebration.

Chilling of the body surface, Prof. Robertson said, causes a slight contraction of the epiglottis, the lid-like valve that closes the upper end of the windpipe during swallowing and prevents food particles and liquids from going down your "Sunday throat." With this vital valve reduced to a poor fit, fluids from the nose, mouth and upper part of the throat can get down into the lungs, carrying with them pneumonia germs that have accumulated in those entryways to the outer world. If there is an irritated condition in the lungs, as from a cough already started, pneumonia is likely to follow.

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