PLAGUE INVESTIGATIONS IN INDIA.

The following extracts and condensations are from the reports on plague investigations in India issued by the advisory committee appointed by the secretary of state for India, the Royal Society, and the Lister Institute, and published in the Journal of Hygiene, September, 1906, and July, 1907:

Transference of plague from rat to rat.—In experiments which were a repetition of those of Gauthier and Raybaud (1902, 1903) it was shown that, in the presence of the common Indian rat flea (*Pulex cheopis*, Rothschild), plague may be spread from a plague-infected rat to a healthy rat confined in close proximity, but in such a way as to prevent contact with the body or excreta of the sick rat.

Two wire cages were placed in a glass box, the cages rising above the level of the top of the box, the intervening space being bridged over by a fine variety of muslin (tulle), which is impervious to fleas. Each cage stood in a tiny tray, which collected the urine. It was found necessary to fill both trays with either dry earth or sand in order to provide dryness and shelter for the fleas, which without some such cover rapidly died out. Each cage was provided with a lid through which the rats were introduced and food and water given to them. The lids when put on were also covered with fine muslin.

Rats placed in the cages were therefore protected against invasion from outside the whole apparatus by particles larger than such as are capable of passing through fine muslin; they could not come in contact with the bodies, feces, or urine of each other.

In one cage was placed a rat inoculated with plague, together with 10 to 20 fleas obtained from Bombay rats. More fleas were in some experiments added subsequently. As soon as the inoculated rat was found dead, a healthy rat was placed in the other cage. The dead rat was left in the first cage till eight to twelve hours later, when it was removed and examined for septicemia. If no plague bacilli were found in the blood microscopically, the experiment was abandoned.

If the healthy rat died, a careful post-mortem examination was made, the position of the buboes noted, and smears from the bubo, spleen, and heart's blood stained and examined. Further, cultures were made from the liver and heart's blood, and the resulting growths tested both culturally and on animals, a number of rats being inoculated with each strain. All rats which had not died in three weeks from the day of being first placed in the second cages were killed with chloroform and examined, to make certain that they were not suffering from a subacute or chronic form of plague. In these cases

also, if there was any doubt in the matter, cultures were taken and animal tests employed.

As a result of these experiments, healthy rats on 30 occasions contracted plague in sequence to living in the neighborhood of plague-infected rats under circumstances which prevented the healthy rats coming in contact with either the body or excreta of the plague-infected rats. In all cases a fairly abundant supply of fleas was present; these could pass freely between the two rats used in each experiment, and, except for "aerial contagia," formed the only apparent means of communication between the animals. The presumption is that plague was transferred from the sick to the healthy rat by the agency of the fleas.

To exclude aerial infection, attempts were made to conduct a similar series of experiments in the absence of fleas. This was, however, found to be impracticable, because even with the greatest care it was impossible to insure that the animals were entirely free from fleas. Experiments were therefore instituted in which the fleas themselves were taken from a sick rat and placed on a healthy animal.

Another set of experiments was made to demonstrate the transference of plague from rat to rat by transference of fleas. Bombay rats were inoculated with a virulent culture of *Bacillus pestis*, placed separately in flea-proof cages and supplied with rat fleas. In the event of any of these rats dying with plague and if their blood contained any bacilli on microscopical examination, the fleas were caught and transferred to a fresh flea-proof cage in which was placed a healthy rat. The flea supply for each healthy rat was always obtained from two or more septicemic rats. As in the first series of experiments a careful post-mortem examination was made of all uninoculated rats which died. The position of the buboes was noted; smears from the bubo, spleen, and heart's blood were stained and examined, and cultures were made from the liver and heart's blood. The resulting growths were tested both as regards their cultural and animal reactions.

All rats which had not died after three weeks were killed with chloroform and examined.

In 21 experiments out of 38 (55 per cent), healthy rats living in flea-proof cages contracted plague in sequence to receiving fleas collected from rats dead or dying of septicemic plague in another cage. The possibility of the rat flea (*Pulex cheopis*) carrying plague from one rat to another was therefore demonstrated directly.

Experimental production of epidemics among guinea pigs.—Experiments which had as their object the determination of the relative importance of the Indian rat flea, *Pulex cheopis*, and of actual close contact in the absence of fleas in the dissemination of plague from animal to animal, were carried out in a series of six small "go-downs" or cabins built especially for this purpose.

Guinea pigs and also two monkeys were used for these experiments, as it had been shown by Liston (1905) that the rat flea that has to be dealt with in India readily attacks these animals in the absence of its natural host.

The godowns were six in number and built in a row. The walls, 9 inches thick, were built of brick and mortar, while the floors were of concrete on the top of a high plinth. The walls and floors were

therefore impervious to rats. Each go-down was entered by a tightly fitting wooden door. The door opened inward into an inspection chamber separated from the rest of the interior by means of wire netting, carefully fitted onto a wooden framework and extending up to a wire netting which covered the inside of the roof. This netting, as also that under the roof, was made of stout wire and had a mesh of half an inch. A door, also of wire netting, gave access from the inspection chamber into the interior of the go-down.

In certain of the go-downs, with the exception of the doors, there was no opening in any of the walls. In certain others there were, for the purpose of ventilation, small windows, measuring 1 foot square, in the front wall. These windows were closed by a double layer of wire netting carried on a wooden framework let into the masonry of the wall. The essential difference in the construction of the go-downs consisted in the structure of the roofs. Two had roofs of ordinary country tiles, placed in four layers on the top of wooden laths. Immediately on the inside of this roof there was a wire netting carried on a wooden framework, the framework being carefully built on all sides into the masonry of the walls. In the roof (a country-tiled roof) of one go-down a certain amount of light was allowed to penetrate through a small glass window in the tiles. This opening did not exist in the roof of another go-down having a country-tiled roof. In the former of these two go-downs there was a second wire screen 10 inches below the one immediately under the tiles. This screen was also carried on a wooden framework built into the walls. While, therefore, rats could inhabit the tiles of the roof and build their nests there, they were completely shut off, in one case by a double screen of wire, in another by a single screen of wire, from the interior of the go-downs. The object of the double screen of wire was to prevent any possible contact between experimental animals in the go-down and the wild rats inhabiting the roof.

The roofs of two other go-downs differed from those just described in having for a roof a single layer of flat Mangalore tiles instead of country tiles. In one of the go-downs with a Mangalore-tile roof there was a ventilator, also of Mangalore tile, through which a small amount of light was allowed to penetrate into the interior of the go-down, the ventilator not existing in the other go-down with a similar roof. Further, the roofs of both these go-downs were separated from the interior by a single layer of wire netting. Mangalore tiles, in comparison with country tiles, afford a poor shelter to rats. It was found, therefore, that the rats inhabiting the roofs of go-downs with Mangalore-tiled roofs were not nearly so numerous as in the case of go-downs with country-tiled roofs. That rats inhabit the roofs of these go-downs has often been a subject of observation. They were frequently seen on the top of the wire during the day while the go-downs were being examined. As many as twelve rats were seen in a single go-down at one time. The species seen was always *Mus rattus*. Further, rats' nests were found on several occasions on the wire netting. Rat dung was also found in the go-downs themselves.

The roofs of the last two of the series of six go-downs was made of a single layer of corrugated iron fastened down with cement to the top of the walls all around. It is evident, therefore, that no rat

could penetrate inside the roof of either of these go-downs. The wire netting under the roof of one of these go-downs was of a single layer; in the case of the other there was a double layer.

The fact is emphasized that the only essential difference in the six go-downs was the structure of the roofs. This difference, however, was of such a nature that the natural supply of fleas, depending as it did on the number of rats inhabiting the roofs, and the amount of light, varied in the different go-downs. In the case of the first two go-downs, the roofs of which offered good protection and shelter to the wild rat of Bombay, the flea supply was abundant and regular. In the case of the second pair of go-downs, the roofs of which offered only poor protection to rats, the flea supply was more or less scanty; while in the last two go-downs, the roofs of which were absolutely impervious to rats, no fleas were able to gain access unless carried in though the door on the experimental animals themselves, or by the attendant when feeding these animals.

All animals dying in the course of the experiments were submitted to a careful detailed post-mortem examination. This examination included a microscopical examination of smears of the bubo, of the spleen, and of the heart's blood. Further, cultures were taken, and if there was the slightest doubt of the diagnosis, cultural and animal inoculation tests were made.

Using these go-downs, experiments were conducted in which epidemic plague did not occur when healthy guinea pigs lived in close contact with plague-infected guinea pigs under conditions where access of fleas was prevented, but in which, under otherwise similar conditions, plague spread among the healthy animals in places where fleas were abundantly present. Simond, Gauthier and Raybaud, and Liston never succeeded in infecting animals from one another when healthy and plague-infected animals were confined together in the same cage, if fleas were excluded and the animals were not allowed to devour the cadavers of their dead comrades. The experiments of the committee were conducted upon a somewhat larger scale than had been previously possible. By experiment an epidemic in an uninfected go-down was started by the transference of fleas from guinea pigs dying from plague. The epidemic was maintained by the introduction of fresh fleas. It was also indicated by experiments that when an epidemic has occurred among a number of guinea pigs the contagion still remains in the place, and is effective in proportion as the test animals are accessible to and found to be infested with fleas. It was shown that fleas removed from infected guinea pigs, and isolated in test tubes, can convey plague to healthy animals on which they are allowed to feed; and also that plague is not conveyed from mother to offspring in the absence of fleas. Finally, a monkey was safely exposed in a plague-infected place where the free access of fleas to his person was prevented, whereas his companion, not so protected, succumbed.

The following conclusions were drawn as a result of the experiments cited above:

Close contact of plague-infected animals with healthy animals, if fleas are excluded, does not give rise to an epizootic among the latter. As the go-downs were never cleaned out, close contact included contact with feces and urine of infected animals, and contact

with and eating of food contaminated with feces and urine of infected animals, as well as with pus from open plague ulcers.

Close contact of young, even when suckled by plague-infected mothers, does not give the disease to the former.

If fleas are present, the epizootic, once started, spreads from animal to animal, the rate of progress being in direct proportion to the number of fleas present. The epizootic was very rapid in those go-downs in which the flea population was abundant and was kept up by a natural supply from the roof; it was much slower in a go-down in which the flea supply was kept up artificially; and, finally, it was slowest of all in a go-down in which there was no definite natural supply of fleas, and from which the fleas were daily removed for a period of six days, after which removal only a comparatively small number could be caught.

An epizootic of plague may start without direct contact of healthy animals and infected animals. Thus, in one experiment healthy guinea pigs were not put in the go-down until the last inoculated guinea pig formerly kept therein had died and been removed.

It having been shown by direct experiment that the rat flea can convey plague from rat to rat, experiments of a similar nature with the fleas removed from infected go-downs were recorded.

Infection can take place without any contact with contaminated soil. In certain of the experiments the guinea pigs placed in wire cages 2 inches above the ground developed plague. In another experiment a monkey placed in a go-down, but never in contact with the ground, also developed plague.

Aerial infection was excluded. Thus, guinea pigs suspended in a cage 2 feet above the ground did not contract the disease, while in the same go-down those animals allowed to run about and those placed 2 inches above the floor became infected. Further, a monkey surrounded by " tangle foot " escaped, though exposed as much to aerial infection as the control animal which contracted the disease.

Experiments in plague houses in Bombay.—Observations were made which go to prove, both indirectly and directly, that in a plague-infected house the infection may be due to the presence therein of rat fleas, which are capable of transmitting the disease to animals.

In choosing the houses for this present purpose care was taken to insure that they were really plague infected. Thus for the most part only those rooms were used in which two or more people were suffering from the disease, or in which rats infected with plague had been found, or in which there was a history of dead rats having been discovered. In some cases, but not in all, there was absolutely no doubt about the house being infected. A careful post-mortem examination was made of every animal which died. The naked eye post-mortem appearances were first recorded; then smears of the spleen, of the heart blood, and of the bubo, if a bubo was present, were stained and examined. Finally, cultures were taken from the organs and from the heart blood. These cultures were tested as to their appearance on agar and as to their power of forming involution forms on salt agar and stalactites in oil broth. Further, subcultures of every strain were inoculated into a number of wild Bombay rats, which rats were examined post-mortem for signs of plague and for the presence of the plague bacillus in smears of the spleen.

The following is a summary of the observations and conclusions of the committee as a result of experiments with plague houses reported in 1906:

Guinea pigs allowed to run free in plague houses in many instances attracted a large number of fleas, which fleas were mostly rat fleas. Of these animals, 29 per cent contracted plague and died from the disease. The position of the bubo in the great majority of these cases was cervical.

If a plague house had been previously disinfected by the ordinary means of disinfection, fleas were still caught in large numbers on guinea pigs set free in them. Further, a considerable number (29 per cent) of these animals died of plague, the bubo in the great majority of these cases being in the cervical region.

Fleas transferred from plague-infected rats found dead or dying in houses were able to transmit plague to healthy animals in flea-proof cages in the laboratory. The bubo in all cases was in the cervical region.

Fleas transferred from guinea pigs and other animals which had been placed for a few hours in plague houses were able to transmit the disease to fresh animals when fed on these in flea-proof cages in the laboratory. The situation of the bubo in these animals was in the great majority of cases in the cervical region.

Animals were placed in plague houses in pairs both protected from soil and contact infection and both equally exposed to aerial infection, but one protected from fleas by means of a fine metallic curtain and the other not so protected. None of the protected animals contracted plague while several of the unprotected animals died of the disease. The position of the bubo in every instance was in the cervical region.

Animals were placed in plague houses in pairs, both protected from soil and contact infection and both equally exposed to aerial infection, but one surrounded with a layer of "tangle foot" and the other surrounded with a layer of sand. Many fleas were caught on the "tangle foot," a certain proportion of which were found on dissection to contain in their stomachs abundant bacilli microscopically identical with plague bacilli. Out of 85 human fleas dissected only one contained these bacilli, while out of 77 rat fleas 23 were found thus infected. The animals surrounded with "tangle foot" in no instance developed plague, while several (24 per cent) of the nonprotected animals died of the disease.

During the epidemic of 1907 previous observations were confirmed and amplified and the following conclusions reached:

In 19 out of 100 experiments guinea pigs allowed to run free in houses which were presumably plague infected developed the disease and died. On three occasions—namely, on every occasion on which the experiment was made—fleas transferred from plague-infected rats found in houses infected fresh guinea pigs in the laboratory. Rat fleas caught on guinea pigs in plague houses and transferred to fresh guinea pigs transmitted the disease in 35 per cent of the cases. A census of rat fleas in houses in Bombay which were proved plague infected indicated that rat fleas were twelve times as numerous as in control houses, and that in presumably plague-infected houses rat fleas were four times as numerous as in control houses. In 41 out of

130 fleas taken on guinea pigs in plague-infected houses bacilli microscopically indistinguishable from plague were found in the stomach. In the case of 24 of the 27 houses definitely proved to be plague infected, dead rats had been found shortly before the experiments were made.

Plague bacillus in rats.—Interesting observations were made on the number of plague bacilli in the blood, urine, and feces, respectively, of rats which had died of plague.

The blood of plague-infected rats may contain an enormous number of plague bacilli, even as many as 100,000,000 per cubic centimeter having been found before death. On the other hand, rats occasionally die from plague with little or no septicemia.

While the blood of a rat may have as many as 100,000,000 organisms in a cubic centimeter, the urine may have none at all, or at least less than 10 per cubic centimeter. Plague bacilli were discovered in the urine in 29 per cent of the cases. When the urine contained plague bacilli they were always present in much fewer numbers than in the blood.

The feces of rats dead of plague even when the blood contains abundant bacteria, are not, it was concluded, highly infective and would appear to play little part in the spreading of the epizootic.

Plague bacillus in man.—Observations were also made on the quantitative estimation of the septicemia in human plague, involving an investigation of the blood of 28 patients suffering from plague, with an examination of 74 specimens. The *Bacillus pestis* was not found in the blood of 5 patients whose illness ended in recovery; nor was it found in 7 of the fatal cases. The salient facts ascertained from an analysis of the remaining 16 fatal septicemic cases may be recapitulated thus: Microscopical examination of the blood can not be regarded as a trustworthy criterion of the degree of septicemia; a severe septicemia may be present at a comparatively early stage of the disease and for a considerable number of hours before death, and the septicemia may be of an irregular or fluctuating type.

The diagnosis of natural rat plague.—Cases of plague in rats, like human cases, may be divided into two classes, according as to whether or not a bubo is present. The bubo, if present, is the most important diagnostic sign of plague. Of other characteristic appearances, those occurring in the liver of plague-infected rats are of primary importance from the point of view of diagnosis. Hemorrhages in various parts of the body are commonly met with, and an abundant clear pleural effusion constitutes, when present, a noteworthy sign of plague in the rats.

As to the results of microscopical examination the bubo gives the best chance of recognizing plague bacilli in large numbers. Not only so, but the value of the bubo as an aid in the microscopical diagnosis of plague is increased by the presence in at least 50 per cent of those examined of the characteristic involution forms.

As to the relative value of diagnosis of the macroscopical and microscopical methods of diagnosis, the results of tests carried out for the purpose of comparison made it manifest that the naked eye is markedly superior to the microscopical method as an aid in diagnosis, and as the result of their experience the committee states that they are

prepared to make a diagnosis of plague on the strength of the macroscopical appearances alone, even though the results of cutaneous inoculation and culture are negative and the animal shows marked signs of putrefaction.

The value of the method of cutaneous inoculation of guinea pigs was examined. It would appear to fail in only about 2 per cent of fresh and about 10 per cent of putrid rats.

The bacilli found in naturally infected rats were fully virulent; 62 per cent of the inoculated animals died of acute plague in five days or less.

The rats examined were divided into two series. Series I comprised 200 plague rats (100 *Mus rattus* and 100 *Mus decumanus*) from those examined during the off season, from July to December, 1905, when sporadic cases only were occurring in rats and in men. All these rats were in a fresh condition—they showed no obvious signs of putrefaction. Series II consisted of 4,000 rats from those obtained during the early period of the epizootic—from the beginning of January to the middle of February, 1906.

Characteristic appearances in plague-infested rats recognizable by naked-eye examination.—Rigor mortis, the report states, is fairly often present in plague rats, and is somewhat characteristic, the limbs projecting stiffly in a distinctive manner from the body. It may persist, even when putrefaction has begun, in the internal organs. It was noted in 26.5 per cent of the rats in Series I.

Subcutaneous congestion is not infrequently a well-marked feature. It may be general, but in some cases is limited to the neighborhood of the bubo. In Series I it was present in 30.5 per cent of the total; in Series II a note was made of its presence in 69 per cent, it was well marked in 7 per cent, and was absent in 23 per cent of the rats. A peculiar purplish-red appearance of the muscles exposed by reflecting the skin of the thorax and abdomen is obviously due to the presence of congested vessels and, combined with the reddish-pink color of the subcutaneous tissue, presents an appearance which arouses a strong suspicion of plague at the commencement of the examination.

Emaciation was very rarely observed and is pronounced to be certainly not typical of plague. In a rat showing emaciation, and having lesions such as abscesses or septic lung conditions, the chances are greatly against the case being plague.

Subcutaneous hemorrhages were noted in 40.5 per cent of the rats in Series I. In 18.5 per cent the hemorrhages were situated in the submaxillary region, and were associated with the occurrence of a bubo in this region, while in 8 per cent subcutaneous hemorrhages were noted in the submaxillary region, although the bubo was in another situation or occasionally absent altogether. The general statement is made that when present these hemorrhages are most frequently to be found in the submaxillary region, depending doubtless upon the fact that hemorrhages are seen generally in the neighborhood of buboes and that buboes in rats are most often found in the neck. The next common situation for these hemorrhages is in the region of the flank. In young and medium sized rats especially they may be very widespread. They were not observed in any rat which was not plague infected. They rarely occurred in guinea pigs infected either experimentally or naturally.

A general edema of the subcutaneous tissue is a feature rarely met with in plague rats. When edema is present it is usually limited to the region of the bubo. In Series I cervical edema was present in 10 per cent of the cases. This contrasts with what was found in experimentally infected guinea pigs, in which general subcutaneous edema was a very characteristic feature.

Changes in the lymphatic glands—Buboes.—If a dissection is made of a healthy rat the only glands which are large enough to be easily seen are those forming the crescent embracing the salivary glands in the submaxillary region, and the elongated retroperitoneal glands on each side of the middle line in the lower part of the abdomen. For the sake of brevity the latter are referred to as "pelvic" glands.

In a septicemic plague rat the glands in any region of the body may be enlarged and congested. Even when a primary bubo is present, secondarily enlarged glands may be found in a different situation. Thus the inguinal glands are not infrequently slightly swollen and congested, and may be surrounded by a characteristic radiating appearance due to an injection of the blood vessels leading to and from the glands. Enlarged glands of this nature must be sharply distinguished from primary buboes. In the description the use of the word bubo is restricted to mean a primary bubo and not these secondary glands.

