

PUBLIC HEALTH

"Creeping Death" Epidemic In Japan May Be Cholera

THE "CREEPING death" epidemic which is reported to have taken nearly 300 lives and caused illness of about 6,000 persons in Fukuoka Province in southern Japan is none other than cholera, in the opinion of U. S. Public Health Service officials.

The very name which has popularly been given the disease, "creeping death," is characteristic of cholera, it was pointed out.

"Cholera sneaks up on people and kills them overnight," Dr. C. L. Williams, chief of the foreign quarantine division of the federal health service, said.

Reports of 32 cases of cholera in Japan were included in the last report received from the U. S. consular service by the Public Health Service. It would be very surprising, Dr. Williams pointed out, if cholera did not break out in Japan as a result of being carried back by troops who have been fighting in China, where there has been a severe cholera epidemic.

The disease is spread chiefly through infected water and food. It can also be spread by direct contact, which may account for cases reported among policemen sent to aid health authorities in southern Japan but who were cautioned against drinking water from the local supplies.

Science News Letter, October 16, 1937

PLANT PATHOLOGY

Fungus Disease Threatens Famed Monterey Cypress

ONE of America's most famous tree species, the Monterey cypress of California, is threatened with extinction by a fungus disease, the cypress bark canker. Under the leadership of the U. S. Department of Agriculture, with the voluntary cooperation of citizens and the aid of CCC workers, heroic efforts are now being made to check it.

The region where first defense efforts are being centered is on the Monterey peninsula itself, where the only living natural stands of Monterey cypress have their home. There are two natural groves of the trees, one on Point Lobos, the other on Cypress Point. Thus far the disease has not reached these natural stands, but it has been rampant among ornamental and windbreak plantings of Monterey cypress within a very few miles of them.

Willis W. Wagener, of the Department of Agriculture, has made a critical study of the fungus and the symptoms that indicate its presence in the trees.

The fungus is known only as cause of this particular disease. It is considered to be a new species, and the technical name *Coryneum cardinalis* has been proposed for it. It gets into the wood of the tree, works its way around through the inner bark and the growth layer, or cambium, until it has the twig or branch completely girdled. A common but not invariable symptom is excessive oozing of gummy balsam.

The disease has now been discovered in planted Monterey cypresses over about two-thirds of the entire state of California. It also attacks the imported Italian cypresses, though less virulently. Laboratory experiments have shown that other conifers related to the cypress may be susceptible, but thus far they have not been found infected under field conditions.

If it is found in an early stage, infecting only a few twigs or branches on a tree, it may be stopped by drastic surgery, removing the wood well below the infected place and spraying the foliage heavily with Bordeaux mixture to kill spores that may be there.

But if the infection is more extensive, the only price for safety of trees still unattacked is to cut down and burn the entire infected tree. Citizens, reached by appeals to make this sacrifice for the sake of one of California's greatest rarities and most beautiful scenic features, have voluntarily destroyed their own plantings by thousands.

The advance of the canker toward Point Lobos and Cypress Point has been checked at least for the present. What the future may bring is, in part at least, a matter of vigilance by scientists and citizens alike.

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GEOLOGY

Meteorite Found in Soviet; Scientists Search for More

SOVIET scientists are searching for more fragments of a meteorite that fell with a thunderous noise on Sept. 13.

Reports to Tass, the Soviet news agency, state that one fragment weighing 54 kilograms (120 pounds) has already been found in the Tartar Republic. A flaming mass shaped like a globe was also reported to have fallen on the same day in the Belebey District of the Bashkirian Republic.

Science News Letter, October 16, 1937

IN SCIENCE

RADIO—ASTRONOMY

Radio Fades As Great Group of Spots Cross Sun

A SUDDEN drop in strength of radio broadcast signals accompanied an extraordinarily large group of sunspots that could be seen without optical aid.

The marked radio fadeout was observed by Dr. Harlan T. Stetson, Massachusetts Institute of Technology research associate here. His radiograph showed an 88 per cent. drop of field intensity of signals from a Chicago station on 770 kilocycles.

Nearly fifty earths could be dropped into the sun's area that is included by the compact cluster of 17 well-defined spot centers. The spots formed what looked like a huge blimp, 100,000 miles long and 30,000 miles wide. The total disturbed area was three billion square miles.

Science News Letter, October 16, 1937

PUBLIC HEALTH

Infantile Paralysis Hits New Area Despite Decrease

THE 1937 outbreak of infantile paralysis continued on the decline throughout the United States during the week ending October 2, but, even while on the downward grade, struck forcibly into new areas, the U. S. Public Health Service revealed.

Six hundred and three cases of the dread childhood disease were reported during the week as against 703 cases the week before. This was the second successive week to record a drop, health officers stated.

But the state of Colorado, which the previous week reported only nine cases, jumped last week to 31. High for the nation was still Illinois, with 72 new cases of poliomyelitis, as against 66 the week previous.

Other states in which the outbreak was considered fairly extensive were: New York, 45; Michigan, 44; Ohio, 40; Wisconsin, 34; Pennsylvania, 31; California, 30.

Science News Letter, October 16, 1937

E FIELDS

ARCHAEOLOGY

Pictographs on Dagger Clue to History of Writing

A FURTHER stage in tracing the origin of our alphabetic system of writing is revealed in discoveries from the site of ancient Lachish, in Palestine.

