

# Germ-Killer May Wipe Out Cholera

Public Health

## India To Study Immunization With Bacteriophage

PLANS for wholesale immunization against cholera, by which whole towns may be protected from the dread disease of the Orient, are now being considered. These plans are based on recent investigations with the bacteriophage, or germ-killer, taken from patients getting over an attack of cholera. If the plans prove practical, there may soon be a time when entire communities can be immunized against Asiatic cholera and epidemics of that disease may cease.

The Indian Government has invited Prof. F. d'Herelle of Yale University, discoverer of the bacteriophage, Major R. H. Malone, officiating director of the Pasteur Institute at Kasauli, and Dr. M. N. Lahiri to investigate the new discovery that bacteriophage, which is virulent for the cholera germ when taken from a convalescent cholera patient, acts as a prophylactic when administered to the uninfected and as a remedy for those who have already contracted the disease.

Bacteriophage, it is thought, is a normal inhabitant of the intestine and is a parasite on the microorganisms

found there. It was discovered after an epidemic of cholera that as soon as the bacteriophage from convalescent patients became diffused through natural means into the water used by the community, the epidemic ceased. This is the fact that the scientists are using as a basis for their investigations. Their suggestion is that potent strains of bacteriophage be grown deliberately and these cultures be introduced directly into the wells, thus immunizing whole communities at one time.

As a remedy when the individual has contracted the disease the bacteriophage has been found very efficacious, it is claimed. If it was given within six hours of the first symptoms, there were no deaths; if administered between six and twenty-four hours the mortality rate was 10.2 per cent. but after twenty-four hours the rate rose to 14.3 per cent.

The bacteriophage is said to be entirely harmless when given by mouth. There is a special warning that it should never be administered by injection under the skin.

SPECIAL orders to quarantine officers in Manila and on the west coast of the Philippine Islands have been issued by the U. S. Public Health Service in order to prevent any spread of cholera from the Philippine Islands to this country. Eight hundred cases have been reported unofficially from the Philippines, although the official figures are considerably lower than this.

Passengers for the United States are not allowed to board vessels at Manila unless bacteriological tests have shown them to be free of the germs of this disease. If these tests are not made, the passengers must be kept under observation for five days before sailing. Quarantine officers here are ordered to be on the watch for cases of the disease in vessels arriving here from the Philippines.

Cholera is a highly fatal disease, and is fairly common in the Orient, particularly in India where there are always some cases of it. The germs of the disease are spread in drinking water.

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## Ancient, Not Prehistoric, Relics Found

Anthropology

INDIAN relics of probably ancient date, though not of the age usually thought of as "prehistoric," have been dug out from under a series of dunes on the margins of Oso Creek lagoon near Corpus Christi, Texas, by Prof. E. H. Sellards, University of Texas geologist who conducted the investigation on behalf of Science Service. Prof. Sellards was interested in the possibility of finding evidences of early human occupation by flint implements discovered there by W. Armstrong Price of Corpus Christi, Texas.

In a telegraphic report to Science Service, Prof. Sellards stated:

"The evidence of early human habitation consists of worked flints, chips and spalls buried in clay dunes. These dunes are made by slow accumulation of dust particles blown from the flat bottom of the lagoon when it goes dry. The lagoon usually contains water, but is occasionally dry in midsummer. These conditions are intermittent.

"These spells of dryness must have been recurring for a long time, because dunes from ten to fifteen feet in height have accumulated at the west margin of the lagoon. At the present time the lagoon is dry and the dune-building process may be seen in operation.

"The artifacts are found to a depth of six feet or more, and with them there are many seashells. As the dunes were being slowly built men living on them brought in sea-food, including oysters, conches, and scallops, leaving their shells to lie when they ate them. Storms also occasionally washed shells across the dunes.

"Fossil bones found in the dunes represent deer, wolf and other animals of the present time. For this reason it is thought that the period when man lived there was recent in the geologic sense, although as shown by the slow building of the dunes it must have been several centuries ago.

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## Oiling Eggs

EGGS with oil-soaked shells may become standard articles of commerce as a result of a series of experiments performed by T. L. Swenson and H. H. Mottern of the U. S. Department of Agriculture.

They treated eggs with two different types of oil, both at ordinary atmospheric pressure and in a vacuum, and then kept them for ten days at a temperature of 98 degrees Fahrenheit, weighing them at regular intervals to determine the rate of shrinkage of the contents.

It was found that untreated eggs lost about 13 per cent. of their total weight during the ten-day period, eggs dipped in mineral oil at atmospheric pressure lost 2 per cent., while eggs dipped in aluminum soap oil under vacuum lost only one-half of one per cent.

Chemistry

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