The Austrian plague commission in their account of the pathology of the lymphatic system in human plague make a distinction between primary buboes of the second order, i. e., glands in the neighborhood of the primary bubo which have been directly infected from it, and secondary buboes which derive their infection from the blood when a septicemia supervenes. In rats it is occasionally found that both the inguinal and pelvic glands are converted into primary buboes, the latter having obviously been infected by way of the lymphatics from the inguinal buboes. Such a lesion conforms to the description of a primary bubo of the second order.

Occasionally the primary bubo is seen in the first stage of enlargement and congestion, showing hemorrhagic points when cut across. It may be distinguished from a secondary gland by the surrounding infiltration, with perhaps hemorrhages in the subcutaneous tissue overlying it. Infiltration in the neighborhood of the bubo, extending into the subcutaneous tissue, is indeed a highly characteristic feature of a bubo in any stage of its development. A localized subcutaneous edema is sometimes observed. The presence of subcutaneous hemorrhages in the proximity of the bubo may often be noticed, and these are frequently associated with marked congestion of the surrounding tissues.

A bubo feels hard when cut across, though it has not the tough consistence of a normal gland. The contents of the latter are not easily squeezed out by pressure, whereas in a bubo the substance of the gland is readily broken down by slight pressure with the forceps.

Occurrence and distribution of buboes in 4,000 rats in Series II.

	Number.	Per cent.
Buboes in single situation only	2,923	73.05
Multiple buboes	467	11.67
Bubo absent	610	15.25

Buboes in single situation.

	Number.	Per cent.
Neck	2,194	75
Axilla	440	15.1
Groin	178	6.1
Pelvis	111	3.8

Frequency of various combinations of buboes in 467 rats with multiple buboes in Series II.

	Per cent.
Groin and axilla	32.3
Neck and axilla	28.2
Neck and groin	12.6
Neck, axilla, and groin	7.4
Groin and pelvis	7.1
Groin, pelvis, and axilla	4.9
Neck and pelvis	2.9
Axilla and pelvis	1.29
Neck, groin, and pelvis	1.07
Neck, axilla, groin, and pelvis	1.07
Neck, axilla, and pelvis	.85

Of the rats with multiple buboes, 54.5 per cent had bubo in the neck.

The typical appearance of a bubo on section is that of necrosis affecting first the medullary portion of the gland, and gradually spreading outward so that ultimately the glands are converted into a mass of necrotic tissue inclosed within the capsule. The central portion has consequently a gray appearance, or in a somewhat later stage contains a yellowish cheesy material. Rarely, in a still more advanced stage, the center has broken down into a rather dry—still more rarely a liquid—purulent material. Buboes with greenish liquid pus are not typical of plague, and those examined specially proved not to be plague.

At times but little surrounding congestion of the tissues is found and the bubo itself may have a yellowish-white color. Such a tissue offers a greater resistence than a normal gland when cut across. Microscopical examination of a bubo of this character reveals the presence of swarms of plague bacilli. Occasionally when a suspicious gland is cut across, a creamy fluid exudes which on microscopical examination is found to consist of degenerated leucocytes, cellular débris, and masses of plague bacilli.

The committee remarks that there is generally little difficulty in recognizing buboes, because they are usually relatively large in size and cause a prominent swelling. In the submaxillary region several buboes may be fused into a large mass. In certain instances, however, the existence of a bubo in the neck may easily be overlooked, for the

reason that there is not much apparent swelling even when the neck glands are exposed. The glands in this region should always be arranged in their natural relations, and cognizance taken of the slightest asymmetry. Any suspicious gland should be dissected out and cut across in several directions. The cut surface may show appearances suggestive of necrotic change, and if so, a smear should be prepared for microscopical examination. The committee made it a practice to cut into the neck glands of every rat examined. A bubo in the neck is sometimes readily found by probing with forceps in the region of the glands. Here it may be detected as a hard nodule like a pea.

Enlarged and congested glands in the groin and axilla should be incised and examined in the same way—a yellowish center, if only the size of a pinhead, being indicative that such a gland is a primary bubo.

Axillary buboes may readily be passed over when small, and especially if they are flattened and lie parallel to the inner surface of the arm under the insertion of the pectoral muscle into the humerus. A routine practice should therefore be adopted of cutting through these muscles into the axilla.

It is mentioned that a common and marked feature of a bubo when examined microscopically is the presence of more or less numerous involution forms. Although secondarily enlarged glands may contain numerous bacilli, these typically have the normal bipolar appearance.

The liver may show all degrees of fatty change. The term fatty, it is explained, is used in reference to the naked eye appearance only, which strongly suggests an excess of fat. Microscopically, however, the appearance is found to be due to necrosis of the liver tissue. In the early stages the lobules are clearly demarcated and this, combined with the yellowish appearance of the parts affected contrasting with the reddish color of the congested areas, constitutes a characteristic picture which is described by the term "mottling." In some instances an extreme degree of fatty change is seen. In such a case the liver has a pink tinge, its surface presenting a uniformly smooth appearance and showing no sign of any division into lobules. The whole organ gives the impression of being modeled in wax with the upper surface peculiarly dome-like and the edges sharply defined. It has lost the normal tough resilient consistence, so that it pits on pressure and somewhat easily cracks on bilateral pressure, especially when putrefaction has begun. This condition was not seen in fresh rats other than those which were plague infected, but in putrid rats an appearance very similar to it, or even indistinguishable from it, is rarely encountered when plague can, with certainty, be excluded.

Another condition frequently met with in the liver, and one of the greatest importance in diagnosis, is the occurrence of small necrotic foci scattered over its surface and throughout its substance. The condition is spoken of as "granular" liver. The gray or whitish granules are most easily observed on the surface; they are typically of the size of a pin's point and give the surface of the organ a stippled appearance as if dusted over with gray pepper. They are invariably discrete and in this respect contrast with the mottled liver in which there is no well-defined margin to any of the affected areas. They

may be so small that only the closest scrutiny of an experienced observer will detect them. When larger, the granules are of a yellow color and vary somewhat in size. When well marked and closely set together, they are always uniformly scattered throughout the liver substance, but if faintly marked and very few they may be confined to one lobe or to the edges only of the lobes. In some instances the necrosis assumes the appearance of a delicate gray network enclosing in its meshes the lobules, which appear reddish from the presence of congested vessels. In a typical speciment the granules are not raised above the surface of the liver. Very exceptionally this does happen.

This granular condition of the liver is fairly often met with in experimentally infected rats which die about forty-eight hours after inoculation. The longer the interval between inoculation and death the better marked is the granulation. In a few instances rats killed on the eighteenth day showed coarse granulation of the liver with very few plague bacilli present in the smears. With regard to the frequency of its occurrence, it was noted in 58 per cent of the rats in Series II. It is occasionally found in a liver which shows fatty changes. Even in putrid rats the granules may be recognized as gray points standing out on a black background.

Other pathological conditions met with in the liver in plague rats may be said to be neither constant nor characteristic. Hemorrhages under Glisson's capsule are seen relatively seldom. Enlargement and congestion of the liver, which some writers seem to consider noteworthy signs, are pronounced to be of very little value.

The spleen of a plague rat is typically of firm consistence with a molded appearance, so that it lies over the stomach in its natural relation to that organ instead of collapsing like a soft normal spleen. Granules or nodules, the size of a millet seed, may be very well marked and may be confluent. Sometimes a relatively large wedge-shaped portion of the spleen is converted into a cheesy mass, in which plague bacilli can be found. A false appearance of granulation is often seen in normal spleens, and is doubtless due to the Malpighian bodies showing through the semitransparent capsule. Apart from this a nodular condition was never seen by the committee except in a plague rat. Analysis of the records of 200 plague rats examined during December, 1905, showed that 111 of the livers were granular (55.5 per cent), while the spleen was granular in 9 (4.5 per cent). In very rare instances the spleen contains granules, although none are to be found in the liver.

Apparent enlargement and congestion of the spleen are of little importance for purposes of diagnosis. The spleen, especially in *Mus decumanus*, is often much enlarged, although the other organs are apparently normal; such a spleen is usually soft and flabby.

The kidneys and the suprarenal capsules are often congested. Minute subcapsular hemorrhages are fairly often present, viz, in 8.5 per cent of Series I. The kidneys frequently show fatty changes, sometimes appearing quite yellow. A granular condition of the organ is an extreme rarity, although occasionally it has been noted.

The stomach and the intestines usually show no characteristic change. The latter may be acutely congested, but subserous hemorrhages are rarely present, contrasting in this respect with plague

guinea pigs, in which they are a common and striking feature. Hemorrhages are somewhat rarely seen under the peritoneal coat of the stomach.

Abundant peritoneal effusion is a rare occurrence, though slight effusion may be seen, the serous surface having a moist look.

In the pleuræ and lungs hemorrhages occur fairly often, but were not seen in the parietal layer of the pleuræ.

The presence of pleural effusion is pronounced to be a very characteristic feature and of great value in diagnosis. The effusion is typically quite clear and may be so abundant that when the sternum and portions of the ribs are reflected the heart and lungs appear to be floating in a bath of straw-colored fluid which overflows, forming a pool in the axilla. It may sometimes be blood stained. In Series I it occurred in 73.5 per cent of the rats, while in 9 per cent it was abundant. In Series II its presence was observed in 72 per cent, it was noted as being abundant in 6.9 per cent, and it was absent in 28 per cent of the rats.

The lungs vary considerably in appearance and as a rule present nothing characteristic. They may exhibit a patchy congestion, but in some cases they appear quite pale. Compared with guinea pigs granules in the lungs of rats rarely occur, only 2.5 per cent of the rats showing them in Series I.

An interesting feature somewhat rarely met with in plague rats is a pneumonia which is decidedly lobar in character. In the cases examined microscopical examination of the lungs revealed very numerous plague-like bacilli (which were verified by culture in some of the cases), although relatively few or no bacilli were seen in the other organs. In two a submaxillary bubo was present, but the condition of the others leaves little doubt that they were instances of a typical primary pneumonia. Pneumonic lungs were observed in all stages, including typical red and gray hepatisation and even apparent resolution. Portions of consolidated lungs sank when placed in water.

The pericardium fairly often contains a clear fluid and epicardial hemorrhages occasionally are seen. The vessels on the surface of the heart frequently have an injected appearance. The walls are relaxed with the right cavities usually engorged with blood and the left empty.

The value of certain characteristic post-mortem features in the diagnosis of plague rats, including those which have undergone putrefaction.—A recapitulation is given of what are considered the most important post-mortem features for purposes of diagnosis.

The presence of a typical bubo is the most important sign of plague in rats.

The next important sign is the condition described as granular liver. This condition, in the experience of the committee, is not met with in rats other than those that are plague infected. The spleen is pronounced to be a much less important organ for diagnostic purposes than the liver; in this respect, it is said, the latter takes the place of the spleen in guinea pigs.

Hemorrhages, both subcutaneous and in the organs, are very suggestive features. They occurred somewhere in no less than 54 per cent of the rats in Series I. It is noted that subcutaneous hemorrhages constitute a most important sign of plague in rats.

Again, an abundant clear pleural effusion goes a long way of itself toward establishing a diagnosis of plague.

In putrid rats at least three of these signs may persist, and when recognized are of the greatest assistance, viz., a bubo, granular liver, and pleural effusion.

Frequency of occurrence of certain characteristic post-mortem features in the rats included in Series I.

Post-mortem appearance or lesion.	100 Mus rattus.	100 Mus decumanus	Percentage of total.
Rigor mortis	27	26	26.5
Subcutaneous congestion (including submaxillary)	22	39	30.5
Subcutaneous hemorrhages	44	37	40.5
Submaxillary hemorrhages with bubo	17	20	18.5
Submaxillary hemorrhages (bubo absent or in another situation)	7	9	8
Cervical edema	9	11	10
Fatty liver	59	50	54.5
Granules in the lungs	1	4	2.5
Granules in the kidneys	0	1	.5
Pleural effusion	73	56	64.5
Abundant effusion (included in above)	11	7	9
Hemorrhages in lungs and pleurae	16	32	24
Hemorrhages in kidneys and suprarenals	5	12	8.5
Hemorrhages in epicardium	2	5	3.5
Hemorrhages in stomach	4	0	2
Hemorrhages in intestines	0	1	.5

The occurrence of plague-like diseases among rats.—It is stated that during sixteen months' continuous rat examination in Bombay, involving the scrutiny of 150,000 animals, of which 19,000 were infected with plague, no disease of the rat was met with which caused any material difficulty in diagnosis.

Results of microscopical examination.—The importance of the results obtained from an analysis of this method of examination relates chiefly to the question of diagnosis.

For staining, carbol-thionin blue was used invariably in the routine examinations. This, it is stated, has a certain value as a differential stain in that plague bacilli appear more faintly colored than adventitious organisms. It brings out to advantage, it is said, the typical bipolar appearance of *Bacillus pestis*. Very rarely the bacilli in the organs assume the form of a small cocco-bacillus closely resembling the organism of fowl cholera and causing some doubt as to their real nature.

With regard to the presence of involution forms, 56.6 per cent of the buboes in Series I showed them, while in the same number of spleen preparations examined they were found in only 12 per cent. In the spleen they occur perhaps most frequently in association with putrefactive organisms. They were not observed in the heart blood.

Sometimes in rats which gave evidence of a relatively chronic form of plague, with well-marked granules in the liver, the bacilli were not uniformly distributed over the preparation, but were present in the form of characteristic clumps. Clumps of bacilli were seen in 9.5 per cent of the spleen smears in Series I. They rarely occurred in the heart blood, having been seen once only in this series. When in clumps the bipolar appearance was much less often observed than when the organisms were uniformly distributed in the smear, the contents of the bacilli usually appearing very finely and uniformly granular.

It is noted that the general value of the method of microscopical examination is sufficiently indicated by the fact that in 75 per cent of the total rats in Series I numerous plague bacilli were seen either in the heart blood, spleen, or bubo of each rat, or, if not very numerous in the bubo, involution forms were present.

As to the comparative value of the three tissues usually examined, there can be, it is declared, no doubt that the bubo gives a better chance of finding plague bacilli than the spleen and the spleen than the heart blood. Thus out of 150 rats with buboes in Series I numerous *Bacillus pestis* were noted in 104 preparations of the buboes, 70 preparations of spleens, and only 27 preparations of the heart blood. Even in a very putrid rat the bubo may show many plague bacilli, frequently with involution forms in addition, but with relatively much fewer putrefactive organisms than in the smears of the spleen or of the heart blood. In a suspicious bubo showing no plague bacilli the presence of degenerated leucocytes and cellular débris serves materially to strengthen the suspicion of plague.

The relative value of the methods of naked-eye and microscopical examination in the diagnosis of rats suspected of being plague infected.—It is stated that there is no room for doubt that for purposes of diagnosis naked-eye examination by a competent observer is more satisfactory than microscopical examination alone. In a single instance only was a plague rat diagnosed by microscopical examination which the observers of the post-mortem appearances failed to recognize, i. e., 0.7 per cent of the total number of plague rats. On the other hand, 6 rats with plague bacilli in the spleen smear were overlooked by the microscopists, and in 7 rats no plague bacilli were found microscopically in any of the organs, i. e., 13 rats were missed out of a total of 131, viz., nearly 10 per cent. In isolated cases both methods, it is added, must be employed, but results are said to clearly show that the omission of the routine microscopical examination of every rat in an investigation conducted on a large scale does not necessarily impair the accuracy of the work, while the saving of labor is of course very great. The investigation shows that the chief difficulty which is encountered in diagnosis by either of the methods arises from putrefactive changes masking the characteristic appearances in the organs.

Diagnosis by the cutaneous method of inoculation.—In nearly every case the rats examined were dead when brought to the laboratory and showed varying degrees of freshness or, in some cases, of putrefaction. The material inoculated was derived from 123 fresh rats and from 27 putrid rats. The majority of the rats belonged to the species *Mus decumanus*.

The technique adopted is described as follows, together with the effects which follow inoculation of plague material into the skin of a guinea pig: An area of skin about 1 inch square of the guinea pig's abdomen is shaved with a sharp razor, no water or soap being used. The use of soap is avoided in shaving the skin, as there is good reason to believe that the chances of the guinea pig dying acutely are thereby greatly diminished. The epidermis is partly removed in shaving, so that a raw, slightly bleeding surface is exposed. Pieces of the organ or organs selected for the test are then removed with sterile scissors and forceps, and rubbed with some vigor by means of the forceps

over the shaved area. This procedure is adhered to however putrid the material may be.

In the employment of the cutaneous method as a confirmatory test for rats diagnosed as plague or for rats suspected of being plague infected, the importance is pointed out of the bubo, if present, being rubbed in. It has been shown above that plague bacilli are more often found, and when present are more numerous, in the bubo of a plague-infected rat than in any other tissue.

From the point of view of early diagnosis by the cutaneous method special attention is directed in the report to the appearance of a reaction at the site of inoculation and the existence of enlarged inguinal glands.

The general experience of the committee was that the cutaneous reaction is the earliest symptom, usually appearing about twelve hours after inoculation. If the disease is acute, the inguinal glands can be felt to be enlarged thirty-six hours after inoculation, while in chronic cases the glands may be palpable only after the lapse of several days. A cutaneous reaction and the presence of inguinal buboes are outstanding features when the inoculation proves successful. Another symptom equally important is the loss of weight which occurs as the result of infection. When death takes place very acutely, the animal may even gain slightly in weight; otherwise there is a varying loss of weight, depending upon the acuteness of the disease. The average daily loss of weight was greatest in the case of guinea pigs which died on the fifth day. An early decrease in weight is shown to give valuable indication that infection by plague bacilli is in progress. A striking contrast is afforded in the case of guinea pigs in which infection has failed; the animal steadily gains in weight from the beginning and the skin abrasions rapidly heal.

The value of the cutaneous test for plague is especially manifest in those cases where the material inoculated is derived from rats which have undergone putrefaction. It is remarked that inoculation by this method apparently failed to produce infection in only three cases out of 27 putrid rats presenting appearances strongly suggestive of plague; i. e., it apparently fails in 10 per cent of putrid rats. It is therefore concluded that the cutaneous method gives an excellent chance of diagnosing plague even in rats far advanced in putrefaction.

Transmission of plague by feeding rats with infected material.—As a result of careful investigation the committee concludes that it is possible to infect wild rats of Bombay with plague by feeding them with the viscera of dead plague rats, 21.4 per cent being found susceptible to this method of infection. Bombay rats show a greater immunity to infection by feeding than rats of the same species which have not been subjected to a plague epizootic.

A series of experiments was also done with *Mus rattus* caught in the Punjab. Of these rats 67.8 per cent were susceptible. In this series a considerably larger dose of infected material was given.

The investigators infected a large number, 38 per cent, of wild Bombay rats by feeding them on the whole carcasses of their plague-infected comrades. No difference as regards the post-mortem appearances, or the distribution of the primary bubo, was found between rats infected in this way and rats infected by feeding on soft viscera.

The general pathological lesions found in all rats infected by feeding are, in the main, the same as those found in rats naturally in-

fected. There are, however, two striking differences: First, the common site of the primary bubo in naturally infected plague rats was in the neck, no mesenteric bubo having been seen out of 5,000 post-mortems, but in the case of fed rats the common site was the mesentery; second, in the case of naturally infected rats the stomachs and intestines showed no marked pathological change, while in the case of fed rats well marked pathological lesions were found in the intestines.

It would appear that in nature intestinal infection rarely or never takes place and that in consequence rats do not become infected by eating the carcasses of their comrades.

A large series of rats were fed on the urine of plague cases. None of these contracted the disease.

Significance of the locality of the primary bubo in animals infected with plague in nature.—The importance of the primary bubo as an indication of the path of infection is insisted upon in the report.

Bombay wild rats were inoculated with a virulent culture of the plague bacillus. Next day the rats were placed separately in flea-proof cages, and a number of fleas were put in with them. On the death of the rats the fleas collected from those rats which showed a marked plague septicemia were placed in a glass tube, one end of which was open, while the other end was closed with a single layer of fine muslin. About twenty fleas were put into each tube. The hair on a small area of a guinea pig's skin was removed. The fleas were now allowed to feed on this area through the muslin covering the end of the tube. They were given a morning and an evening meal, the tube being applied for from ten to fifteen minutes on each occasion. In some cases the feeding took place only on a single day, while in other instances the same fleas were fed daily for several days consecutively, the same area of skin, however, being used on each occasion. In the case of seventeen animals the relationship was shown between the area on which the fleas were fed, and through which the plague bacilli entered the skin, and the position of the primary bubo. A point of interest in these experiments was the presence in most cases and the complete absence in others of a marked local reaction at the site of feeding. Having then satisfied themselves that the primary bubo develops in those groups of glands which are in direct lymphatic connection with the area through which the plague bacillus enters the animal organism, the committee proceeded to inquire if, by a study of the relative distribution of the primary bubo, on the one hand, in animals naturally infected with plague, and, on the other hand, in animals artificially infected by different means, any evidence could be obtained which would point to any particular method as being the one by which infection takes place in nature.

