

the rats and mice, and much has been done in the last few years through this means to stay the progress of outbreaks.

Dr. Kitasato, in the present instance, is unable to affirm positively how the epidemic originated, but favors the theory that the first victim was a Chinese trapper, who contracted the disease from the fur of a Mongolian rodent, the bartagen, since when it has been spread by human agency, not by rats. This circumstance helps to explain the exclusively pulmonary character of the disease, the most reasonable hypothesis being that the filthy personal habits and overcrowding of the Chinese promote the contagion through germs from the sputum brought into contact with the clothes, hands, mouth, etc., of the victims, and thence gaining entry to the lungs, whereas the bubonic plague usually is contracted by bites of fleas or from plague-infected rats. The bacillus is not transmitted through the air.

That the disease is aggravated if not developed by bad living in the sanitary sense—poor or insufficient food, overcrowding, foul air and filth—is well known. Cold weather appears to check its ravages in European countries, which have been scourged by it many times. Always it has traveled westward, usually along the ancient courses of traffic between Europe and Asia, over or along the Mediterranean Sea. Writers of ancient Greece and Judea describe its ravages. In Rome it appeared several times before the beginning of the Christian era and in the year 170 A.D. in the reign of Marcus Aurelius it raged over all Europe and Asia.

The most frightful form of the plague known to history was "the black death," which within the last six months has appeared in England and has been virtually overcome by modern sanitation. But, appearing in 1340 in Italy, the disease spread northward and throughout all Europe carried sudden destruction to millions. England and Scotland suffered greatly from it, and Ireland in less degree. The Scandinavian countries were frightfully devastated by it, Norway losing two-thirds of her population from it.

London's "great plague," which began in December, 1664, is said by some writers to have caused 100,000 deaths; the mortality officially recorded was 68,596. It was graphically described by Defoe in his "History of the Plague." Fires were kept up

day and night to purify the air, and it was believed the infection was not fully destroyed until the great fire of 1666.

The "black death" received its name from black spots that appeared on the skin of those afflicted with the disease. Tumors of the glands, stupefaction and expectoration of blood marked its development. No remedy was known for it. Those who could afford to do so fled from a town or region in which it made its appearance, just as people to-day are fleeing from the Chinese territory, which the new plague is ravaging. The belief that the "black death" was an air borne disease prevailed to such an extent that those stricken with the disease often were left to perish from lack of attendance. So fatal was the "black death" that it is estimated one-fourth of the 100,000,000 population of Europe at the time, or about 25,000,000 persons, became its victims.

Symptoms of the pneumonic type of the disease usually are declared in from three to five days; and without the previous exhibition of Haffkin's serum recovery usually is rare.

Although this type is really less virulent than the bubonic type, yet owing to the virtual absence of technical knowledge of preventive measures and the impossibility of segregation, the epidemic at present in China is almost bound to spread and assume somewhat the proportions of the European black death, which also was pneumonic. Comparative immunity is solely due to superior hygiene. Dr. Kitasato reports that if the disease were introduced into Japan he could stamp it out in one month, thanks to the nation's perfected system.

*Sanitary Milk Pails:* There are a great many different styles of sanitary pails used in the production of certified milk, any of which are an improvement over the old open pail which has no provision for keeping out dirt and which should not be used in any dairy.

Generally speaking the sanitary pails have a small opening. Some are provided with a strainer, through which the milk passes in entering the pail. This strainer consists in some cases of metal wire, but it is not so satisfactory as a cheese cloth strainer.

Aside from the strainer used in the pails absorbent cotton is generally preferred.