A copper or bronze dagger made certainly not later than 1600 B. C., is now on view at the Wellcome Research Institution, London. It is one of the relics of the prehistoric and pre-Jewish period in Palestine, which have been obtained on the mound site of Tell Duweir, 18 miles southwest of Jerusalem, identified with the ancient Lachish, which is being excavated by the Wellcome Marston Archaeological Research Expedition to the Near East.

Antiquities obtained in the season 1936-7 are now on view, and among them is this dagger, which although found three years ago, has only recently been cleaned by authorities of the Museum of Antiquities in Jerusalem. It is lent for exhibition by the Government of Palestine.

When the dagger was cleaned a little while ago, it was found to bear four signs arranged vertically. These evidently form an inscription in pictographic script, in which the meaning is conveyed by pictures, each representing a word or idea. One of the four signs is a beautifully engraved representation of a man's head in outline. This is the second sign in the vertical line. Immediately below is what is apparently a snake. The remaining two signs, first and last in the line, have not yet been made out.

There is no clue to the meaning of the inscription, but it is probably a declaration of ownership showing the owner's name, or possibly a dedication.

Interest of the inscription lies in the fact that it shows the earliest stage in an ancient system of writing, which was developing quite independently of the hieroglyphic script of Egypt and the cuneiform, or wedge-shaped, writing of Mesopotamia. By 1600 B. C. both these systems were fully developed; but in Palestine development went on quite independently in the direction which came ultimately through the system invented

or improved by the Phenicians, to our modern alphabet.

It is now possible to trace the more important stages in development of our alphabet, though the sequence is not yet complete.

First comes the pictographic script from Lachish, just found.

Then the form shown on inscriptions found by Sir Flinders Petrie in the Sinai Peninsula some years ago, in which the picture has broken down into a sign, but in which it is still possible in most cases to make out what was the picture from which the sign was derived.

Then we come to the inscriptions on bowls of the 13th century B. C. found at Tell Duweir in which the signs have developed still further—so much so, in fact, that not all have yet been identified. These Tell Duweir signs seem to stand half-way between those of Sinai and the early Phenician, from which the early form of the alphabet developed.

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GEOGRAPHY

Scientists at North Pole "Bedding" Down for Night

By I. PAPANIN

Leader of Soviet Scientific Expedition to the North Pole (Through Tass)

DURING the last few days we have been energetically preparing to meet the polar night. We have drawn eider-down covers over our main living tent and in order to preserve more warmth within, have strewn the tent edges with snow. It immediately became warmer in the tent, 44.6 degrees Fahrenheit, while outside the thermometer showed only 17.6 degrees Fahrenheit. On September 10 we completed the construction and equipment of our new kitchen, the walls of which are made of ice. There is a common roof over both the kitchen and the living tent; wind and snow can not penetrate into the kitchen.

On September 12 we lit the kerosene lamp for the first time. It will burn until February.

We often encounter storms and strong winds. We are all in excellent mood and are not disturbed by the advent of the polar night. In case of future necessity, we are stowing away on three sledges supplies of provisions, fuel, clothing and tents; in the event of sudden jamming of the ice or the appearance of large crevices we shall be able to move to another place without loss of time.

Science News Letter, October 16, 1937

MEDICINE

Nicotinic Acid May Be Pellagra Preventive

PATIENTS in certain southern hospitals suffering from pellagra, serious skin and nervous disorder resulting from a dietary lack, are now being given doses of nicotinic acid to test its pellagra-curing power. (*Journal, American Chemical Society, September.*)

The tests are a sequel to the discovery by C. A. Elvahjem and R. J. Madden, University of Wisconsin agricultural chemists, that nicotinic acid will prevent and cure black tongue in dogs. This disease is generally considered the canine counterpart of human pellagra.

Similar diet tests made on inmates of orphanages and other institutions in the south enabled the late Dr. Joseph Goldberger of the U. S. Public Health Service to prove that pellagra is due to lack of a vitamin found in fresh meat, milk, fresh vegetables and yeast. The vitamin has been variously called B, G, P-P, and now is generally referred to as the anti-pellagra vitamin, to avoid confusion with other vitamins. The disease is characterized by a skin rash and nervous symptoms. Many pellagra patients have become demented as a result of the disease. In the past it has been especially prevalent during hard times in the South, and is sometimes called the "hard times disease," because of the vitamin-lacking diet of salt pork, mush and molasses which the poor people lived on at such times.

May be Vitamin

Nicotinic acid, which may turn out to be the anti-pellagra vitamin, is present in small amounts in various plant and animal tissues and is also found in tobacco. This does not mean, the scientists pointed out, that smoking or chewing will prevent pellagra.

In explanation of the effect of nicotinic acid, Drs. Elvehjem and Madden suggested the theory that the acid is present, and therefore probably essential, in one of the enzymes that transfers oxygen from the blood to the cells of the body. Apparently animals cannot build the vitamin from food compounds but must get it ready-made.

The Wisconsin investigators aided by F. M. Strong and D. W. Wooley, have also succeeded in distilling a crystalline form of the vitamin from liver. They call this nicotinic acid amide and find it about as effective as commercial nicotinic acid in curing black tongue.

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