Cervical buboes were found to preponderate, on the one hand, in naturally infected rats and in guinea pigs infected by being placed in plague-infected houses, and also in rats and guinea pigs artificially infected with fleas. In rats artificially infected by feeding mesenteric buboes were the most frequent, whereas in upword of 5,000 naturally infected rats in not a single case was a mesenteric bubo present. It is therefore concluded that rats in nature are not infected by feeding on plague-infected material, but probably by the agency of fleas.

The plague bacillus and the flea.—Observations were made on the transmission of plague by fleas, with special reference to the fate of the plague bacillus in the body of the rat flea (*Pulex cheopis*).

It was found that the average capacity of a rat flea's stomach may be approximately estimated to be 0.5 cubic millimeters; that a rat flea imbibing blood from a plague-infected rat might receive as many as 5,000 germs into its stomach; and that fleas feeding on a large proportion of plague-infected rats just before death imbibe some plague bacilli.

Fleas were fed on plague-infected rats until the death of these animals. They were afterwards fed on healthy animals. A number were dissected each day for twenty-three days. In a certain proportion abundant plague bacilli were found in the stomach contents up to the twelfth day and in one instance on the twentieth day. These observations were considered by the committee to be good evidence that multiplication of plague bacilli may take place in the flea's stomach.

The approximate proportion of fleas in the stomachs of which multiplication of plague bacilli takes place was determined, and it was shown that this proportion varies with the season of the year, being six times greater in the epidemic season than in the nonepidemic season.

Plague bacilli were present in the rectum and feces of fleas taken from plague rats, and such feces were found to be infective to guinea pigs both by cutaneous and by subcutaneous inoculation.

On rare occasions plague bacilli were found in the esophagus, but never in any other region of the body, such as the body cavity or salivary glands.

One series of experiments made during the epidemic plague season to test the duration of infectivity of rat fleas fed on septicemic rats' blood showed that these fleas could remain infective for at least ten days. This series was made in separate cages with a limited supply of fleas. A second series also made during the epidemic season, but in a single large cage in the presence of a large number of fleas, gave the time that fleas might remain infective as fifteen days. In a third series of experiments conducted under the same conditions as the second series, but during the nonepidemic season, the fleas remained infective for seven days only, and, further, far fewer (one-third instead of two-thirds) animals than in the second series contracted the disease.

A single rat flea may transmit the disease. Both male and female rat fleas can transmit the infection.

Twenty-seven experiments to transmit plague from animal to animal by means of cat fleas (*Pulex felis*) were made. None of these was successful. Thirty-eight experiments to transmit plague from animal to animal by means of human fleas (*Pulex irritans*) were made. Three were successful. Two experiments were made with *Ceratophyllus fasciatus;* both gave successful results.

Evidence was obtained to show that the bite of a healthy flea affords a sufficient avenue for infection by septicemic blood if it is spread upon the bitten part. No evidence was brought out in favor of infection by contaminated mouth parts or regurgitation from the stomach, but the possibility of infection by such means could not be excluded.

Natural occurrence of chronic plague in rats.—The characteristic feature of chronic rat plague is described as being the presence of circumscribed abscesses containing plague bacilli in rats caught alive, the animals usually showing no other lesions nor signs of ill health. No bacilli were seen on microscopical examination of the heart blood and of the spleen tissue in any of the rats. The bacilli in the great majority of the cases were virulent. Forty-five rats conforming to this description which were found during the year's investigation reported in 1907 in the Punjab were grouped into two classes, one group including those in which the lesions were situated in the abdominal viscera, and the other group including those in which the abscesses were found in regions occupied by peripheral lymphatic glands. Lesions of the viscera were found principally in the spleen and in the mesentery, while the submaxillary group were most frequently affected among the lymphatic glands. The peripheral type was observed chiefly during the decline of the epizootic, while the visceral type predominated in the offseason. In Bombay only one chronic plague rat was met with out of 17,000 plague-infected rats. In Kasel 9 per cent of all the rats which were proved plague infected had the chronic disease, while in Dhand the proportion was as high as 28 per cent. In the present state of knowledge the committee declare themselves unable to advance any adequate explanation of these facts. No direct evidence was found that chronic plague, as it occurs in the Punjab villages, possesses any significance in the seasonal recurrence among the rats of the infection in an acute form, nor was any evidence available which excludes this possibility.

Man as a host of the Indian rat flea.—It is shown that in the laboratory the rat flea, *Pulex cheopis*, will readily bite man. When very numerous it will bite man even in the presence of its natural host. The committee were able to keep this species of flea alive for more than three weeks by feeding it on man alone. In the course of some experiments in go-downs which were infested with *Pulex cheopis* alone, fleas in considerable numbers were often caught on the legs of men who had entered the go-downs for a short time. In a building in Bombay in which there had been a severe rat mortality, proved to be due to plague, rat fleas in large numbers were caught on the legs of men who entered some of the rooms in the building for a short time.

It is concluded, therefore, that the rat flea, *Pulex cheopis*, under certain circumstances, is attracted by man, and will readily bite and feed on him.

UNITED STATES.

[Reports to the Surgeon-General, Public Health and Marine-Hospital Service.]

Reports from San Francisco, Cal.—Status of plague—Plague-prevention work.

Passed Assistant Surgeon Blue reports:

December 4. One new case of plague to-day, a Russian. Total cases of plague to date, 110; deaths to date, 65.

December 5. Two cases of plague, a Californian who died December 2 and a German who died December 3, were confirmed by bacteriological examination to-day. Total cases of plague to date, 112; deaths to date, 67.

Doctor Blue further reports plague-prevention work at San Francisco carried out during the week ended November 30:

Sick inspected	75
Plague cases found	7
Dead inspected	61
Plague, among dead inspected	1
Premises inspected	4,988
Houses disinfected	58
Houses destroyed	20
Nuisances abated	452
Rats found dead	561
Rats trapped	1,911
Bounty rats received	75
Poisons placed	249,757
Rats examined bacteriologically	811
Rats infected with bacillus pestis	1
Contacts inspected	34

Outgoing quarantine transactions.

Passed Assistant Surgeon Hobdy reports, November 25:

Week ended November 23. Ninety-four vessels were fumigated and certified to during the week, and 40 vessels, previously fumigated, were certified to. Investigations along the water front show that there is considerable diminution in the number of rats present and a still more marked decrease in the number of sick or dead rats seen. The infection is still generally distributed, but the percentage is very much lower than was first reported. Of the dead rats that are found, many were proved to have died from the results of the rat crusade now being waged, as their autopsies show death to have been due to the various poisons employed for their destruction, and particularly to phosphorus.

Observations during the week indicate that the number of rats found on board is being steadily reduced.

Report from Seattle, Wash.—Plague-prevention work.

Passed Assistant Surgeon Cofer reports, December 2:

Week ended November 30.

Sick inspected	3
City blocks inspected and reported upon	207
Nuisances abated	135
Cubic yards of rubbish burned	105
Cubic yards of rubbish removed	304
Rats delivered and cremated	2,540
Rats examined bacteriologically	49
Pieces of rat poison placed	176,000
Vessels disinfected	6

STATISTICAL REPORTS OF MORBIDITY AND MORTALITY, STATES AND CITIES OF THE UNITED STATES—UNTABULATED.

CALIFORNIA—*Sacramento.*—Month of October, 1907. Estimated population, 40,000. Total number of deaths, 45, including diphtheria 3, and 5 from tuberculosis. Cases: Diphtheria 7, enteric fever 1, smallpox 1, and scarlet fever 4.

CONNECTICUT—*New London.*—Month of November, 1907. Estimated population, 20,200. Total number of deaths 23, including 4 from tuberculosis. Cases: Diphtheria 1, enteric fever 1, and scarlet fever 5.

Stamford.—Month of November, 1907. Estimated population, 20,000. Number of deaths not reported. Cases: Diphtheria 3, whooping cough 1, and tuberculosis 2.

INDIANA—*Marion.*—Month of November, 1907. Estimated population, 27,000. Total number of deaths, 17, including 1 from tuberculosis. Cases: Enteric fever 3, measles 1, whooping cough 1, and tuberculosis 1.

Muncie.—Month ended December 2, 1907. Estimated population, 34,036. Total number of deaths, 23, including 2 from tuberculosis. Cases: Diphtheria 7, enteric fever 2, scarlet fever 7, and whooping cough 1.

IOWA—*Cedar Rapids.*—Month of November, 1907. Estimated population, 30,000. Total number of deaths, 25. Cases: Scarlet fever 21.

Davenport.—Month of November, 1907. Estimated population, 45,000. Total number of deaths not reported. One death from enteric fever and 1 from scarlet fever. Cases: Diphtheria 39, enteric fever 18, measles 1, scarlet fever 1, and whooping cough 3.

KENTUCKY—*Henderson.*—Month of November, 1907. Estimated population, 17,500. Total number of deaths, 25, including enteric fever 1, measles 1, and 2 from tuberculosis. Cases: Enteric fever 8, measles 141, and tuberculosis 1.

NEW JERSEY.—Reports to the State board of health for the month ended November 15, 1907, show a total of 2,902 deaths, including diphtheria 49, enteric fever 46, scarlet fever 12, whooping cough 19, and 344 from tuberculosis.

Morristown.—Month of November, 1907. Estimated population, 12,500. Total number of deaths, 26, including 1 from diphtheria. Cases: Diphtheria 1 and scarlet fever 4.

NEW HAMPSHIRE—*Concord.*—Month of November, 1907. Estimated population, 20,000. Total number of deaths, 41, including 3 from tuberculosis. Cases: Diphtheria 4, enteric fever 3, and tuberculosis 3.

NEW YORK—*Saratoga Springs.*—Month of November, 1907. Estimated population, 11,122. Total number of deaths, 25, including enteric fever 1 and 1 from tuberculosis. Cases: Diphtheria 5, measles 1, and tuberculosis 1.

Schenectady.—Month of November, 1907. Estimated population, 77,666. Total number of deaths, 57, including scarlet fever 1 and 9 from tuberculosis. Cases: Diphtheria 21, enteric fever 10, measles 1, scarlet fever 6, and tuberculosis 2.

OHIO—*Zanesville.*—Month of November, 1907. Estimated population, 26,000. Total number of deaths, 25, including enteric fever 2, scarlet fever 2, and 3 from tuberculosis. Cases: Diphtheria 6 and scarlet fever 2.

OREGON—*Portland.*—Month of October, 1907. Estimated population, 175,000. Total number of deaths, 167, including enteric fever 5 and 15 from tuberculosis. Cases: Diphtheria 64, enteric fever 39 (11 brought to city for treatment), measles 10, smallpox 6, and scarlet fever 11.

PENNSYLVANIA—*Beaver Falls.*—Month of November, 1907. Estimated population, 12,000. No deaths reported. Cases: Diphtheria 2, enteric fever 1, and scarlet fever 1.

New Castle.—Month of November, 1907. Estimated population, 38,000. Total number of deaths, 46, including enteric fever 2 and 3 from tuberculosis. Cases: Diphtheria 7, enteric fever 9, measles 3, and tuberculosis 2.

South Bethlehem.—Month of November, 1907. Estimated population, 18,000. Total number of deaths, 21, including diphtheria 1 and 2 from tuberculosis. Cases: Diphtheria 7, enteric fever 1, and scarlet fever 8.

UTAH—*Ogden.*—Month of October, 1907. Estimated population, 25,000. Total number of deaths, 24, including 1 from enteric fever. Cases: Diphtheria 5, enteric fever 2, scarlet fever 4, and smallpox 2.

Month of November, 1907. Total number of deaths, 34, including 1 from enteric fever. Cases: Diphtheria 8, enteric fever 4, measles 2, scarlet fever 19, and smallpox 1.

VIRGINIA.—Reports to the State board of health for the month of October, 1907, show as follows:

Diphtheria present in 33 counties; enteric fever in 71 counties; measles in 8 counties; scarlet fever in 16 counties; whooping cough in 31 counties; smallpox in 3 counties; and tuberculosis in 70 counties.

Smallpox in the United States as reported to the Surgeon-General, Public Health and Marine-Hospital Service, June 28 to December 13, 1907.

[For reports received from December 28, 1906, to June 28, 1907, see PUBLIC HEALTH REPORTS for June 28, 1907.]

[NOTE.—In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.]

Place.	Date.	Cases.	Deaths.	Remarks.
Alaska:				
Nome	July 1-10	1		From ss. Ohio.
St. Michael	May 26-July 13	3		From ss. Pennsylvania, July 16; epidemic in vicinity.
Total for Territory		4		
California:				
General	July 1-31		1	
Longbeach	Sept. 1-30	5		
Los Angeles	July 21-Nov. 23	14		
Oakland	July 1-Oct. 31	24		Imported.
Pasadena	Sept. 1-30	3		
Sacramento	July 1-Oct. 31	2		
San Francisco	June 22-Nov. 23	48	2	
Kern County	June 1-Nov. 28	100		Estimated.
Kern city, with Bakersfield	Sept. 21-Nov. 28	21		
Tehachapi	June 1-Nov. 15	125		
Total for State		342	3	
Colorado:				
Adams County	Sept. 1-Oct. 31	6		
Bent County	May 1-31	3		
Boulder County	May 1-Oct. 31	35		
Clear Creek County	May 1-Oct. 31	11		
Conejos County	June 1-30	1		
Denver County	May 1-Oct. 31	137		
Douglas County	June 1-30	1		
Eagle County	May 1-31	1		
El Paso County	May 1-June 30	3		
Grand County	June 1-Aug. 31	7		
Jefferson County	May 1-July 31	8		
Kiowa County	May 1-31	2		
Lake County	May 1-31	2		
Larimer County	May 1-July 31	7		
Las Animas County	May 1-Aug. 31	48		
Lincoln County	June 1-July 31	4		
Logan County	July 1-31	1		
Mesa County	May 1-Sept. 30	3		
Montrose County	May 1-June 30	7		
Otero County	May 1-Aug. 31	43		
Ouray County	Aug. 1-31	1		
Pitkin County	Oct. 1-31	1		
Prowers County	May 1-31	9		
Pueblo County	May 1-June 30	11		
Washington County	May 1-July 31	20		
Weld County	May 1-Aug. 31	11		
Yuma County	May 1-June 30	7		
Total for State		390		
Connecticut:				
Willimantic	June 1-30	2		
Total for State		2		
Delaware:				
Delaware Breakwater quarantine.	Sept. 24	1	1	From ss. Vienna from Tagal Java.
Total for State		1	1	
District of Columbia:				
Washington	June 16-22	1		
Total for District		1		
Florida:				
Duval County—				
Mandarin	Nov. 10-16	1		
Total for State		1		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Illinois:				
Arcadia	Jan. 1–June 30	2		
Atwood	Jan. 1–June 30	2		
Aurora	Jan. 1–June 30	55		Sept. 30. Still present.
Barry	Jan. 1–June 30	8		
Beardstown	Jan. 1–June 30	1		
Belleville	Jan. 1–Nov. 23	7		
Canton	Jan. 1–June 30	1		
Cerro Gordo	Jan. 1–June 30	1		
Chadwick	Jan. 1–June 30	5		
Champaign County	Jan. 1–June 30	6		July 31. Still present.
Chapin	Jan. 1–June 30	4		
Charleston	Jan. 1–June 30	2		
Chester	Jan. 1–June 30	1		
Chicago	June 23–Nov. 23	20		
Coal City	Jan. 1–June 30	17		
Colfax	Jan. 1–June 30	1		
Crawford County	Oct. 1–31			Present.
Cumberland County	Oct. 1–31			Do.
Danville	Jan. 1–June 30	15		
Decatur	Jan. 1–June 30	21		
De Land	Jan. 1–June 30	1		
Dundas	Jan. 1–June 30	3		
East Dubuque	Jan. 1–June 30	9	1	
Edwards County	Oct. 1–31			Do.
Evanston	Jan. 1–June 30	2		
Evansville	Jan. 1–June 30	1		
Fayette County	Jan. 1–June 30	7		
Freeport	Aug. 1–31		1	Present from July 1–Nov. 30.
Galena	Jan. 1–June 30	68		July. Still present.
Galesburg	June 16–July 6	3		
Hanna	Jan. 1–June 30	1		
Harvey	Jan. 1–June 30	1		
Henry County	July 1–Sept. 30			Present.
Iroquois	Jan. 1–June 30	6		Aug. 31. Still present.
Jacksonville	Jan. 1–June 30	1		
Jo Davies County	July 1–Nov. 30			Present.
Joliet	May 31–June 15	5		
Kankakee County	July 1–Sept. 30			Do.
Knox County	Jan. 1–June 30	12		
La Salle	Jan. 1–June 30	26		
Livingston County	Jan. 1–June 30	74		
Logan County	Sept. 1–Nov. 30			Do.
Macon County	Oct. 1–31			Do.
Marion	July 1–Aug. 31			Do.
Marshall County	Oct. 1–31			Do.
Mason County	Aug. 1–Nov. 30			Do.
Mechanicsburg	Jan. 16–Aug. 1	19		
Morgan County	Oct. 1–31			Do.
Murrayville	Jan. 1–June 30	1		
Panola	Jan. 1–June 30	3		
Peoria	June 18–Nov. 19	14		
Pike County	Jan. 1–June 30	14		Oct. 31. Still present.
Plainfield	Jan. 1–June 30	8		
Pontiac	Jan. 1–June 30	17		
Quincy	Oct. 1–31	1		
Rockford	Jan. 1–Oct. 31	8		
Rock Island County	July 1–Nov. 30			Present.
Rushville	Jan. 1–June 30	4		
Sag Bridge	Jan. 1–June 30	2		
St. Charles	Jan. 1–June 30	4		
St. Clair County	July 1–31			
Sangamon County	July 1–Nov. 30			Do.
Shannon	Jan. 1–June 30	1		
Sherman	Nov. 1–5	5		
Springfield	June 21–Nov. 28	92		
Stark County	Jan. 1–June 30	37		
Stronghurst	Jan. 1–June 30	10		
Tazewell County	Jan. 1–June 30	33		Aug. 31. Still present.
Tolono	June 1–July 19	5		
Tremont	Jan. 1–June 30	27		
Vermilion County	Oct. 1–31			Present.
Westville	Jan. 1–June 30	1		
Whiteside County	Sept. 1–30			Do.
Williamsville	Jan. 1–June 30	5		
Winslow	June 1–Aug. 3	25		
Total for State		725	2	
Indiana:				
Allen County	May 1–July 31	6		
Boone County	June 1–July 31	4		
Carroll County	June 1–30	9		
Cass County	May 1–Sept. 30	10		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Indiana—Continued.				
Clinton County	May 1-Sept. 30	5		
Delaware County	June 1-July 31	3		
Dearborn County	Sept. 1-30	3		
Elkhart County	May 1-July 31	31		
Elkhart	July 1-Nov. 23	26		
Floyd County	May 1-31	1		
Fountain County	May 1-31	1		
Grant County	May 1-July 31	8		
Marion	June 1-Aug. 31	4		
Hamilton County	May 1-July 31	42		
Harrison County	May 1-31	3		
Hendricks County	May 1-July 31	13		
Howard County	May 1-July 31	5		
Huntington County	June 1-30	2		
Jay County	July 1-31	3		
Jefferson County	July 1-31	1		
Kosciusko County	June 1-July 31	13		
Lake County	June 1-30	5		
Laporte County	May 1-July 31	30		
Lawrence County	May 1-June 30	8		
Madison County	June 1-Sept. 30	3		
Anderson	Aug. 1-Nov. 30	29		
Marion County—				
Indianapolis	June 17-Oct. 27	11		
Marshall County	May 1-Sept. 30	54		
Miami County	May 1-July 31	23		
Montgomery County	June 1-Sept. 30	9		
Noble County	July 1-31	1		
Parke County	June 1-30	1		
Pike County	June 1-30	3		
Porter County	June 1-30	12		
St. Joseph County—				
South Bend	June 16-July 20	6		
Stark County	Sept. 1-30	12		
Tippecanoe County	May 1-June 30	3		
Lafayette	June 18-Nov. 25	8		
Tipton County	May 1-July 31	34		
Vanderburg County	June 1-30	1		
Vermilion County	June 1-30	16		
Wabash County	May 1-31	8		
Wells County	June 1-30	1		
White County	May 1-31	3		
Whitley County	May 1-June 30	3		
Total for State		477		
Iowa:				
Cartersville	Sept. 21-Oct. 12	3		
Cedar Rapids	June 1-Oct. 31	3		
Davenport	June 15-Sept. 30	11		
Keokuk	July 1-31	2		
Ottumwa	Aug. 18-Nov. 23	3		
Total for State		22		
Kansas:				
Allen County	May 1-Oct. 31	18		
Atchison County	May 1-Sept. 30	29		
Atchison (city)	Aug. 1-Oct. 31	21		
Barton County	May 1-June 30	5		
Bourbon County	June 1-July 31	4		
Brown County	May 1-31	6		
Butler County	Sept. 1-30	1		
Chase County	May 1-June 30	38		
Cheyenne County	May 1-31	1		
Clark County	May 1-June 30	7		
Clay County	July 1-Oct. 31	3		
Cloud County	May 1-Oct. 31	3		
Coffey County	Aug. 1-31	6		
Cowley County	May 1-July 31	28		
Crawford County	May 1-31	1		
Dickinson County	Oct. 1-31	1		
Doniphan County	May 1-June 30	9		
Edwards County	May 1-31	8		
Finney County	May 1-31	3		
Franklin County	May 1-June 30	2		
Geary County	June 1-30	7		
Gove County	May 1-31	3		
Grant County	June 1-July 31	10	1	
Greenwood County	May 1-31	1		
Harper County	May 1-31	1		
Harvey County	May 1-July 31	13		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Kansas—Continued.				
Jackson County	May 1-July 31	21		
Jefferson County	May 1-June 30	4		
Kearny County	July 1-Sept. 30	2		
Kingman County	May 1-Oct. 31	10		
Labette County	May 1-July 31	2		
Parsons	May 1-Oct. 31	16		
Leavenworth County—				
Leavenworth	June 1-Oct. 31	15		
Lincoln County	Aug. 1-31	4		
Linn County	July 1-Sept. 30	5		
Lyon County	May 1-31	2		
Marion County	June 1-Oct. 31	7		
Marshall County	Oct. 1-31	5		
Miami County	May 1-31	1		
Montgomery County	June 1-Sept. 30	10		
Coffeyville	May 1-Oct. 31	16		
Neosho County	Aug. 1-31	26		
Osage County	Oct. 1-31	1		
Osborne County	May 1-31	5		
Pawnee County	June 1-Aug. 31	9	1	
Phillips County	May 1-31	22		
Rawlins County	May 1-Oct. 31	12		
Reno County	May 1-July 31	37		
Saline County	May 1-Oct. 31	21		
Sedgwick County	May 1-Oct. 31	15		
Seward County	May 1-31	3		
Shawnee County	Aug. 1-Oct. 31	12		
Topeka	Aug. 1-31	1		
Sheridan County	May 1-Oct. 31	48		
Sherman County	May 1-July 31	44		
Smith County	May 1-31	2		
Stafford County	May 1-July 31	3		
Sumner County	May 1-Sept. 30	18		
Thomas County	May 1-31	1		
Washington County	May 1-June 30	6		
Wichita County	July 1-Aug. 31	3		
Wilson County	May 1-31	4		
Wyandotte County	June 1-Oct. 31	15		
Kansas City	June 16-Nov. 23	15		
Total for State		672	2	
Kentucky:				
Covington	June 23-Nov. 30	10		
Lexington	July 21-27	1		
Louisville	June 22-Oct. 10	12		
Total for State		23		
Louisiana:				
New Orleans	June 16-Nov. 30	29	3	
Shreveport	July 28-Oct. 19	6		
Total for State		35	3	
Massachusetts:				
Boston	July 14-Sept. 28	3		
Fall River	Nov. 10-Dec. 7	4		
Lawrence	June 16-July 13	3		
Somerville	Oct. 20-Nov. 9	2		
South Groveland	July 1-Aug. 17	20		
Total for State		32		
Michigan:				
General	Oct. 1-31	32		
Detroit	June 16-Sept. 28	30		
Grand Rapids	Nov. 10-30	13		
Saginaw	Aug. 18-Nov. 30	12		
Total for State		87		
Minnesota:				
Anoka County	May 21-27	3		
Beltrami County	May 6-Aug. 12	28		
Benton County	Apr. 30-May 6	2		
Big Stone County	May 14-Aug. 12	23		
Blue Earth County	May 14-June 24	17		
Brown County	May 14-July 1	32		
Carver County	May 1-July 22	69		
Cass County	May 1-Aug. 19	24		
Chippewa County	June 18-July 1	9		
Chisago County	May 14-June 11	19		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Minnesota—Continued.				
Clay County	May 14–July 8	15		
Crow Wing County	May 14–20	1		
Dakota County	May 14–June 11	2		
Douglas County	July 1–15	1		
Faribault County	May 1–June 24	38		
Fillmore County	June 1–17	1		
Grant County	May 27–July 15	28		
Hennepin County	May 1–July 22	89		
Minneapolis	June 18–Oct. 31	72		
Houston County	May 1–July 22	5		
Hubbard County	June 18–July 22	3		
Isanti County	May 1–27	18		
Itasca County	May 6–Aug. 12	10		
Kandiyohi County	June 4–11	18		
Lac qui Parle County	Aug. 13–19	1		
Lake County	May 14–Aug. 19	4		
McLeod County	May 27–July 8	16		
Meeker County	June 24–July 1	1		
Millelacs County	May 1–Aug. 12	3		
Morrison County	Apr. 30–Aug. 5	3		
Nicollet County	May 1–June 24	8		
Nobles County	June 14–Aug. 12	6		
Olmsted County	June 18–24	1		
Ottertail County	July 30–Aug. 5	4		
Pine County	May 28–June 3	1		
Polk County	June 18–24	1		
Ramsey County	May 1–July 29	29		
St. Paul	June 18–Sept. 30	44		
Red Lake County	July 16–Aug. 19	3		
Renville County	June 24–Aug. 19	29		
St. Louis County	June 18–Aug. 15	39		
Scott County	May 1–June 24	22		
Sherburne County	May 14–20	1		
Stearns County	May 1–Aug. 19	81		
Steele County	May 6–July 8	10		
Todd County	May 6–July 1	2		
Traverse County	May 6–13	8		
Wabasha County	May 1–June 24	2		
Waseca County	Aug. 12–19	1		
Washington County	May 1–June 24	15		
Stillwater	July 1–Aug. 31	5		
Watonwan County	June 18–24	1		
Winona County—				
Winona	Nov. 10–30	3		
Wilkin County	May 1–20	18		
Wright County	June 18–Aug. 19	6		
Yellow Medicine County	May 1–June 24	2		
Total for State		897		
Mississippi:				
Adams County—				
Natchez	July 1–6	2		Imported.
Harrison County—				
Biloxi	May 1–31	1		
Washington County	May 1–July 31	12		
Greenville	Aug. 1–31	1		
Total for State		16		
Missouri:				
Buchanan County—				
St. Joseph	June 16–Nov. 2	30		
Cole County	Oct. 1–31	8		
Daviess County	Oct. 1–31	2		
De Kalb County	Oct. 1–31	8		
Gentry County	Oct. 1–31	8		
St. Louis City County—				
St. Louis	June 16–Oct. 31	[a]8		
Total for State		64		
Montana:				
Beaverhead County	Feb. 1–28	1		
Broadwater County	May 1–31	1		
Carbon County	Aug. 1–31	1		
Cascade County	Apr. 1–June 30	8		
Custer County	Feb. 1–Sept. 30	23		
Dawson County	July 1–31	1		
Deerlodge County	Mar. 1–Aug. 31	2		
Fergus County	Apr. 1–Oct. 31	2		
Flathead County	Apr. 1–30	1		
Gallatin County	May 1–June 30	2		

