

Little Dipper on a clear night and with its aid we can check up on the position of Polaris by recalling that it is located at the end of the handle.

There are times when we may find it very convenient to be able to get our bearings by the North Star. Everyone should know at least one way of locating this important star.

ISOLATION ONLY PLAGUE PREVENTIVE

The only preventive of the plague, a virulent pneumonia, which recently broke out in Los Angeles is the complete isolation of the patient.

"Careless disposal of the discharges of the patient is the main way of spreading the disease," said Dr. M. J. White, acting surgeon general of the Public Health Service.

The people infected with the disease in the present outbreak have been Mexican natives of Los Angeles. They were ranch workers and doubtless were infected by ground squirrels. Unlike the bubonic plague, it is not spread by the bite of animals but through droplets of sputum given off in the air by the patient. It is almost impossible to detect the difference between it and broncho pneumonia in the early stages except that it is more virulent from the first. An examination of the sputum of the patient will show the presence of the germs.

"The disease must have spread from the ground squirrels in California since no case of the plague has been recorded in Mexico for the last two years," said Dr. G. W. McCoy, director of the Hygienic Laboratory, U. S. Public Health Service.

The pneumonic plague is a native of Manchuria and other northern climates. The last great outbreak occurred in 1911 when over 50,000 people died in a few weeks. The first known case of pneumonic plague came to the western hemisphere in 1899 from Africa.

In 1919 fourteen cases were recorded in different parts of California. Ground squirrels were examined and found to be infected with the disease. The death rate in this slight epidemic was 100 per cent. It was not recognized definitely until the last case where an autopsy proved it to be plague and not pneumonia. It can never be particularly violent in California as the germs need a cold, damp atmosphere to thrive. Under favorable conditions they can lie dormant for years and still spread the plague.

It is probable that it was the pneumonic rather than the bubonic plague that swept through England and France in the Middle Ages.

Two specialists in contagious diseases, Dr. J. C. Berry and Dr. M. E. Wayson, have been sent out to the coast by the U. S. Public Health Service to study the conditions leading up to the plague.

The situation in California is not alarming to any except the ground squirrels as a war of extermination is being waged against them. Every precaution is being taken to prevent new cases. Rats are also suffering in the war. They have been in bad odor as carriers of plague for centuries. The same quarantine precautions are being observed as in diphtheria.

The germ was discovered and isolated by The Royal Academy of Science of

Austria in 1898. The germs were brought over from India and Dr. Muller was put in charge of the experimental work. The earliest victim of the plague in Europe was a man named Barisch who was detailed to watch the animals used in the experiment. Due to carelessness, he became infected with the disease and died. This definitely established the fact that pneumonic plague was caused by a plague germ, bacillus pestis. The people attending his case also died, proving the infectious quality, high fatality, and difficulty of diagnosis of this disease, as it was not recognized until he had been ill three days.

RAT EXTERMINATION MAY BE NECESSARY TO STOP PLAGUE

Complete extermination of the rats in Los Angeles may be necessary before the pneumonic plague can be stopped among the inhabitants. Ground squirrels in California are known to be infected with the plague and have been for several years. They may have spread the disease to the rats of the city.

So far the cases have been confined to the Mexican quarter and to the people who have visited their sick friends. In this case only the most extreme quarantine will have any effect.

The latest report from the U. S. Public Health Service shows a total of 29 cases reported and 22 deaths.

A plague serum, rather like the anti-toxin used in diphtheria, has been sent out to the coast by a drug company in Philadelphia. This is purely an experiment as it has never been tried before in the treating of pneumonic plague.

No alarm is shown by the U. S. Public Health Service over the report of a case of bubonic plague in New Orleans. The plague was brought over by a Belgian sailor on a Greek ship from Algeria. The case was diagnosed upon his arrival and all precautions were taken. Since the plague is spread by the bite of a rat flea the ship, *Atlanticos*, has been entirely cleared of rats and has been disinfected.

About a month ago a case of yellow fever was reported in New Orleans without causing a ripple of interest in the medical profession. It was impossible for that case to spread because it was so late in the season that mosquitoes which act as the carrier were dead. In the second place, the case was fully developed and a yellow fever patient cannot infect the carrier after the first 72 hours of the development of the case.

PLANTS RESPOND TO STIMULUS THOUGH THEY HAVE NO NERVES

Definite response by plants to stimuli, under circumstances that disprove any idea of nervous connection, was the subject of experiments reported to the Royal Society by R. Snow of Trinidad.

In his experiments, Mr. Snow cut the stem of a sensitive plant in two, connecting the parts only with a rubber tube filled with water. Yet a stimulus on one side of the cut was transmitted through the water, for the leaves on the other side responded by folding up. A stem crushed in water gave this water the power to stimulate any shoot dipped into it. Mr. Snow believes that when a plant is stimulated, some substance is released that travels in the sap, or in the present instance in the water, and thus causes a response in a distant part.