[a] Erroneously reported in previous issues as 19 cases.

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Montana—Continued.				
Granite County	May 1-Oct. 31	6		
Lewis and Clarke County	May 1-31	1		
Madison County	Feb. 1-28	1		
Meagher County	May 1-31	1		
Missoula County	Feb. 1-Oct. 31	26		7 cases imported.
Park County	Mar. 1-Oct. 31	26		
Rosebud County	July 1-Aug. 31	2		
Sanders County	Feb. 1-June 30	14		
Silverbow County	Feb. 1-Oct. 31	17		
Valley County	May 1-July 31	2		
Yellowstone County	May 1-Oct. 31	15		
Total for State		153		
Nebraska:				
Lincoln	Apr. 1-Oct. 31	99		
Omaha	Feb. 1-Sept. 30	44		
Total for State		143		
New Hampshire:				
Franklin	Oct. 1-Nov. 30	4		
Total for State		4		
New Jersey:				
Carlstadt	Sept. 6	1		
Newark	July 1-Nov. 9	16		
West Hoboken	Apr. 1-Aug. 15	7		
Total for State		24		
New York:				
Albany County	Aug. 1-31	2		
Allegany County	Jan. 1-Feb. 28	10		
Broome County	Jan. 1-Feb. 28	39		
Cattaraugus County	Apr. 1-Sept. 30	20		
Machias	May 1-June 30	3		
Chautauqua County	Feb. 1-Mar. 31	2		
Chemung County	Jan. 1-Feb. 28	2		
Chenango County	Jan. 1-Apr. 7	6		
Columbia County	May 1-31	1		
Cortland County—				
Homer	Aug. 5-Sept. 6	1		
Erie County	Jan. 1-July 31	11		
Buffalo	July 14-Oct. 31	6	1	
Greene County	Jan. 1-Feb. 28	3		
Jefferson County	June 1-Nov. 7	36		
Lewis County	Aug. 1-Nov. 7	20		
Monroe County	Oct. 1-31	3		
New York County—				
New York	June 23-Nov. 16	5	2	
Niagara County—				
Niagara Falls	May 1-31	2		
Oneida County	Oct. 1-31	20		
Ontario County	Feb. 1-28	3		
Onondaga County—				
Syracuse	Aug. 7-Nov. 7	2		
Orange County	Feb. 1-Oct. 31	5		
Orleans County	June 1-30	1		
Otsego County—				
Springfield	Oct. 1-31	1		
Rockland County	May 1-31	2		
St. Lawrence County	Apr. 1-Nov. 7	3		
Schenectady County	June 1-30	5		
Seneca County	Aug. 1-31	1		
Steuben County	Mar. 1-Apr. 30	4		
Suffolk County	Apr. 1-May 31	1		
Shelter Island	May 1-Sept. 30	1		
Tompkins County	Oct. 1-31	1		
Ulster County	Mar. 1-Oct. 31	5		
Kingston	June 1-Oct. 31	5		
Westchester County	Apr. 1-30	1		
Wyoming County	June 1-30	1		
Yates County	Mar. 1-Apr. 30	6		
Total for State		240	3	
North Carolina:				
Alamance County	May 1-Sept. 30	70		
Alexander County	May 1-31	1		
Beaufort County	May 1-31	1		
Bladen County	May 1-31	1		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
North Carolina—Continued.				
Burke County	May 1–July 31	4		
Cabarrus County	May 1–Sept. 30	7		
Camden County	Aug. 1–Sept. 30	8		
Chatham County	May 1–Sept. 30	9		
Chowan County	May 1–Aug. 31	32		
Cleveland County	July 1–31			Present.
Columbus County	June 1–July 31	6		
Davidson County	May 1–31	12		
Davie County	May 1–Aug. 31	2		
Durham County	June 1–30	3		
Edgecombe County	May 1–31	1		
Forsyth County	May 1–July 31	14		
Franklin County	May 1–June 30	11		
Gaston County	June 1–30	3		
Guilford County	May 1–July 31	17		
Greensboro	June 29–Sept. 7	17		
Harnett County	May 1–June 30	13		
Johnston County	May 1–July 31	50		
Lincoln County	May 1–31	1		
Madison County	July 1–Aug. 31	20		
Martin County	July 1–Aug. 31	2		
Mitchell County	July 1–31	20		Aug. 1–Sept. 30. Present.
Nash County	May 1–Aug. 31	4		
New Hanover County, Wilmington included.	May 1–July 10	11		
Orange County	July 1–Sept. 30	10		
Pender County	July 1–31	1		
Pitt County	Aug. 1–31	1		
Robeson County	May 1–31	5		
Rockingham County	Aug. 1–31	9		
Rowan County	May 1–July 31	14		
Rutherford County	June 1–30	2		
Sampson County	July 1–31	2		
Union County	July 1–31	1		
Wake County	May 1–July 31	74		
Warren County	Aug. 1–Sept. 30	9		
Watauga County	July 1–Sept. 30	25		
Wayne County	Aug. 1–31	1		
Total for State		494		
North Dakota:				
Ramsey County—				
Devils Lake	Oct. 1–Nov. 14	48		
Terry	Nov. 1–14			Present.
Penn	Nov. 1–14			Do.
Total for State		48		
Ohio:				
Cleveland	June 22–28	4		
Cincinnati	June 30–Dec. 6	10		
Columbus	June 1–30	3		
Dayton	Aug. 25–Nov. 30	4		
Hamilton	Mar. 17–June 27	21		
Sandusky	Nov. 24–30	1		
Toledo	May 19–July 25	30		
Total for State		73		
Oregon:				
General	Mar. 1–31	15	1	
Baker County	Apr. 1–July 31	8		
Clatsop County	July 1–31	1		
Columbia County	June 1–30	1		
Coos County	July 1–31	3		
Douglas County	Apr. 1–30	1		
Grant County	Aug. 1–31	1		
Klamath County	Apr. 1–30	1		
Linn County	May 1–Aug. 31	5		
Marion County	May 1–31	1		
Multnomah County	Apr. 1–July 31	1		
Portland	May 1–Oct. 31	13		
Union County	Apr. 1–July 31	13		
Wasco County	Apr. 1–30	1		
Washington County	Apr. 1–May 31	2		
Total for State		67	1	
Pennsylvania:				
Altoona	Nov. 3–9	2		
Homestead	June 8–21	2		
New Castle	June 1–30	3		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Pennsylvania—Continued.				
Oil City	July 3–13	2		
Philadelphia	July 7–13	1		
Spring City	Aug. 19–Sept. 6	1		
Total for State		11		
South Dakota:				
Sioux Falls	Aug. 11–24	2		
Total for State		2		
Tennessee:				
Memphis	June 23–July 13	8		
Nashville	June 24–Dec. 7	43		
Total for State		51		
Texas:				
Galveston	June 22–28	1		
Houston	Apr. 28–July 27	50	1	
San Antonio	June 16–Nov. 23	18		
Temple	Sept. 28	2		
Total for State		71	1	
Utah:				
Salt Lake County, Salt Lake City.	June 1–Nov. 30	29		
Summit County	Sept. 1–30	5		
Uintah County	May 1–31	1		
Wasatch County	May 1–Sept. 30	28		
Weber County	June 1–30	3		
Total for State		66		
Vermont:				
Marshfield	July 15–Sept. 4	6		
West Berlin	Apr. 26–Aug. 20	43		
Total for State		49		
Virginia:				
Albemarle County	Oct. 1–31	2		
Amherst County	Apr. 1–30	3		
Appomattox County	Apr. 1–May 31	5		
Bedford County	Apr. 1–30			Present.
Caroline County	Aug. 1–Oct. 31	9		
Dinwiddie County	July 1–31	2		
Elizabeth City County	Apr. 1–May 31	5		
Giles County	Apr. 1–May 31	3		
Hanover County	Apr. 1–July 31	4		
Henrico County, Richmond	June 12–Nov. 23	14		
Henry County	Aug. 1–31	4		
Lancaster County	July 1–31	1		
Louisa County	Apr. 1–July 31	9		
Mecklenburg County	May 1–31	7		
Nansemond County	Apr. 1–May 31	2		
Pittsylvania County	Apr. 1–Sept. 30	5		
Princess Anne County	May 1–July 31	3		
Rockbridge County	Apr. 1–30	40		
Scott County	Apr. 1–30	50		July 31, still present.
Smyth County	Apr. 1–Aug. 31	6		
Southampton County	May 1–31	4		
Surry County	Apr. 1–30	1		
Tazewell County	Apr. 1–30	6		
Warwick County	May 1–31	2		
Wise County	July 1–Oct. 31	13		
York County	Apr. 1–30	5		
Total for State		205		
Washington:				
Fort Steilacoom	May 10–30	2		
Seattle	May 1–Oct. 31	82		
Spokane	June 16–Nov. 23	67		7 imported.
Tacoma	June 23–Nov. 30	20		
Total for State		171		
West Virginia:				
Ripley	May 25–Aug. 19	28		
Total for State		28		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Wisconsin:				
Ashland County	Apr. 1–Sept. 30	13		
Barron County	Apr. 1–Sept. 30	5		
Bayfield County	May 1–June 30	4		
Burnett County	Aug. 1–31	1		
Chippewa County	May 1–31	3		
Clark County	Aug. 1–Sept. 30	5		
Crawford County	Apr. 1–Aug. 31	23		
Dane County	Apr. 1–Aug. 31	44	1	
Douglas County	Apr. 1–Sept. 30	30		
Dunn County	May 1–Aug. 31	12		
Eau Claire County	Sept. 1–30	1		
Fond du Lac County	May 1	25		
Forest County	Apr. 1–June 30	8		
Grant County	Apr. 1	10		
Green County	July 1–31	4		
Green Lake County	Apr. 1–June 30	29		
Iowa County	Apr. 1–30	1		
Iron County	May 1–31	7		
Jefferson County	Apr. 1–30	1		
Juneau County	May 1–July 31	8		
La Crosse County				
La Crosse	Sept. 22–Nov. 30	20		
Lafayette County	May 1–June 30	8		
Langlade County	May 1–June 30	26		
Manitowoc County, Manitowoc.	June 16–22	1		
Milwaukee County	Apr. 1–Aug. 31	24		
Milwaukee	June 16–Nov. 16	50		
Monroe County	June 1–30	1		
Outagamie County	Apr. 1–30	1		
Appleton	Oct. 6–12	2		
Oneida County	June 1–July 31	6		
Polk County	June 1–30	13		
Portage County	May 1–June 30	5		
Pierce County	June 1–30	3		
Racine County	June 1–30	3		
Richland County	Apr. 1–30	3		
Rock County	June 1–July 31	11		
Shawano County	May 1–31	3		
Trempealeau County	Aug. 1–31	5		
Vernon County	Apr. 1–July 31	21		
Washburn County	May 1–Sept. 30	31		
Winnebago County	June 1–30	2		
Waupaca County	Apr. 1–June 30	45		
Waushara County	May 1–July 31	7		
Wood County	Apr. 1–Aug. 31	9	1	
Total for State		534	2	
Grand total, United States.		6,225	18	

Plague in the United States as reported to the Surgeon-General, Public Health and Marine-Hospital Service, August 12 to December 13, 1907.

Place.	Date.	Cases.	Deaths.	Remarks.
California:				
Berkeley	Sept. 1	1	1	
Oakland	Oct. 9–28	4	4	
San Francisco[a]	Aug. 12–Dec. 5	112	67	Case Aug. 12 from ss. Samoa.
Washington:				
Seattle	Oct. 16–30	2	2	

[a] A case of plague was admitted to the marine hospital, San Francisco, May 23, and died May 26, 1907. (See PUBLIC HEALTH REPORTS, June 21, 1907.)

Yellow fever in the United States as reported to the Surgeon-General, Public Health and Marine-Hospital Service, September 1 to December 13, 1907.

Place.	Date.	Cases.	Deaths.	Remarks.
Maryland:				
Baltimore	Sept. 1–7	1	1	At Baltimore quarantine station, from Norwegian ss. Aagot, from Daiquiri.

Weekly morbidity and mortality table, cities of the United States.

Cities.	Week ended—	Population, United States census 1900.	Total deaths from all causes.	Cases and deaths.																					
				Tuberculosis.		Yellow fever.		Smallpox.		Varioloid.		Cholera.		Typhus fever.		Enteric fever.		Scarlet fever.		Diphtheria.		Measles.		Whooping cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Altoona, Pa	Nov. 30	38,973	16	1	....	....	....	....	....	....	....	....	....	....	....	1	1	1	....	3	1	....	....	....	....
Ann Arbor, Mich	Nov. 23	14,509	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
Do	Nov. 30	14,509	5	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
Baltimore, Md	....do ...	508,957	199	18	20	....	....	....	....	....	....	....	....	....	....	24	6	22	2	21	2	46	....	3	....
Bayonne, N. J	....do ...	32,722	.....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	1	....	1	1	....	....	....	....
Belleville, Ill	Nov. 23	17,484	8	....	1	....	....	1	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....
Berkeley, Cal	Nov. 16	13,214	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4	....	....	....	....	....
Do	Nov. 23	13,214	8	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Biddeford, Me	Nov. 30	16,145	17	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....
Binghamton, N. Y	....do ...	38,647	14	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Boston, Mass	....do ...	560,892	201	44	24	....	....	....	....	....	....	....	....	....	....	10	....	49	....	66	3	25	1	....	....
Braddock, Pa	....do ...	15,564	7	....	1	....	....	....	....	....	....	....	....	....	....	7	....	....	....	1	....	....	....	....	....
Brockton, Mass	....do ...	40,063	10	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	3	....	....	....	....	....
Cambridge, Mass	....do ...	91,886	28	4	3	....	....	....	....	....	....	....	....	....	....	1	....	1	....	7	....	2	....	....	....
Camden, N. J	....do ...	75,935	32	1	....	....	....	....	....	....	....	....	....	....	....	....	....	5	....	4	2	....	....	....	....
Carbondale, Pa	....do ...	13,536	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4	....	1	....	....	....	....	....
Charlotte, N. C	....do ...	18,091	10	....	4	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	1
Chelsea, Mass	....do ...	34,072	11	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
Chicopee, Mass	....do ...	19,167	8	....	1	....	....	....	....	....	....	....	....	....	....	3	....	3	2	5	....	....	....	....	....
Cincinnati, Ohio	Nov. 29	325,902	115	20	15	....	....	....	....	....	....	....	....	....	....	6	....	6	....	11	....	17	....	1	....
Cleveland, Ohio	....do ...	381,768	150	22	12	....	....	....	....	....	....	....	....	....	....	13	2	25	5	19	3	54	1	11	1
Clinton, Mass	Nov. 30	13,667	3	....	....	....	....	....	....	....	....	....	....	....	....	2	....	1	....	2	....	....	....	....	....
Columbus, Ga	Nov. 23	17,614	7	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Do	Nov. 30	17,614	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Covington, Ky	....do ...	42,938	.....	....	2	....	....	1	....	....	....	....	....	....	....	....	....	2	....	1	....	....	....	....	....
Danville, Ill	....do ...	16,354	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	2	....	....	....	....	....
Dunkirk, N. Y	....do ...	11,616	6	....	....	....	....	....	....	....	....	....	....	....	....	1	....	6	....	3	1	1	....	....	....
Elkhart, Ind	....do ...	15,184	6	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....
Elmira, N. Y	....do ...	35,672	6	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	31	....	....	....
Erie, Pa	Nov. 21	52,733	26	2	5	....	....	....	....	....	....	....	....	....	....	3	1	18	....	4	1	....	....	....	....
Do	Nov. 28	52,733	15	4	1	....	....	....	....	....	....	....	....	....	....	2	....	6	1	4	....	....	....	....	....
Evansville, Ind	Nov. 30	59,007	12	1	1	....	....	....	....	....	....	....	....	....	....	2	....	....	....	1	....	....	....	....	....
Everett, Mass	....do ...	24,336	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....	....	....
Fall River, Mass	....do ...	104,863	49	6	6	....	....	2	....	....	....	....	....	....	....	1	....	4	....	....	....	14	....	2	....
Findlay, Ohio	....do ...	17,613	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Galesburg, Ill	....do ...	18,607	4	....	....	....	....	....	....	....	....	....	....	....	....	18	....	....	....	2	....	....	....	....	....
Galveston, Tex	Nov. 29	37,789	15	5	3	....	....	....	....	....	....	....	....	....	....	....	....	2	....	4	1	....	....	....	....

Gloucester, Mass	Nov. 30	26,121	11	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
Greensboro, N. C	....do...	10,035	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Greenville, S. C	Nov. 23	11,860	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....
Harrison, N. J	Nov. 30	10,596	2	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....
Haverhill, Mass	....do...	37,175	17	1	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	2	....	15	2	....	....	....	....	....	....	....	....
Hoboken, N. J	....do...	59,364	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	....	4	1	4	....	....	....	....	....	....	....	....	....
Hyde Park, Mass	....do...	13,244	2	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
Indianapolis, Ind	Dec. 1	169,164	53	1	8	....	....	....	....	....	....	....	....	....	....	....	5	....	2	....	9	....	2	....	....	....	....	....	....	....	....	....
Jacksonville, Fla	Nov. 30	28,429	21	....	2	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	5	....	....	....	....	....	....	....	....	....	....	....
Jersey City, N. J	Nov. 24	206,433	70	....	4	....	....	....	....	....	....	....	....	....	....	....	1	....	23	6	11	....	2	....	2	....	....	....	....	....	....	....
Johnstown, Pa	Nov. 30	35,936	15	....	1	....	....	....	....	....	....	....	....	....	....	....	2	1	7	....	13	1	2	....	....	....	....	....	....	....	....	....
Kalamazoo, Mich	....do...	24,404	11	3	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	8	....	....	....	....	....	....	....	....	....	....	....
Kansas City, Kans	....do...	51,418	14	....	....	....	....	....	....	....	....	....	....	....	....	....	2	1	8	....	5	....	....	....	....	....	....	....	....	....	....	....
Kearny, N. J	...do...	10,896	5	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4	1	....	....	....	....	....	....	....	....	....	....
Kingston, N. Y	....do...	24,535	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Knoxville, Tenn	....do...	32,637	.....	.....	2	....	....	....	....	....	....	....	....	....	....	....	.....	....	6	....	3	1	....	....	....	....	....	....	....	....	....	....
La Fayette, Ind	Dec. 2	18,116	3	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Lancaster, Pa	Nov. 30	41,459	12	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	2	....	2	....	....	....	....	....	....	....	....	....	....	....
Lawrence, Mass	....do...	62,559	22	1	1	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	4	....	5	....	....	....	....	....	....	....	....	....
Lexington, Ky	....do...	26,369	11	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....
Lowell, Mass	....do...	94,969	33	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	3	....	14	2	1	....	....	....	....	....	....	....	....	1
Lynn, Mass	Nov. 23	68,513	22	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	3	....	8	1	87	....	....	....	....	....	....	....	....	....
McKeesport, Pa	Nov. 2	34,227	16	1	....	....	....	....	....	....	....	....	....	....	....	....	9	1	2	....	8	2	15	....	....	....	....	....	....	....	....	....
Do	Nov. 9	34,227	22	1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	7	....	36	2	1	....	....	....	....	....	....	....
Do	Nov. 16	34,227	16	....	2	....	....	....	....	....	....	....	....	....	....	....	6	2	....	....	6	1	32	1	....	....	....	....	....	....	....	....
Do	Nov. 23	34,227	18	....	2	....	....	....	....	....	....	....	....	....	....	....	4	2	1	....	10	....	39	....	1	....	....	....	....	....	....	....
Do	Nov. 30	34,227	19	....	1	....	....	....	....	....	....	....	....	....	....	....	6	1	....	....	9	1	52	....	....	....	....	....	....	....	....	....
Malden, Mass	....do...	33,664	11	....	....	....	....	....	....	....	....	....	....	....	....	....	4	....	4	....	10	....	6	....	....	....	....	....	....	....	....	....
Manchester, N. H	....do...	56,987	22	1	1	....	....	....	....	....	....	....	....	....	....	....	3	....	1	....	25	1	....	....	....	....	....	....	....	....	....	....
Manitowoc, Wis	....do...	11,786	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	3	....	....	....	....	....	....	....	....	....	....	....
Marinette, Wis	....do...	16,195	4	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Massillon, Ohio	....do...	11,941	2	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4	1	....	....	....	....	....	....	....	....	....	....
Medford, Mass	....do...	18,244	3	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Middletown, N. Y	Nov. 23	14,522	10	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Do	Nov. 30	14,522	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Moline, Ill	Dec. 1	17,248	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Montclair, N. J	Nov. 30	13,962	7	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Montgomery, Ala	Nov. 29	30,346	18	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Mount Vernon, N. Y	Nov. 30	21,228	7	....	....	....	....	....	....	....	....	....	....	....	....	....	6	....	9	....	1	....	....	....	....	....	....	....	....	....	....	....
Nanticoke, Pa	Dec. 2	12,616	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	5	1	....	....	....	....	....	....	....	....	....	....	....	....
Nashville, Tenn	Nov. 30	80,865	38	1	3	....	7	....	....	....	....	....	....	....	....	....	2	1	14	....	3	1	....	....	....	....	....	....	....	....	....	1
Nebraska City, Nebr	....do...	7,200	1	2	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....	14	....	....	....	....	....	....	....	....	....
Newark, N. J	....do...	246,070	97	....	13	....	....	....	....	....	....	....	....	....	....	....	4	....	9	....	25	....	....	....	....	....	....	....	....	....	....	....
New Bedford, Mass	....do...	63,442	22	5	2	....	....	....	....	....	....	....	....	....	....	....	1	....	3	....	....	....	27	....	2	....	....	....	....	....	....	....
New Brunswick, N. J	....do...	20,006	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	....	3	....	1	....	....	....	....	....	....	....	....	....	....	....
Newburyport, Mass	....do...	14,478	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Newton, Mass	....do...	33,587	11	1	1	....	....	....	....	....	....	....	....	....	....	....	.....	....	.....	....	3	....	....	....	....	....	....	....	8	....	....	....
New York, N. Y	....do...	3,437,202	1,346	337	164	....	....	....	....	....	....	....	....	....	....	....	77	22	323	11	343	26	323	15	9	3	....	....	....	....	....	....
Niagara Falls, N. Y	....do...	19,457	6	1	1	....	....	....	....	....	....	....	....	....	....	....	3	....	1	....	3	....	....	....	....	....	....	....	....	....	....	....
Norristown, Pa	....do...	22,265	10	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
North Adams, Mass	....do...	24,200	5	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	8	....	2	....	....	....	....	....	....	....
Northampton, Mass	....do...	18,643	9	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	3	1	....	....	....	....	3	....	....	....	....	....	....	....
Oneonta, N. Y	....do...	7,147	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

Weekly morbidity and mortality table, cities of the United States—Continued.

Cities.	Week ended—	Population, United States census 1900.	Total deaths from all causes.	Cases and deaths.																					
				Tuberculosis.		Yellow fever.		Smallpox.		Varioloid.		Cholera.		Typhus fever.		Enteric fever.		Scarlet fever.		Diphtheria.		Measles.		Whooping cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Ottumwa, Iowa	Nov. 30	18,197	9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....
Palmer, Mass	....do...	7,801	2	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
Pittsburg, Pa	Nov. 23	321,616	151	9	8	....	....	....	....	....	....	....	....	....	....	126	11	34	1	25	1	18	1	9	1
Plainfield, N. J	Nov. 30	15,369	13	1	1	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....
Port Huron, Mich	....do...	19,158	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....
Portland, Me	Nov. 23	50,145	20	2	2	....	....	....	....	....	....	....	....	....	....	4	....	1	....	2	....	....	....	....	....
Do	Nov. 30	50,145	18	....	1	....	....	....	....	....	....	....	....	....	....	1	....	1	....	1	1	2	....	....	....
Providence, R. I	....do...	175,597	64	5	9	....	....	....	....	....	....	....	....	....	....	2	....	5	....	10	....	6	....	....	....
Quincy, Mass	....do...	23,899	9	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	1	....	....	....	....
Reading, Pa	Dec. 2	78,961	32	2	....	....	....	....	....	....	....	....	....	....	....	2	2	....	....	2	....	18	....	....	1
Rutland, Vt	Nov. 30	11,499	1	....	....	....	....	....	....	....	....	....	....	....	....	3	....	1	....	....	....	1	....	2	....
Saginaw, Mich	Nov. 23	42,345	15	1	1	....	....	....	....	....	....	....	....	....	....	....	....	2	....	1	....	....	....	....	....
Do	Nov. 30	42,345	12	2	2	....	....	2	....	....	....	....	....	....	....	7	....	1	....	3	....	....	....	....	....
St. Louis, Mo	...do...	575,238	179	31	15	....	....	....	....	....	....	....	....	....	....	16	4	25	1	27	1	5	....	12	2
San Antonio, Tex	Nov. 23	53,321	....	....	....	....	....	4	....	....	....	....	....	....	....	1	....	1	....	3	....	....	....	....	....
Do	Nov. 30	53,321	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
Scranton, Pa	Nov. 2	102,026	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	5	....	....	....	....	....
Do	Nov. 9	102,026	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	11	....	14	....	7	....	1	....
Do	Nov. 16	102,026	....	....	1	....	....	....	....	....	....	....	....	....	....	4	1	12	....	16	....	4	....	....	....
Do	Nov. 23	102,026	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	4	....	16	1	12	....	....	....
Do	Nov. 30	102,026	....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	3	....	9	....	3	....	....	....
Sioux Falls, S. Dak	....do...	10,266	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Somerville, Mass	....do...	61,643	17	1	....	....	....	....	....	....	....	....	....	....	....	....	2	9	1	4	....	....	....	....	....
South Bend, Ind	....do...	35,999	14	2	2	....	....	....	....	....	....	....	....	....	....	....	....	2	....	2	....	....	....	....	....
Spokane, Wash	Nov. 23	38,848	23	....	....	....	....	12	....	....	....	....	....	....	....	5	....	....	....	19	....	1	....	....	....
Springfield, Ill	Nov. 28	34,159	18	....	....	....	....	8	....	....	....	....	....	....	....	....	....	....	....	6	1	....	....	....	....
Springfield, Mass	Nov. 30	62,059	20	1	....	....	....	....	....	....	....	....	....	....	....	1	....	3	....	6	....	....	....	....	....
Springfield, Ohio	....do...	38,253	8	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	11	1	....	....	....	....
Steelton, Pa	....do...	12,068	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
Tacoma, Wash	Nov. 23	37,714	11	....	1	....	....	2	....	....	....	....	....	....	....	1	....	....	....	....	1	1	....	....	....
Taunton, Mass	Nov. 30	31,036	15	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Terre Haute, Ind	....do...	36,673	23	....	....	....	....	....	....	....	....	....	....	....	....	2	1	3	....	1	....	1	....	....	....
Titusville, Pa	....do...	8,244	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Toledo, Ohio	Nov. 23	131,822	53	....	5	....	....	....	....	....	....	....	....	....	....	3	4	2	....	6	1	....	....	....	....
Do	Nov. 30	131,822	43	....	8	....	....	....	....	....	....	....	....	....	....	4	1	4	....	7	....	2	....	....	1

Topeka, Kans	Nov. 23	33,608	16	2	2	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....
Do	Nov. 30	33,608	16	1	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
Trenton, N. J	....do ...	73,307	.....	2	1	....	....	....	....	....	....	....	....	....	....	7	....	2	....	6	1	....	....	....	....	....
Waltham, Mass	....do ...	23,481	7	....	2	....	....	....	....	....	....	....	....	....	....	1	....	....	....	4	1	....	....	1	....	....
Warren, Ohio	....do ...	8,529	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Warren, Pa	Nov. 25	8,043	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	2	....	....	....	....
Washington, D. C	Nov. 23	278,718	.....	....	23	....	....	....	....	....	....	....	....	....	....	17	2	5	....	8	....	2	....	4	....	....
Do	Nov. 30	278,718	89	....	13	....	....	....	....	....	....	....	....	....	....	14	2	4	....	15	1	1	....	5	....	....
Wheeling, W. Va	Nov. 23	38,878	15	....	3	....	....	....	....	....	....	....	....	....	....	....	....	2	....	1	....	....	....	....	....	....
Do	Nov. 30	38,878	16	....	3	....	....	....	....	....	....	....	....	....	....	....	2	3	....	1	1	....	....	....	....	....
Williamsport, Pa	Nov. 16	28,757	10	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Do	[a]Nov. 30	28,757	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	5	....	....	....	....	....	....
Wilmington, Del	....do ...	76,508	23	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Winona, Minn	....do ...	19,714	3	....	....	....	....	1	....	....	....	....	....	....	....	....	....	3	....	....	....	3	....	....	....	....
Woburn, Mass	....do ...	14,254	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Worcester, Mass	Nov. 23	118,421	35	9	5	....	....	....	....	....	....	....	....	....	....	3	1	6	1	18	2	1	....	1	....	....
Yonkers, N. Y	Nov. 30	47,931	20	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

[a] Intervening week previously reported.

FOREIGN AND INSULAR.

CURRENT QUARANTINE MEASURES.

[From the Veröffentlichungen des Kaiserlichen Gesundheitsamtes, Berlin, November 20, 1907.]

CHOLERA.

Italy.—November 8. Quarantine measures ordered September 22 against arrivals from Singapore suspended.

Russia.—November 6. The government of Tiflis declared cholera threatened; the provinces of Saga, Fukuoka, and Nagasaki, in Japan, cholera infected; and the cities of Shanghai and Girin, in Manchuria, cholera free.

November 11. Declaration of cholera in the city of Astrachan, the localities of Archiereiski-Passelok and Atamanskaja-Stanitza, and the districts of Astrachan, Krasnojarsk, Jenotajewsk, and Zarew, in Astrachan government, suspended, and the government of Astrachan declared cholera threatened.

Straits Settlements.—October 12. Port of Manila declared cholera infected.

PLAGUE.

Austria.—November 5. The maritime authorities at Trieste have notified port officials that arrivals from Tunis are subject to quarantine treatment.

British India.—October 12. Quarantine measures against Mauritius declared at ports of Orissa.

Dutch Indies.—September 28 and October 10. Quarantine measures against Hongkong, Swatow, and Amoy suspended, and ordered against arrivals from Port Said.

Egypt.—November 5. Arrivals from Tunis subject at Egyptian ports to quarantine measures.

Italy.—November 8. Port of Bona declared plague infected.

Malta.—November 2. Tunis declared plague infected.

Russia.—November 6. The cities of Oran and Tunis declared plague infected.

Spain.—November 11. Ports of Bona and Philippeville declared plague infected.

Turkey.—November 5. Arrivals from Tunis subject to three days' medical observation at a Turkish quarantine station and arrivals from Oran subject to medical observation at a Turkish quarantine station or at Jaffa or Rhodes after disinfection and measures for destruction of rats.

AFRICA.

Report from Cape Colony—Examination of rodents at King Williams Town for plague infection.

The following is received from the medical officer of health for the colony, under date of October 28:

Week ended October 26:

No case of plague was discovered during the week.

One hundred and seven rats (including 11 found dead), 64 mice (including 10 found dead), and 3 cats (found dead) were examined, of which 16 rats, 10 mice, and 3 cats proved to be probably plague infected.

CUBA.

Report from Cienfuegos—Inspection and fumigation of vessels—Leprosy—Yellow fever—Summary of yellow fever—Transactions, month of November, 1907.

Acting Assistant Surgeon Marsillan reports, November 25 and 30:

Week ended November 23.

Vessels inspected, fumigated, and bills of health issued	2
Members of crews inspected	61

The British steamship *Mui*, from Manzanillo, Cuba, bound for Mobile, Ala., was fumigated November 18. The Spanish steamship *Telesfora*, from Santiago de Cuba, destined to Tampa, Fla., was fumigated November 22. Both vessels sailed in water ballast for their destination.

The sanitary condition of this city and surrounding country continues infected.

Quarantinable diseases in and outside this city: Leprosy and yellow fever.

Week ended November 30, and for the entire month of November:

Report for the week ended November 30.

Vessels inspected, fumigated, and bills of health issued	4
Members of crews inspected	157
Members of crew inspected landed at this port	1
Passengers inspected	2

November 25, the Norwegian steamship *Trafalgar*, from Guantanamo and bound for Mobile, Ala., was fumigated.

On the same day the Spanish steamship *Vivina*, from Manzanillo, Cuba, for Pensacola, was fumigated throughout while in the open bay; the vessel sailed in the remainder of a cargo from England.

November 29, the British steamship *Yucatan*, from Cartagena, Colombia, for New Orleans, was fumigated; the vessel sailed in ballast.

November 30, the German steamship *Norderney*, from Manzanillo, Cuba, bound for New Orleans, La., direct, was fumigated.

Quarantinable diseases prevailing at city and surrounding country are leprosy and yellow fever.

Statistics of yellow fever: Total cases recorded to date, 78; deaths, 20.

Prophylactic measures have been instituted.

Transactions for the month of November, 1907.

Vessels inspected	7
Vessels inspected and fumigated	12
Bills of health issued	19
Members of crews inspected	517
Members of crews inspected landed at this port	2
Members of crews inspected taken on at this port	2
Passengers inspected	5
Immune certificates issued	1

During the month 8 cases of yellow fever with 2 deaths were reported, making a total, to date, of 78 cases and 20 deaths for this city and 2 cases at Santa Clara city in this province.

Since the beginning of this month more vigorous measures have been instituted against yellow fever.

December 4.—One case of yellow fever reported to-day in this city; origin of infection traceable to surrounding country.

December 7.—Last case of yellow fever confirmed died to-day.

December 9. Two new cases of yellow fever were confirmed yesterday. No deaths.

Reports from Habana—Inspection and fumigation of vessels—Improvement in yellow fever situation—Yellow fever in Santa Clara Province—Disinfection of foci in Habana Province—Statement of yellow fever present in Cuba.

Passed Assistant Surgeon Amesse reports, December 3:

Week ended November 30.

Vessels inspected and bills of health issued	20
Vessels not inspected and bills of health issued	8
Members of crews of outgoing vessels inspected	921
Members of crews of outgoing vessels not inspected	292
Passengers of outgoing vessels inspected	276
Passengers of outgoing vessels not inspected	98
Persons entering Triscornia for observation prior to sailing	13
Persons transferred from Triscornia to vessels	22
Certificates of immunity to yellow fever issued	20
Vessels fumigated prior to sailing	9

A decided improvement in the yellow fever situation was noted for this period. The San Nicolas case, isolated at Dependientes Hospital, Habana, was discharged, recovered, on November 29, as were also, on the same date, the 2 cases remaining at Santa Clara. At Ciego de Avila, an American soldier, under treatment since November 6, was discharged November 26, and the entire camp thoroughly refumigated.

A large number of sanitary employees have been at work during the past week disinfecting various foci in the southern part of Habana Province.

On November 29, a case of yellow fever, originating in Union de Reyes, and sick for five days at the time of admission, was isolated at

Covadonga Hospital, Habana, where it terminated in death on December 2.

At the close of the week there remained 5 cases of yellow fever under treatment throughout the island; 3 at Cienfuegos, 1 at Union de Reyes, and 1 at Covadonga Hospital, Habana.

December 4.—One case of yellow fever at Remedios, Santa Clara Province, 4 miles from the port of Caibarien; also 1 at Santa Clara from Cienfuegos. Medical inspectors put on trains entering Habana.

December 6.—The case of yellow fever at Santa Clara from Cienfuegos, Spanish immigrant, reported December 4, resulted fatally yesterday.

Summary of detentions at Triscornia, month of November, 1907.

During the month of November, 1907, there were detained at Triscornia the following passengers, bound for southern ports: First cabin, 64; steerage, 172.

Report from Matanzas—Inspection and fumigation of vessels—Campaign instituted for eradication of yellow fever foci in vicinity of Alacranes and Union de Reyes; train inspection and observation of passengers—Summary, month of November, 1907.

Acting Assistant Surgeon Nunez reports, December 3:

Week ended November 30.

Bills of health granted to 4 vessels bound for ports in the United States; 1 health and acclimation certificate issued to a passenger destined for Porto Rico via Habana, and the following vessels fumigated: November 26, the Norwegian steamship *Vitalia*, having 20 members of crew, and 8 passengers of whom 1 was taken on at this port, bound for Galveston; November 29, the Norwegian steamship *Times*, with a crew of 24, no passengers, bound for Mobile, and the Spanish steamship *Valbanera*, with 57 members of crew, no passengers, destined for New Orleans.

The case of yellow fever reported November 26 at Union de Reyes, a Spaniard, recovered and was discharged to-day. Shortly after the above case was reported, a second case, also a Spaniard, was detected in Habana, traceable to Union de Reyes, and was isolated at the Covadonga hospital in that city, where the patient died December 2.

Two medical officers have been ordered to Alacranes and Union de Reyes for the direction and supervision of a new sanitary campaign to be carried out for the eradication of the various foci of yellow-fever infection within those districts. Several medical inspectors, civilians, are to be stationed on board trains to exercise a strict supervision of travel originating from infected districts and report the destination of passengers to the proper sanitary authorities for further observation during the period of incubation of the disease.

Month of November, 1907: Bills of health were granted to 16 vessels bound for United States ports, having a total number of 470 members of crew and 80 passengers in transit, with 1 taken on at this

port; 1 health and acclimation certificate was issued for Porto Rico, and 10 vessels were fumigated.

The following cases and deaths of yellow fever were reported within the city and province during the month: November 2, 1 death in the city of Matanzas; November 15 and 21, 2 cases ending fatally at Alacranes, this province; November 26, 1 case at Union de Reyes. Total number of cases, 4, with 3 deaths.

Report from Santiago—Inspection of vessels.

Acting Assistant Surgeon Wilson reports, November 26:

Week ended November 23. Bills of health issued to 6 vessels bound for the United States. No vessel fumigated. No quarantinable disease reported.

GERMANY.

Report from Berlin—Status of cholera in Russia.

The following is received from Consul-General Thackara, under date of November 25:

During the period from October 30 to November 5, there were registered in the Russian Empire, according to official statistics published by the imperial health office at Berlin, 410 cases of cholera and 192 deaths. Of the 97 cases notified on November 4 and 5, 26 occurred in the lower Volga governmental district, 3 in the Middle Volga district, 2 in the Moscow district, 19 in the new Russian district, 17 in the southwestern governmental district, 1 in Minsk, 5 in south Caucasus, 10 in Siberia, and 14 in the steppes territory.

On November 6, 7, and 8, there were reported 171 cases of cholera, with 112 deaths.

According to a further report, there were registered in the city of Kief, during the period from November 6 to 11, 33 cases of cholera and 8 deaths, making a total number of cases in that city up to November 11 of 1,249, with 339 deaths.

HAWAII.

Report from Honolulu—Examination of rats for plague infection.

Passed Assistant Surgeon Currie reports that during the week ended November 16, 163 rats were examined bacteriologically at the plague laboratory of the Service at Honolulu. Plague infection was not proved in any of the rats examined.

INDIA.

Report from Calcutta—Transactions of Service—Cholera, plague, and smallpox—Plague in India and Bengal.

Acting Assistant Surgeon Eakins reports, November 7:

During the week ended November 2, a bill of health was issued to the steamship *Stolzenfels* bound for Philadelphia and New York with a total crew of 64. The usual precautions were taken, the holds

fumigated, rat guards placed on the wharf lines, and Asiatics' effects disinfected.

During the week ended October 26, there were 75 deaths from cholera and 4 from plague in Calcutta. In Bengal during the week ended October 26, there were 32 cases and 28 deaths from plague. In India during the week ended October 26, there were 12,470 cases, 8,785 deaths from plague.

ITALY.

Report from Naples—Inspection of vessels—Emigrants recommended for rejection—Smallpox in Italy.

Passed Assistant Surgeon McLaughlin reports, November 18:

Week ended November 16. Vessels inspected at Naples and Palermo:

NAPLES.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of large baggage inspected and passed.	Pieces of baggage disinfected.
Nov. 10	Nord America	New York	598	70	750
12	Republic	do	606	140	820
12	Luisiana	do	702	110	1,100
13	Italia	do	292	55	630
13	Germania	do	283	70	650
14	Neckar	do	249	45	350
15	Italia	do	122	17	150
16	Romanic	Boston	550	130	780
	Total		3,402	617	5,230

PALERMO.

Nov. 11	Nord America	New York	214	400	180
14	Italia	do	179	391	136
16	do	do	50	261	59
	Total		443	1,052	365

Rejections recommended.

NAPLES.

Date.	Name of ship.	Trachoma.	Favus.	Suspected trachoma.	Suspected favus.	Other causes.	Total.
Nov. 10	Nord America	35	1	21	2	4	63
12	Republic	29	2	14	.....	4	49
12	Luisiana	25	.....	12	.....	7	44
13	Italia	6	.....	6	.....	2	14
13	Germania	15	.....	1	.....	.....	16
14	Neckar	9	.....	5	.....	1	15
15	Italia	3	2	.....	.....	.....	5
16	Romania	18	2	4	2	7	33
	Total	140	7	63	4	25	239

PALERMO.

Nov. 11	Nord America	20	.....	15	.....	2	37
14	Italia	10	.....	12	.....	2	24
16	do	4	.....	5	.....	1	10
	Total	34	.....	32	.....	5	71

Smallpox.—Week ended November 14, 1907.

Cases: Pietragalla (Potenza), 2; Trapani, 4; Alcamo (Trapani), 2; Caltanissetta, 4.

Smallpox.—Week ended November 21, 1907. Cases: Ovigliano, 1; Pietrogalla (Potenza), 3; Trapani, 5.

JAPAN.

Report from Yokohama—Inspection of vessels—Summary of emigrant inspection, month of October, 1907—Cholera at Yokohama and Tokyo—Plague in vicinity of Nagasaki and at Osaka.

Passed Assistant Surgeon Cumming reports, November 12:

Bills of health were issued during the weeks ended November 3 and 10 to 8 vessels having an aggregate personnel of 1,051 passengers and 970 members of crews. Of these, 3 were bound to San Francisco via Honolulu, 2 to Seattle, and 1 each to Tacoma, Portland, Oreg., and Manila.

During the month ended October 31, 848 intending steerage passengers to the United States, or its possessions were inspected. Of these 590 were passed and 561 certified upon steerage manifests.

Five hundred and fifty steerage passengers with 1,007 pieces of baggage destined to American ports, 184 steerage passengers with 264 pieces destined to Canadian ports, and 90 members of crews shipped here were bathed and effects disinfected.

There have been only two or three cases of cholera in the suburbs here, and the disease has not really obtained any foothold in this community, but is reported quite prevalent in suburbs of Tokyo and in the rural districts situated to the east of that city.

There was reported yesterday a severe outbreak of plague upon a small island near Nagaski, and an outbreak in an iron foundry at Osaka was reported to-day.

Emigrants recommended for rejection.

Number of emigrants per steamship *Korea* recommended, November 12, for rejection: For San Francisco, 1; for Honolulu, 8; advised to wait, 1 for San Francisco, 23 for Honolulu.

Per steamship *Tosa Maru*, November 13: For Seattle, 1; advised to wait, 8. All rejections and detentions were for trachoma.

Reports from Kobe—Inspection of vessels—Examination of emigrants—Cholera conditions improved—Smallpox—Plague at Osaka.

Acting Assistant Surgeon Ransom reports, October 29, and November 2:

During the week ended October 26, 1 original bill of health was granted and 7 supplemental bills of health were issued to 7 steamers, with a total personnel of 1,413. There were inspected 8 vessels, 806 members of crews, and 471 steerage passengers. Two vessels were fumigated with sulphur to kill vermin and their forecastles were washed down with antiseptic solution. There were disinfected by

steam 2,508 pieces of baggage and effects, and there were bathed 70 crew and 473 steerage passengers. Manifests were viséed for 16,989 pieces of freight.

Emigrants were examined for trachoma, etc., as follows:

Steamship *Amiral Exelmans* for Honolulu, 162 passed, 112 recommended for rejection; steamship *Kaga Maru* for Seattle, 40 passed, 45 recommended for rejection, and steamship *Hongkong Maru* for Honolulu, 106 passed, 155 recommended for rejection.

The emigrants passed, together with 215 intending passengers for Victoria, for the steamships *Keemun* and *Kaga Maru*, were held five days under observation prior to embarkation.

The cholera situation here continues to show marked improvement, there having been reported last week but 14 cases and 9 deaths from that disease. Smallpox shows 3 cases and 2 deaths during the week.

Week ended November 2. Two supplemental bills of health were granted to 2 steamers with an aggregate personnel of 474.

There were inspected 2 vessels, 378 crew, and 30 steerage passengers. Manifests were viséed for 319 pieces of freight. There were disinfected 21 pieces of personal effects and 35 pieces of freight. Nine steerage pasengers were bathed and held five days under observation prior to embarking.

Twenty-eight emigrants were examined for the steamship *Minnesota* for Seattle; 7 passed, 21 recommended for rejection.

The following diseases were reported in Kobe during the week: Cholera, 19 cases and 7 deaths; smallpox, 6 cases and 1 death. The total reported mortality was 142.

Reports from Osaka for the week ended October 26 show 30 cases of plague with 19 deaths.

MEXICO.

Reports from Veracruz—Inspection of vessels.

Acting Assistant Surgeon Frick reports, November 25 and 30:

Week ended November 23. November 18, inspected the Norwegian steamship *City of Mexico*, bound for New Orleans via Tampico, with 25 in the crew and 1 passenger; vessel sails in the remainder of an American cargo. Inspected the Norwegian steamship *Bratton*, bound for Mobile, with 15 in the crew; vessel sails in ballast.

November 20, inspected the British steamship *Senator*, bound for New Orleans, with 42 in the crew and 2 passengers; vessel sails in ballast.

November 19, inspected the German steamship *Caledonia*, bound for New Orleans via Mexican ports, with 39 in the crew; vessel sails in the remainder of a European cargo.

November 21, inspected the French steamship *Louisiana*, bound for New Orleans via Tampico, with 65 in the crew, 16 cabin and 16 steerage passengers; vessel sails in the remainder of a European cargo. Inspected the American steamship *Merida*, bound for New York via Progreso and Habana, with 126 in the crew, 92 cabin and 15 steerage passengers; vessel sails in a general cargo.

November 22, inspected the British steamship *Sokoto*, bound for Halifax via Norfolk, for bunker coal, with 58 in the crew and 16

steerage passengers; vessel sails in a general cargo for Canada. Fumigated the German steamship *Mars*, bound for New Orleans, with 23 in the crew; vessel sails in ballast.

November 23, inspected the British steamship *Jacob Bright*, bound for Norfolk, with 24 in the crew; vessel sails in ballast.

November 24, inspected the Mexican steamship *Oaxaca*, bound for Mobile, with 27 in the crew; vessel sails in ballast.

November 26, inspected the German steamship *Louisa Menzell*, bound for Pascagoula, with 23 in the crew; vessel sails in ballast. Inspected the Spanish steamship *Manuel Calvo*, bound for New York via Habana, with 136 in the crew, 56 cabin, and 27 steerage passengers; vessel sails in a general cargo for Spanish ports.

November 27, inspected the British steamship *Cayo Domingo*, bound for Galveston via Coatzacoalcos, with 28 in the crew; vessel sails in the remainder of a European cargo.

November 28, inspected the American steamship *Morro Castle*, bound for New York via Progreso and Habana, with 124 in the crew, 54 cabin and 11 steerage passengers; vessel sails in general cargo.

November 30, inspected the British steamship *Dora*, bound for Key West, with 23 in the crew; vessel sails in ballast.

No quarantinable disease was reported during the week.

NICARAGUA.

Report from Managua—Yellow fever present.

Consul Olivares reports, November 14:

For a week past yellow fever has been present at Managua. Several deaths have occurred from this cause and a considerable number of cases are present.

PERU.

Reports from Callao—Inspection and fumigation of vessels—Status of plague in Peru—Disinfection of houses in Lima on account of plague and smallpox.

Assistant Surgeon Wightman reports, November 2 and 10:

Week ended November 2.

Vessels dispatched as follows:

October 29, the German steamship *Sakkarah*, for San Francisco, Cal., with a general cargo and a total personnel of 57, of whom 5 members of crew and 2 cabin passengers were from this port. October 31, the Chilean steamship *Mapocho*, for Ancon, Canal Zone, with a general cargo and a total personnel of 173, of whom 1 member of the crew, 41 cabin, and 49 steerage passengers were from this port. November 1, the British steamship *Cuzco*, with a general cargo, for New York, with a total personnel of 58, of whom 1 cabin passenger was from this port. November 1, the British steamship *Sheilah*, for San Francisco, Cal., with a general cargo and a total personnel of 34, of whom 8 cabin passengers were from this port; and the British bark *Earl of Dunmore*, for Port Townsend, with ballast and a crew of 30, of whom 17 were from this port.

The *Cuzco* and the *Sheilah* were fumigated on arrival and allowed to proceed without refumigation; the others were fumigated before sailing.

The following is the latest report on plague in Peru received from the Director de Salubridad:

Locality.	Cases, Oct. 24.	New.	Recovered.	Died.	Remaining, Oct. 30.
Lima	2	5	0	1	6
Callao	6	0	0	0	6
Trujillo	1	2	1	1	1
Piura	3	0	0	0	3
Paita	1	3	0	2	2
Ferrenafe	2	2	0	0	4
San Pedro	0	10	0	4	6

Smallpox continues at Lima.

Week ended November 9. Vessels were dispatched as follows: November 7, the German steamship *Neko* for San Francisco, Cal., with a general cargo and a total personnel of 74, of whom 9 cabin passengers were from this port. November 9, the British steamship *Peru* for Ancon, Canal Zone, with a general cargo and a total personnel of 273, of whom 5 members of the crew and 88 cabin and 79 steerage passengers were from this port. Both vessels were fumigated before sailing.

The following is the latest report on plague received from the Director de Salubridad.

Locality.	Cases Oct. 31.	New.	Recovered.	Died.	Remaining Nov. 6.
Lima	6	1	0	3	4
Callao	6	1	0	1	6
Trujillo	1	4	0	4	1
Piura	3	0	0	0	3
Paita	2	4	0	4	2
Ferrenafe	4	0	0	4	0
San Pedro	6	1	0	2	5

Smallpox continues to prevail in Lima. During the month of October 54 habitations were disinfected in Lima for smallpox, and 24 on account of plague or the finding of dead rodents. On November 6 there were 25 patients in the Lima smallpox hospital.

RUSSIA.

Report from St. Petersburg—Status of cholera in Russia.

The following is received from Chargé d'Affaires Schuyler, under date of November 16:

According to communications received from the foreign office, 614 cases of cholera were reported throughout Russia between October 23 and 29 and 451 cases between October 30 and November 5. The towns of Astrakhan, Archiereisky Poselok, and Atamanskaya and the districts of Astrakhan, Krasnoiarsk, Enotaevsk, and Tzarew are now declared free from cholera.

WEST INDIES.

Report from Bridgetown, Barbados—Further relative to yellow-fever cases from British naval vessel Indefatigable.

The following information, received from the general board of health, Bridgetown, was forwarded by Consul Clare, under date of November 20:

Three men from the British man-of-war *Indefatigable*, who were sent on the afternoon of November 18 to the general hospital, supposed to be suffering from dengue fever, developed yellow fever in the night, and 1 died yesterday morning. The other 2 were sent to the quarantine hospital. Five other men from the same ship were also sent to the latter hospital, suffering from fever, 2 of whom have since developed yellow fever. The wife of the resident surgeon at the general hospital also died there yesterday morning from yellow fever. The source of the disease has not been ascertained. Every precaution possible has been and is being taken to prevent the disease from spreading.

(See Public Health Reports, November 29, 1907, p. 1744.)

November 24.—Consul Clare reports no further development of yellow fever at Bridgetown.

FOREIGN AND INSULAR STATISTICAL REPORTS OF COUNTRIES AND CITIES—UNTABULATED.

AFRICA—*Lourenço Marquez.*—Month of September, 1907. Estimated population, 10,000. Total number of deaths, 51, including smallpox 5, whooping cough 1, and 8 from tuberculosis.

BRAZIL—*Pernambuco.*—Two weeks ended September 30, 1907. Estimated population, 210,000. Total number of deaths, 277, including enteric fever 1, smallpox 54, plague 3, malarial fever 7, beriberi 1, and 50 from tuberculosis.

CANADA—*Ontario—Hamilton.*—Month of November, 1907. Estimated population, 63,000. Total number of deaths, 62, including enteric fever 1 and 2 from tuberculosis.

Quebec—Sherbrooke.—Month of November, 1907. Estimated population, 14,700. Total number of deaths, 14, including diphtheria 2 and 1 from tuberculosis.

CUBA—*Habana.*—Month of October, 1907. Estimated population, 280,000. Total number of deaths, 441, including diphtheria 2, enteric fever 8, yellow fever 3, whooping cough 6, leprosy 3, and 87 from tuberculosis.

FRANCE—*Cannes.*—Month of October, 1907. Estimated population, 37,361. Total number of deaths, 48, including enteric fever 1 and 8 from smallpox.

St. Etienne.—Two weeks ended October 31, 1907. Estimated population, 150,000. Total number of deaths, 115, including diphtheria 2, whooping cough 1, scarlet fever 1, and 23 from tuberculosis.

GREAT BRITAIN—*England and Wales.*—The deaths registered in 76 great towns in England and Wales during the week ended November 16, 1907, correspond to an annual rate of 14.8 per 1,000 of population, which is estimated at 16,624,458.

London.—One thousand three hundred and twenty-six deaths were registered during the week, including measles 21, scarlet fever 9, diphtheria 21, enteric fever 6, whooping cough 17, tuberculosis 210, and 34 from diarrhea. The deaths from all causes correspond to an annual rate of 14.5 per 1,000. In Greater London 1,767 deaths were registered. In the "outer ring" the deaths included 3 from diphtheria, 2 from measles, 2 from scarlet fever, and 6 from whooping cough.

Ireland.—The average annual death rate represented by the deaths registered during the week ended November 16, 1907, in the 21 principal town districts of Ireland was 21.6 per 1,000 of the population, which is estimated at 1,117,547. The lowest rate was recorded in Portadown, viz, 5.2, and the highest in Limerick, viz, 34.2 per 1,000.

Scotland.—The deaths registered in 8 principal towns during the week ended November 16, 1907, correspond to an annual rate of 15.9 per 1,000 of the population, which is estimated at 1,812,171. The highest rate of mortality was recorded in Dundee, viz, 23.6, and the lowest in Aberdeen, viz, 9.0 per 1,000. The aggregate number of deaths registered from all causes was 552, including diphtheria 10, enteric fever 4, measles 33, scarlet fever 4, and 12 from whooping cough.

JAPAN—*Formosa.*—Two weeks ended November 2, 1907. Estimated population, 3,050,004. Total number of deaths not reported. Four deaths from enteric fever and 1 from plague reported.

MALTA.—Two weeks ended November 9, 1907. Estimated population, 206,689. Total number of deaths, 191, including diphtheria 2, enteric fever 2, and 1 from smallpox.

RUSSIA—*Riga.*—Month of August, 1907. Estimated population, 320,000. Total number of deaths, 624, including diphtheria 8, enteric fever 12, measles 11, scarlet fever 25, smallpox 1, and 63 from tuberculosis.

SPAIN—*Barcelona.*—Ten days ended November 20, 1907. Estimated population, 600,000. Total number of deaths, 411, including diphtheria 5, enteric fever 26, smallpox 3, and 32 from tuberculosis.

Huelva.—Month of October, 1907. Estimated population, 24,000. Total number of deaths, 73, including enteric fever 2, scarlet fever 1, and 11 from tuberculosis.

Seville.—Month of October, 1907. Estimated population, 148,315. Total number of deaths, 352, including diphtheria 2, enteric fever 7, scarlet fever 4, and 53 from tuberculosis.

VENEZUELA.—Reports from the entire Republic for the year ended December 31, 1906, show as follows: Estimated population, 2,323,527. Total number of deaths, 52,949, including diphtheria 88, enteric fever 1,217, measles 233, scarlet fever 34, whooping cough 324, yellow fever 73, leprosy 74, beriberi 10, malarial fever 8,544, and 4,293 from phthisis pulmonalis.

WEST INDIES—*Curaçao.*—Two weeks ended November 22, 1907. Estimated population, 31,600. Total number of deaths, 8. No deaths from contagious diseases reported.

St. Lucia, Castries.—Month of October, 1907. Estimated population, 7,000. Total number of deaths, 18.

Cholera, yellow fever, plague, and smallpox from June 28 to December 13, 1907.

[Reports received by the Surgeon-General, Public Health and Marine-Hospital Service, from American consuls, through the Department of State and from other sources.]

[For reports received from December 28, 1906, to June 28, 1907, see PUBLIC HEALTH REPORTS for June 28, 1907.]

[NOTE.—In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria—Algiers	Aug. 1-31	.....	2	Quarantined without the city limits.
Ceylon—Point de Galle	June 16-22	.....	2	
China:				
Amoy	June 30-July 6	.....	.....	Kulangsu, 8 deaths daily, estimated. Aug. 3, still present.
Hankow	Aug. 24-Sept. 14	7	4	
Hongkong	Sept. 8-14	1	.....	
Shanghai	Aug. 4-Sept. 29	a 23	467	
Shanhaikwan	Sept. 2	.....	.....	Present on R. R. to Tongshan.
Tientsin	Aug. 15-Oct. 5	.....	11	3 cases and 2 deaths from steamship from Shanghai.
India		.....	.....	Burma Province, 1906, 7,872 deaths.
Bombay	May 29-Oct. 22	.....	386	
Calcutta	May 12-Oct. 26	.....	941	
Cochin	May 4-Oct. 4	.....	93	
Kashmir	May 11-July 9	10,555	6,563	From Nov. 1 to June 29, 16,675 cases and 9,705 deaths.
Madras	July 6-Oct. 25	.....	592	
Moulmine	May 5-July 27	42	1	
Negapatam	Oct. 5-11	.....	7	
Rangoon	May 12-Oct. 26	.....	42	
Japan, general	Sept. 1-Oct. 5	2,944	736	
Chiba pref	Oct. 19-21	28	6	
Ehime Ken	Sept. 1-13	2	.....	
Formosa	Sept. 8-Oct. 5	2	1	
Fukawa	To Oct. 5	961	.....	
Fukuoka Ken	Aug. 19-Sept. 13	687	.....	
Moji	Aug. 19-Oct. 8	512	400	And 83 cases in vicinity Sept. 9.
Haneda	Oct. 19	.....	.....	Present.
Hieroshima Ken	Sept. 1-Oct. 8	30	.....	
Hyogo Ken	Aug. 24-Sept. 13	102	.....	
Kobé	Aug. 24-Nov. 2	451	117	
Kagashima	Sept. 1-Oct. 5	15	.....	
Kagawa Ken	Sept. 1-Oct. 12	28	.....	
Nagasaki Ken	Aug. 30-Oct. 12	61	2	Imported from Moji.
Nagatsu	Aug. 31	.....	.....	14 cases daily.
Nara	Sept. 1	1	.....	
Ohita Ken	Sept. 1-Oct. 12	120	.....	
Okayama	Sept. 1-Oct. 12	10	.....	
Okugori	Sept. 1-9	27	.....	
Osaka	Aug. 24-Oct. 12	248	179	
Saga Ken	Sept. 1-Oct. 12	74	.....	
Saseho	Sept. 1	.....	.....	Present.
Tokyo	Sept. 1-Oct. 5	12	.....	Nov. 12, still present in vicinity.
Wakama Ken	Sept. 1-13	1	.....	

a Cases among foreigners, deaths among natives.

Cholera, yellow fever, plague, and smallpox, etc.—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Japan, general—Continued.				
Yamaguchi Ken	Sept. 1–Oct. 5	276		
Shimonoseki	Aug. 4–Oct. 8	82	55	Case Aug. 10 from ss. Hakauai Maru. Present also in vicinity.
Yokohama	July 28–Nov. 11	69	43	5 cases, 3 deaths July 28–Aug. 3 from ss. Yamashiro Maru; 1 case Sept. 1 from vessel Takasago Maru.
Yokosuka	Oct. 19			Present.
Korea	Sept. 11			Present in northern part.
Nakanoshima Island	Sept. 11	11	2	
Seoul	Sept. 26			Present.
Manchuria:				
Antung	Oct. 21			Do.
Dalny	Sept. 15–Oct. 29	22	13	
Port Arthur	Sept. 15–24	4	4	Japanese.
Philippine Islands:				
Manila	July 14–Oct 19	127	116	
Provinces				Report of the bureau of health, Philippine Islands, first quarter of the calendar year 1907, gives a grand total of 235 cases and 148 deaths.
Bulachan	Oct. 6–12	1		
Leyte, Carigara	Aug. 31			2 cases daily.
Masbate, Mandaon	To Sept. 21			Present.
Russia:				
General	July 16–Nov. 11	10,688	5,076	
Amolinsk Territory	Aug. 21–Oct. 25	772	242	
Archiereiski-Passelok	Aug. 19–Oct. 25	7	2	Report incomplete.
Astrachan, govt. district	July 14–Oct. 25	2,262	1,114	Sept. 1 to 9 present at Balochna, Busulusk, and Novoouzensk.
Astrachan	Sept. 5–Oct. 25	493	296	
Jenotajewsk district	Aug. 22–25	1		
Zarew district	Aug. 22–25	3	12	
Ataman-Stanitza	Aug. 19			Present.
Bäku	Aug. 25–Oct. 25	48	25	
Don district	Sept. 7			Do.
Ekaterinslav	Sept. 16–Oct. 29	144	59	
Elizabethpol district	Sept. 18–24			Do.
Irkoutsk	Oct. 19–25	12	4	
Jaroslaw	July 14–Oct. 29	19	5	
Jurino	Aug. 26	2		
Kamyschin	Sept. 1–9	20	24	
Kazan, govt	Sept. 3–Oct. 29	60	21	
Kherson	Oct. 19–25	1	1	
Kief	Sept. 22–Nov. 11	1,249	339	
Kostroma, govt	Aug. 21–Oct. 29	83	42	
Kursk	Sept. 9	1	1	
Lodz	Sept. 8	1		
Melekes	Aug. 25	6	2	
Minsk	Nov. 11	1		
Moscow	Aug. 31–Sept. 8	1	1	Imported from Saratov.
Nikolajwesk	Aug. 25	12	8	
Nizhni-Novgorod, govt	Aug. 26–Oct. 29	259	129	
Omask	Sept. 16–24			Present.
Penza, govt	Aug. 21–Oct. 25	48	28	
Perm	Aug. 24–Oct. 25	35	14	
Riäsan	Sept. 1–Oct. 1	1		
Rostow	Sept. 19–Oct. 25	52	30	And vicinity, 136 cases and 71 deaths, Oct. 2–25. Oct. 18–19, no report.
St. Petersburg	Aug. 18–Sept. 7	28	18	
Samara, govt. district	July 16–Oct. 25	411	252	
Samara	July 14–Oct. 29	314	146	
Saratov, govt	July 16–Oct. 25	574	283	
Zarazyn	Sept. 1–Oct. 25	255	120	
Sémipalatinsk	Oct. 19–25	4	1,710	
Siberia, govt. district	Oct. 2–Nov. 11	519	316	
Simbirsk, govt	July 7–Oct. 29	123	46	
Stavropol	July 28–Aug. 5	3		To Sept. 1. Still present.
Syr-Darja, govt	Sept. 16–Oct. 25	2	2	
Tachkent	Oct. 19–25	2		
Tobolsk	Sept. 1–Oct. 25	23	15	
Tomsk, govt	Oct. 19–25	138	87	
Ufa	Oct. 21–29	5	5	
Vladimir, govt	Aug. 21–Sept. 3	1	1	
Yeniseisk	Oct. 19–25	7	3	
Wiatka, govt	Sept. 1–Oct. 25	22	6	
Russia in Asia:				
Astara	Nov. 9	3		
Tiflis	Nov. 10		1	

Cholera, yellow fever, plague, and smallpox, etc.—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Siam:				
Bangkok	Aug. 1–31	17	12	
Straits Settlements:				
Penang	Sept. 15–Oct. 5	2	1	
Singapore	June 9–Oct. 12		168	
Turkey in Europe:				
Constantinople	Nov. 19	1	1	
Turkey in Asia:				
Hassan Kala	Nov. 4–10	5	5	Erzroom dist.
Khorassan	Nov. 9		1	

YELLOW FEVER.

Brazil:				
Manaos	May 25–Nov. 16		36	
Para	June 9–Nov. 16	92	74	
Rio de Janeiro	May 13–Sept. 22	19	13	
Colombia:				
Barranquilla	May 21–27		1	
Costa Rica:				
San José	Sept. 24	1		From vicinity of San Mateo.
San Mateo	To Aug. 31	1	1	
Cuba:				
Camaguey Province—				
Ciego de Avila	Nov. 13–18	4	2	
Habana Province—				
Bainoa	Nov. 9–Dec. 3	3	1	
Campo Florido	Aug. 28–Oct. 11	3	2	
Guines	Oct. 31–Nov. 16	2	2	
Habana	June 25–Dec. 2	13	3	Cases June 25 and Nov. 9 from Union de Reyes; 6 cases from Aug. 30 to Oct. 27 in Habana; cases Sept. 10 and 14 from Palos; cases Oct. 1 and 16 from Cienfuegos; case Nov. 20 from San Nicolas.
Jaruco	Oct. 25–27	2	2	
Palos	Oct. 1–Nov. 6	7	3	
San Nicolas	July 22–Aug. 14	3	1	
Matanzas Province—				
Alacranes	Aug. 17–Nov. 24	7	4	Case Oct. 28 from Bermeja.
Bermeja	Sept. 10	1	1	
Jovellanos	Sept. 24–27	2	1	
Matanzas	Aug. 4–Nov. 2	4	3	From Mocha.
Trinidad, plantation	Oct. 16	2		Adjoining Union de Reyes.
Union de Reyes	Dec. 26–29	2		Case Nov. 29 sent to Habana. Died Dec. 2.
Santa Clara Province	Oct. 7			Present at Central Soledad, Camarones, Cannao, Costillo de Jagua, Guanos.
Manacas	Oct. 1–7	1		
Santa Clara	Sept. 18–Dec. 5	6	2	Nov. 19, 2 American soldiers.
Cienfuegos	Aug. 3–Dec. 8	81	21	10 cases among troops.
Rodas	Sept. 30		1	
Santiago Province—				
Gibara	Sept. 12	1		From ss. Galveston from Guanto, Venezuela.
Remedios	Dec. 4	1		
Santiago	July 5–Oct. 16	2		From ss. Puerto Rico. Origin Union de Reyes.
Ecuador:				
Guayaquil	May 26–Nov. 16		14	
Guatemala:				
Puerto Barrios	June 27	1		
Mexico:				
Manzanillo	Aug. 17	1		On ss. San Juan.
Veracruz	Sept. 5	1		
Nicaragua:				
Managua	Nov. 3–9			Present.
Panama:				
Ancon	July 4	1		From ss. Sidney.
Venezuela:				
Caracas	Oct. 23–Nov. 23	275	5	Estimated.
La Guaira	Nov. 10–16	16	2	
Maracaibo	Nov. 2			Present.
West Indies:				
Barbados	Nov. 19–21	7	4	6 cases from British cruiser Indefatigable. No case occurred on shore.
Bridgetown	Aug. 4–10	1		Imported on ss. Atrato from Trinidad.
Trinidad—Port of Spain	June 1–Nov. 9	18	7	

Cholera, yellow fever, plague, and smallpox, etc.—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Africa:				
British South Africa—				
King Williams Town	May 24–Aug. 1	7	1	Case July 30 to Aug. 1 from Dubus Location.
Izeli Location	June 23–Aug. 2	6	6	
Izinyoka	Aug. 5	1	1	
Thomas River	Aug. 11–14	1	1	
Wartburg	Aug. 10–21	2	2	
Algeria:				
Bona	Nov. 9–12	2		
Oran	Sept. 30–Oct. 14	18	4	Bacteriologically verified to Oct. 7, 5 cases; 4 deaths. Nov. 1, still present.
Philippeville	Oct. 9–19	3	2	Nov. 2, still present.
Tunis—Tunis	Oct. 20–Nov. 9	7	2	
Arabia:				
Djeddah	May 23–30	9	4	May 23, 8 cases on ss. Moshtari occurred on voyage from Bahrein Islands and Bassorah.
Argentina:				
Cordova	June 4			Present.
Australia:				
Brisbane	May 20–Sept. 21	8	6	Case Sept. 12–21 on ss. Mareeba.
Cairns	Sept. 4–Oct. 12	10	5	
Melbourne	May 17–21	1	1	From ss. Arawatta.
Sydney	May 11–June 1	2	2	
Brazil:				
Bahia	June 2–Oct. 26	60	48	
Rio de Janeiro	May 13–Nov. 3	73	21	Oct. 30, 7 cases, 2 deaths, on ss. Orleanais from Marseille, via ports.
Pernambuco	June 1–Sept. 30		11	
Sao Paulo	Aug. 25		1	
Chile:				
Antofagasta	May 11–July 18	72	25	Jan. 1 to June 30, 216 cases and 90 deaths.
Arica	June 8–Aug. 6	19		
Iquique	Jan. 1–June 30	154	63	
Pisagua	Jan. 1–June 30	105	47	
Taltal	Jan. 1–June 30	220		
China:				
Amoy	July 14–Aug. 10	4	4	Amoy, July 26. Epidemic. Kulangsu (native city), 25 deaths daily, estimated from June 23–Aug. 10.
Foochow	July 27–Sept. 14			Present. Aug. 3–24 present in Hinghua and Nantai.
Gai Hai	Aug. 3			Present.
Hongkong	May 5–Oct. 5	219	205	
Macao	May 1–31			Do.
Swatow	June 1–15			Do.
Egypt:				
Alexandria	June 4–Oct. 21	118	68	
Port Said	June 21–Oct. 17	13	10	
Provinces—				
Assiout	June 6–28	20	16	
Behera	June 3–Aug. 20	43	28	
Beni Souef	June 6–July 23	15	7	
Dakahlieh	Sept. 1–18	3	2	
Garbieh	May 29–June 5	1	1	
Kena	June 7–July 28	34	35	
Minieh	June 6–Oct. 15	16	6	
France:				
Marseille	Sept. 17–18	2		In quarantine at Frioul.
French Indo-China:				
Cholon	May 10			Present.
Pnompenah	July 26			Do.
Saigon	June 28–Aug 1	28	28	Present from May 21.
Great Britain:				
Glasgow	Oct. 17–23	1		
Hawaii:				
Hilo	Oct. 5	1		At Olaa Plantation.
Honolulu	July 22–Sept. 14	4	2	1 case on ss. Sierra from San Francisco, Sept. 14.
India:				
Bombay Presidency and Sind.	Apr. 28–Oct. 19	91,065	64,072	
Madras Presidency	Apr. 28–Oct. 19	1,985	1,560	
Bengal	Apr. 28–Oct. 19	11,150	10,271	
United Provinces	Apr. 28–Oct. 19	71,770	64,410	
Punjab	Apr. 28–Oct. 19	341,183	308,222	
Burma	Apr. 28–Oct. 19	2,994	2,775	

Cholera, yellow fever, plague, and smallpox, etc.—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India—Continued.				
Eastern Bengal and Assam.	Apr. 28–July 20...	9	9	
Central provinces, including Berar.	Apr. 28–Oct. 19....	10,012	7,550	
Coorg	Oct. 5–19	4	1	
Mysore State	Apr. 28–Oct. 19....	9,462	6,597	
Hyderabad State	Apr. 28–Oct. 19....	2,006	1,451	
Central India	Apr. 28–Oct. 19....	2,682	1,363	
Rajputana	Apr. 28–Oct. 19....	4,333	2,594	
Kashmir	Apr. 28–Oct. 19....	1,376	810	
Northwest frontier province.	Apr. 28–Oct. 19....	1,810	1,519	
Baluchistan	Apr. 28–June 29...	4	1	
Bahrein Island, in the Persian Gulf.	Apr. 21–July 6....	1,712	1,709	
Grand total		553,557	474,914	
Japan:				
Formosa	May 19–Oct. 26 ...	1,076	945	
Hodagaya	July 6–Aug. 3		3	Suburb of Yokohama.
Kobe	Sept. 1–21	7	7	
Nagasaki	Nov. 10			Present on island in vicinity.
Osaka	May 29–Oct. 26....	98	78	Jan. 1 to June 30, 71 cases. Nov 19. Still present.
Saseho	Aug. 3			Present.
Tokyo	July 6	2	1	
Yokohama	May 22–Aug. 21...	14	14	2 cases and 2 deaths in vicinity.
Yokosuka	July 7–13	1		
Korea:				
Nakanoshima, Island	Sept. 11		1	Imported.
Madagascar:				
Majunga	Aug. 26–Sept. 5			Present.
Manchuria:				
Kaiping	Aug. 7–Oct. 19		212	Oct. 13–19, 13 cases.
Mauritius	June 21–Oct. 31 ...	78	67	
New Zealand:				
Auckland	May 12–June 30...	8	8	
Persia:				
Bushire	June 9–15			Present.
Mohammerah	Aug. 1			Do.
Peru:				
Callao	May 16–Nov. 6	30	14	
Catacaos	Sept. 5–11	2	2	
Chiclayo	May 16–July 3	10	6	1 case from Ferrenafe and 5 cases from Pomalca.
Chosica	July 25–31	1		
Ferrenafe	July 18–Nov. 6....	5	4	
Huanchaco	Aug. 24–31	31		And in vicinity.
Lambayeque	May 16–30	1		
Lima	May 16–Nov. 6....	37	22	
Mollendo	May 16–Oct. 23....	14	8	1 case imported from Tambo.
Paita City	May 16–Nov. 6....	22	17	
Piura	July 25–Oct. 23....	12	2	
Querecotillo	July 25–31	1		
San Pedro	Aug. 28–Nov. 6....	20	10	
Trujillo	May 16–Nov. 6....	103	58	18 cases from Cuesta; June 26, present in Menochuco.
Viru	Aug. 17–21	9	7	
Philippine Islands:				
Manila	July 23–25	1	1	From German ss. Ferd. Laiesz.
Russia:				
Arkhiereiskaya district ...	June 20	3		Vicinity of Astrakhan.
Odessa	July 10–14	1	1	On ss. Tsarevitch.
Siam:				
Bangkok	June 1–Aug. 31 ...	3	3	
Straits Settlements:				
Singapore	May 12–Oct. 26....		9	
Turkey in Asia:				
Adalia	Nov. 9			Present.
Bagdad	June 10			Do.
Bassorah	June 8			Do.
Beirut	Aug. 9	1		
Dikeli	Oct. 1–13	1	1	
Mitylene	Sept. 3–Oct. 28....	4		
Smyrna	Aug. 6–Oct. 12....		5	Oct. 13, 1 case.
Zanzibar	June 10–Oct. 17....	10	9	

Cholera, yellow fever, plague, and smallpox, etc.—Continued.

SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
Africa:				
Algeria—				
Algiers	June 1–Oct. 31	.....	25	
British South Africa—				
Cape Town	Aug. 11–Oct. 19	4	.....	
East London	June 30–Oct. 19	4	.....	Imported.
Kimberly	Aug. 1–31	1	.....	Do.
British West Africa—				
Sierra Leone	Aug. 1–31	2	1	
Portuguese East Africa—				
Lourenço Marquez	Apr. 1–Sept. 30	25	.....	
Tunis:				
Tunis	Nov. 10–16	.....	.....	Present.
Argentina:				
Buenos Aires	May 1–Aug. 31	.....	26	
Rosario	May 1–Aug. 31	.....	45	
Australia:				
New South Wales—				
Newcastle	May 1–June 30	2	.....	
Austria:				
Bohemia	Sept. 22–Oct. 12	11	.....	
Galicia	May 26–Aug. 31	20	.....	
Kärnten	Sept. 8–14	1	.....	
Kamenic	Oct. 6–12	1	.....	
Lower Austria	Aug. 18–Sept. 14	7	.....	
Mies	Oct. 6–12	1	.....	
Moravia	Aug. 18–Sept. 14	5	.....	
Silesia	June 18–22	1	.....	
Trappan district	Aug. 6–13	1	.....	
Trieste	May 26–Aug. 3	4	1	
Upper Austria	Aug. 25–31	1	.....	
Vienna	June 23–Nov. 9	144	33	
Brazil:				
Bahia	June 1–Oct. 26	274	15	
Manaos	July 21–Aug. 31	.....	5	
Para	June 9–Nov. 16	303	182	
Pernambuco	Apr. 15–Sept. 30	.....	919	
Rio de Janeiro	May 20–Nov. 2	143	52	
Santos	June 1–30	1	1	
Sao Paulo	July 28–Aug. 4	.....	1	
Canada:				
British Columbia—				
Vancouver	June 1–30	1	.....	
Manitoba—				
Winnipeg	July 7–27	4	.....	
Nova Scotia—				
Halifax	June 16–Nov. 2	31	.....	
Ontario—				
Hamilton	Oct. 20–Nov. 30	2	.....	
Quebec—				
Sherbrooke	June 1–30	2	.....	
Chile:				
Iquique	May 17–Oct. 12	.....	.....	Do.
China:				
Chefoo	July 14–Aug. 17	4	.....	Case July 20 from ss. Pennsylvania.
Foochow	June 26–30	1	.....	On China, merchant ss.
Hankau	May 27–June 15	5	.....	
Hongkong	May 5–Oct. 5	83	62	
Kulangsu	June 1–22	.....	.....	Present.
Newchwang	May 5–18	3	.....	
Shanghai	May 12–Oct. 27	[a] 49	470	Case Aug. 8 from U. S. S. Pennsylvania from Chefoo. May 25, 4 cases on U. S. cruiser Wilmington.
Tientsin	May 19–June 8	4	2	June 22, present among natives.
Colombia:				
Barranquilla	May 1–July 21	.....	.....	Present.
Cartagena	Aug. 3–Nov. 1	.....	.....	Do.
Ecuador	Sept. 25	1,000	.....	In central part, chiefly at Ambato, Cajabamba, Chasaqui, La Tacunga, and Riobamba.
Guayaquil	May 26–Nov. 16	.....	29	
Egypt:				
General	Apr. 9–Oct. 21	849	578	From Jan. 1 to Apr. 8, cases 317, deaths 259.
Cairo	May 21–Nov. 4	12	10	
France:				
Cannes	May 1–Oct. 31	39	14	
Lyon	June 5–11	.....	1	

[a] Cases foreign, deaths native.

Cholera, yellow fever, plague, and smallpox, etc.—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
France—Continued.				
Marseille	June 1-Oct. 31	.....	305	
Nice	May 1-31	1	1	
Paris	June 2-Nov. 16	112	28	
Toulon	Aug. 1-31	2	.....	
Germany:				
General	June 2-Nov. 9	30	.....	
Barmen	Sept. 22-28	1	.....	
Bremen	May 5-Nov. 9	3	.....	
Konigsberg	June 9-July 6	2	.....	
Great Britain:				
London	Aug. 4-10	1	.....	
Liverpool	June 30-Nov. 16	2	.....	
Manchester	June 16-22	1	.....	
Southampton	June 2-8	2	.....	
Sunderland	July 21-27	1	.....	
Greece:				
Piraeus	June 16-Aug. 31	5	.....	
Hawaii:				
Honolulu	June 28	8	3	On ss. Kumeric.
India:				
Bombay	May 12-Oct. 29	.....	18	
Calcutta	May 12-Oct. 19	.....	191	
Madras	June 1-Oct. 25	.....	19	
Rangoon	June 9-Oct. 5	.....	9	
Italy:				
General	June 7-Nov. 21	581	.....	
Catania	Sept. 28-Nov. 21	.....	4	
Genoa	June 1-Sept. 30	8	1	
Florence	June 17-30	3	.....	
Naples	June 14-Aug. 17	4	2	2 cases, June 13 to 22, from ss. Perugia.
Turin	June 17-Aug. 11	5	1	
Venice	June 30-July 6	.....	1	
Japan:				
Formosa	June 16-22	1	.....	
Kobé	Aug. 24-Nov. 2	22	6	
Yokohama	June 18-July 12	2	.....	Case July 12 on ss. Mongolia. From Jan. 1-June 30, 102 cases. 12 deaths.
Java:				
Batavia	May 12-Oct. 26	154	21	
Korea:				
Seoul	May 25-June 30	.....	.....	Present.
Luxemburg	June 22-July 6	1	.....	
Madeira:				
Funchal	June 10-Sept. 22	374	63	
Malta:				
Valletta	Sept. 1-Nov. 9	10	2	
Manchuria:				
Dalny	May 19-July 27	21	2	
Mexico:				
Aguascalientes—Aguascalientes	June 16-Nov. 23	.....	87	
Federal District—Mexico City	May 19-Nov. 2	.....	105	
Nueva Leon—Monterey	June 17-Sept. 29	.....	6	
Yucatan—Payo Obispo	July 17	.....	.....	Do.
Netherlands:				
General	May 19-21	1	.....	
Panama:				
Colon	June 30-Sept. 9	5	.....	1 case June 30 from ss. La Normandie from St. Nazaire. Case Sept. 9, on ss. Atrato from Vigo, Spain.
Persia:				
Mash-Had	July 1-31	.....	.....	Present.
Rasht	July 1-Aug. 22	.....	.....	Do.
Shiraz	July 1-Aug. 22	.....	.....	Do.
Tabris	July 1-31	.....	.....	Do.
Peru:				
Callao	Aug. 23-Sept. 14	.....	2	
Lima	Sept. 7-Oct. 3	43	.....	Oct. 12, still present and in vicinity.
Philippine Islands:				
Manila	Apr. 21-Sept. 21	55	.....	
Portugal:				
Lisbon	June 2-Nov. 16	97	.....	

Cholera, yellow fever, plague, and smallpox, etc.—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Russia:				
Batoum	May 1–Oct. 13	6		
Libau	June 17–Nov. 9	5		
Moscow	May 26–Nov. 2	62	15	
Odessa	June 2–Nov. 9	27	4	
Reval	July 1–31	4		
Riga	June 2–Nov. 16	62	46	
St. Petersburg	May 11–Nov. 2	65	10	
Warsaw	July 14–Oct. 5		78	
Siberia:				
Vladivostok	May 15–July 5	5		
Spain:				
Almeria	May 1–Oct. 31		35	Report for August not received.
Barcelona	June 2–Nov. 20		37	
Cadiz	May 1–Oct. 31		41	
Denia	Sept. 1–Oct. 26	8		
Huelva	May 1–31		1	
Madrid	May 1–Oct. 31	7	1	
Malaga	June 1–Aug. 31		17	
Seville	May 1–Aug. 31		32	
Valencia	June 10–Nov. 17	447	45	
Vigo	Sept. 22–Nov. 16		4	
Straits Settlements:				
Penang	May 19–July 13	2	1	
Singapore	May 26–June 1		1	
Switzerland:				
General	May 15–June 29	6		
Turkey:				
Constantinople	June 17–Oct. 27		20	
Turkey in Asia:				
Bagdad	Oct. 13–19	32	6	Present from May 19.
Bassorah	June 23–Aug. 24			Do.
Damascus	Apr. 7–June 22			Do.
Smyrna	Apr. 16–Sept. 30		35	
Venezuela:				
La Guaira	Nov. 9	1		From Aug. 25–Nov. 16, occasional.
West Indies:				
Barbados—				
Bridgetown	Aug. 4–10	1		On ss. Statia from Funchal.

Weekly mortality table, foreign and insular cities.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—										
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Aberdeen	Nov. 16	174,579	30	....	.....	....	....	....	....	....	....	1	....	....
Aden	Nov. 12	43,974	31	6	.....	....	....	....	....	....	....	....	....	....
Aguas Calientes	Nov. 23	40,000	69	1	.....	....	....	1	....	1	....	6	....	....
Aix-la-Chapelle	Nov. 9	155,975	63	4	.....	....	....	....	....	....	2	....	....	....
Antwerp	....do	312,571	77	4	.....	....	....	....	....	....	....	....	1	1
Asuncion	Oct. 19	65,000	26	2	.....	....	....	....	....	3	....	....	....	....
Baracoa	Nov. 16	25,000	3	1	.....	....	....	....	....	....	....	....	....	....
Barmen	....do	159,500	45	7	.....	....	....	....	....	....	1	....	....	....
Barranquilla	Nov. 2	40,000	12	1	.....	....	....	....	....	....	....	....	....	....
Do	Nov. 9	40,000	14	....	.....	....	....	....	....	....	....	....	....	....
Basel	Nov. 16	130,000	30	2	.....	....	....	....	....	....	....	....	....	....
Belfast	....do	360,173	176	22	.....	....	....	....	....	2	....	1	11	2
Berlin	Nov. 9	2,102,917	608	87	.....	....	....	....	....	2	6	17	9	7
Birmingham	Nov. 16	553,155	165	....	.....	....	....	....	....	1	7	1	....	3
Bluefields	....do	2,800	1	....	.....	....	....	....	....	....	....	....	....	....
Bordeaux	....do	253,000	95	13	.....	....	....	....	....	1	....	....	....	....
Bradford	....do	290,323	80	6	.....	....	....	....	....	1	....	3	....	1
Bremen	....do	226,531	77	5	.....	....	....	....	....	....	....	3	3	....
Breslau	Oct. 26	335,186	209	31	.....	....	....	....	....	....	1	3	....	5
Do	[a]Nov. 9	335,186	206	27	.....	....	....	....	....	....	....	8	1	6
Bristol	Nov. 16	367,979	79	....	.....	....	....	....	....	....	2	3	1	....
Brussels	Nov. 9	623,202	177	21	.....	....	....	....	....	2	....	2	....	....
Do	Nov. 16	623,202	155	12	.....	....	....	....	....	1	2	....	2	....

[a] Intervening week previously reported.

Weekly mortality table, foreign and insular cities—Continued.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—									
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Cairo	Nov. 4	671,344	332	29	.....	.....	.....	1	.....	2	.....	11	.....	.....
Calcutta	Oct. 26	847,796	586	21	4	75	.....	.....	.....	.....	.....	.....	.....	.....
Cardiff	Nov. 16	187,620	67	4	.....	.....	.....	.....	.....	.....	.....	2	4	1
Cartagena, Colombia	Nov. 3	30,000	8	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Catania	Nov. 14	160,000	79	5	.....	.....	.....	.....	1	8	.....	.....	.....	.....
Do	Nov. 21	160,000	81	4	.....	.....	.....	1	1	7	.....	1	.....	.....
Chemnitz	Nov. 16	269,104	98	10	.....	.....	.....	.....	.....	.....	1	3	4	3
Christiania	Nov. 9	229,000	56	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Do	Nov. 16	229,000	45	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Cienfuegos	....do...	37,000	17	3	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Coburg	Nov. 9	23,164	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Nov. 16	23,164	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cognac	....do...	19,483	7	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cologne	....do...	453,060	150	17	.....	.....	.....	.....	.....	1	3	2	7	1
Copenhagen	Nov. 2	440,000	110	9	.....	.....	.....	.....	.....	1	1	1	4	4
Crefeld	Nov. 16	112,096	35	8	.....	.....	.....	.....	.....	1	.....	2	1	.....
Dalny	Oct. 26	29,654	14	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Do	Nov. 2	29,654	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Denia	Nov. 16	12,431	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dresden	Nov. 9	536,000	149	21	.....	.....	.....	.....	.....	.....	.....	7	1	2
Dublin	Nov. 2	390,691	169	28	.....	.....	.....	.....	.....	2	1	1	1	.....
Do	Nov. 9	390,691	178	33	.....	.....	.....	.....	.....	2	.....	2	2	2
Do	Nov. 16	390,691	163	29	.....	.....	.....	.....	.....	2	.....	2	3	1
Dundee	....do...	165,748	75	.....	.....	.....	.....	.....	.....	.....	1	2	12	1
East London	Oct. 26	49,253	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Edinburgh	Nov. 16	345,747	80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Flushing	....do...	20,253	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fort de France	Nov. 9	27,069	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Nov. 16	27,069	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Frontera	....do...	9,000	15	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Funchal	Nov. 17	44,049	26	6	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Geneva	Nov. 9	116,400	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Georgetown	Oct. 5	36,567	32	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Oct. 12	36,567	61	4	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Do	Oct 19	36,567	77	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Oct. 26	36,567	31	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Glasgow	Nov. 22	847,584	283	.....	.....	.....	.....	.....	.....	4	1	3	17	5
Gothenburg	Nov. 16	155,700	45	11	.....	.....	.....	.....	.....	.....	.....	3	1	1
Greenock	....do...	71,269	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	Nov. 2	70,000	50	6	.....	.....	1	5	.....	1	.....	.....	3	.....
Do	Nov. 9	70,000	46	8	.....	.....	.....	2	.....	.....	.....	.....	2	2
Halifax	Nov. 23	40,787	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Nov. 30	40,787	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hamburg	Nov. 16	824,792	247	23	.....	.....	.....	.....	.....	2	.....	4	4	2
Havre	Nov. 9	132,430	52	13	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Hull	Nov. 16	266,762	59	.....	.....	.....	.....	.....	.....	.....	.....	1	1	2
Jalapa	Nov. 22	22,000	16	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kobe	Nov. 2	345,952	142	.....	.....	7	.....	.....	.....	1	.....	.....	.....	.....
Königsberg	Nov. 16	229,300	101	8	.....	.....	.....	.....	.....	.....	4	.....	2	1
La Rochelle	Nov. 17	31,553	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lausanne	Nov. 9	54,500	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leeds	Nov. 16	470,268	132	9	.....	.....	.....	.....	.....	.....	.....	4	3	1
Leipzig	....do...	518,682	158	23	.....	.....	.....	.....	.....	2	.....	4	.....	.....
Leith	....do...	83,668	25	5	.....	.....	.....	.....	.....	.....	1	1	.....	2
Liege	Nov. 9	172,794	42	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Liverpool	Nov. 16	746,144	285	27	.....	.....	.....	.....	.....	3	1	1	6	8
Livingston	Nov. 19	3,500	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
London	Nov. 16	7,217,941	1,767	.....	.....	.....	.....	.....	.....	6	18	32	24	25
Lübeck	....do...	94,500	32	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Madras	Nov. 1	509,346	414	.....	1	4	.....	3	.....	.....	.....	.....	3	.....
Mainz	Nov. 16	99,572	29	4	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Managua	Nov. 2	22,278	5	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Manaos	Nov. 9	50,000	26	4	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Do	Nov. 16	50,000	25	1	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Manchester	....do...	631,533	183	18	.....	.....	.....	.....	.....	.....	4	2	2	3
Mannheim	Nov. 9	174,590	38	8	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Manzanillo	Sept. 28	1,740	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mazatlan	Nov. 9	21,000	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Messina	Nov. 2	107,000	32	2	.....	.....	.....	.....	.....	5	.....	1	.....	.....
Do	Nov. 9	107,000	26	1	.....	.....	.....	.....	.....	3	1	.....	.....	.....
Do	Nov. 16	107,000	25	2	.....	.....	.....	.....	.....	3	1	.....	.....	.....
Mexico	Oct. 26	400,000	327	29	.....	.....	.....	1	7	.....	.....	.....	3	1
Do	Nov. 2	400,000	328	33	.....	.....	.....	1	2	1	.....	1	1	2
Milan	Nov. 3	900,000	169	9	.....	.....	.....	.....	.....	5	.....	1	.....	.....
Do	Nov. 10	900,000	188	24	.....	.....	.....	.....	.....	7	.....	.....	.....	.....

Weekly mortality table, foreign and insular cities—Continued.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—									
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Monterey	Nov. 24	100,000	57	8	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Moscow	Nov. 9	1,335,104	624	74	.....	.....	.....	.....	.....	2	15	11	4	7
Nagasaki	Nov. 3	168,436	48	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Naples	Nov. 16	593,729	197	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newcastle on Tyne	....do ...	272,969	92	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	2
Newchwang	Oct. 26	60,000	12	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Nov. 2	60,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nottingham	Nov. 9	250,000	77	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	1
Nuevo Laredo	Nov. 23	8,000	4	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Nuremberg	Nov. 9	307,000	70	13	.....	.....	.....	.....	.....	.....	2	3	1	.....
Odessa	....do ...	455,000	187	28	.....	.....	.....	.....	.....	9	8	2	5	.....
Do	Nov. 16	455,000	201	17	.....	.....	.....	.....	.....	5	5	5	7	.....
Paita	Nov. 3	2,500	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Nov. 10	2,500	9	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Para	Nov. 16	185,000	75	7	.....	.....	8	9	.....	.....	.....	.....	1	.....
Paris	....do ...	2,776,394	825	177	.....	.....	.....	.....	.....	4	1	2	1	.....
Penang	Oct. 19	100,429	56	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Piræus	Nov. 16	70,000	26	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plymouth	....do ...	116,000	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Port Elizabeth	Nov. 2	32,959	10	2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Port of Spain	Nov. 9	60,000	35	4	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Do	Nov. 16	60,000	38	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Prague	....do ...	228,645	124	31	.....	.....	.....	.....	.....	2	.....	3	4	.....
Progreso	....do ...	6,000	4	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Queenstown	....do ...	7,684	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rangoon	Oct. 19	252,155	180	11	13	1	.....	.....	.....	.....	.....	.....	.....	.....
Do	Oct. 26	252,155	160	5	18	1	.....	.....	.....	.....	.....	.....	.....	.....
Rio de Janeiro	Oct. 27	628,675	250	60	4	.....	.....	5	.....	2	.....	.....	2	1
Do	Nov. 3	628,675	231	53	2	.....	.....	4	.....	.....	.....	2	3	2
Rome	Aug. 17	462,783	191	27	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Do	Aug. 24	462,783	191	21	.....	.....	.....	.....	.....	5	.....	2	10	.....
Do	Aug. 31	462,783	173	24	.....	.....	.....	.....	.....	9	.....	.....	.....	.....
Do	Sept. 7	462,783	171	14	.....	.....	.....	.....	.....	4	.....	1	.....	.....
Rotterdam	Nov. 16	401,299	141	.....	.....	.....	.....	.....	.....	1	11	.....	.....	.....
St. John, N. B	Nov. 30	40,789	13	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
St. Petersburg	Nov. 2	1,500,000	660	112	.....	.....	.....	.....	.....	19	28	19	13	14
St. Stephen, N. B	Nov. 30	2,840	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Salaverry	Nov. 1	1,750	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Feliu de Guixols	Nov. 16	11,094	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Santa Cruz de Teneriffe	Nov. 9	46,000	9	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Santiago de Cuba	Nov. 23	45,500	15	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schiedam	Nov. 16	30,030	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shanghai	Oct. 27	523,700	168	21	.....	.....	.....	18	3	.....	.....	2	.....	.....
Singapore	Oct. 26	258,324	278	44	2	.....	.....	.....	.....	8	.....	.....	.....	.....
Southampton	Nov. 16	119,745	22	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
South Shields	....do ...	113,460	37	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stettin	....do ...	255,000	107	5	.....	.....	.....	.....	.....	.....	7	11	.....	.....
Stockholm	Nov. 9	332,738	100	8	.....	.....	.....	.....	.....	.....	.....	2	6	1
Tarragona	Nov. 16	19,400	9	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Trieste	....do ...	202,920	93	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....
Turin	Nov. 3	367,685	141	14	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Do	Nov. 10	367,685	107	12	.....	.....	.....	.....	.....	2	1	1	.....	1
Tuxpam	Nov. 19	13,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Utila	Nov. 16	671	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Valencia	Nov. 17	250,000	102	7	.....	.....	.....	6	.....	1	2	1	.....	.....
Veracruz	Nov. 16	32,000	46	12	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Do	Nov. 23	32,000	40	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Victoria, B. C	....do ...	25,000	5	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vienna	Nov. 9	1,999,912	548	78	.....	.....	.....	.....	.....	.....	3	12	3	1
Vigo	Nov. 16	36,000	13	1	.....	.....	.....	2	.....	2	.....	.....	.....	.....
Warsaw	Sept. 28	764,611	306	51	.....	.....	.....	8	.....	4	8	5	1	2
Do	Oct. 5	764,611	289	36	.....	.....	.....	13	.....	4	5	4	.....	9
West Hartlepool	Nov. 16	66,750	22	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Winnipeg	Nov. 23	111,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Zanzibar	Oct. 21	75,000	33	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Zurich	Nov. 16	176,542	48	7	.....	.....	.....	.....	.....	.....	1	.....	.....	.....

By authority of the Secretary of the Treasury:

WALTER WYMAN,
Surgeon-General,
United States Public Health and Marine-Hospital Service.