

## PUBLIC HEALTH REPORTS.

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### PROFESSOR KOCH'S VIEWS ON THE PREVENTION OF PLAGUE.

By PROFESSOR KITASATO.

[Translated from the Tokyo Jiji Shimpō, July 22 and 23, 1908, by Passed Asst. Surg. Dunlop Moore.]

Not only has plague in Japan occasioned great expenditure of public money and labor, but the indirect losses through interruption of commercial intercourse and interference with business undertakings can not be easily estimated.

Since the discovery of the cause of the disease increasingly exact investigations into the avenues of infection have rendered us familiar with the extremely important rôle that anti-rat measures play in its prophylaxis. Such measures were enforced at an early date in this country, and the number of rats destroyed has reached an annual total of from several hundred thousand to a million. Nevertheless at the present day no appreciable diminution in the number of rodents can be noticed. Reproduction keeps pace with destruction, so that we are at a loss to know how to proceed. When we consider that on the one hand plague has already obtained a firm foothold in two or three localities in Japan and on the other hand that new infective material is being constantly introduced from abroad, it would appear that the absolute suppression of the disease is an almost impracticable task.

However correct may be the underlying theories upon which we base our procedures, antipest measures, being of a negative character and necessarily involving great expenditure of time and money extending over a long period, are apt eventually to incur the disfavor of the public at large. Consequently they are not properly carried out. Therefore the urgent need of the present time is a plan for the destruction of rats, simple of application and requiring a minimum expenditure of time and labor—a demand, however, that we are not yet in a position to meet.

Taking advantage of the recent visit of the eminent bacteriologist Robert Koch to this country, I laid before him in detail the present status of the plague epidemic and requested his advice in the premises. As his views, which I had the good fortune to obtain, touch upon some points of vital importance in the prophylaxis and eradication of plague, I give a résumé, as follows:

The rat is the chief agent in the diffusion of plague, and our preventive measures must be based on this principle. The encouragement of the destruction of rats, as early practiced in Japan, is an eminently proper procedure, but in the extermination of animals of such great reproductive power the use of artificial methods, like mechanical devices and poisonous drugs, must prove laborious, expensive, and at the same time comparatively inefficient. On the other hand, in the natural world the mutual relations of living things is extremely intricate and subtle, and by paying attention to this point we may discover natural methods of dealing with this problem, the limited powers of man being far inferior to the boundless resources of nature.

Permit me to cite two or three instances of the very successful utilization of the natural correlation between living beings which may by analogy serve to illustrate the proper means to be employed in the work of demurization. Some years ago an amateur botanist admiring its pretty flowers introduced a verbenaceous plant called *lantana* from America into the Hawaiian Islands. Through the agency of birds its seeds were distributed broadcast. It soon became disseminated throughout the entire group of islands as a harmful weed to the great detriment of agriculture. In its native land, Mexico, this plant does not flourish to the same disastrous extent. At the end of a careful investigation it was discovered that there exists in Mexico a species of small fly called *agromyza*, which deposits its eggs within the seed of the *lantana* and thus checks increase of the plant. This fly was introduced into Hawaii and propagated, with the result that in a few years the omnipresent *lantana* pest showed signs of diminution.

Another remarkable example is found in the *Perkinsiella saccharicida*, a species of leaf hopper injurious to the sugar cane in the Hawaiian Islands. This insect is parasitic on the stalk and leaves of the sugar cane, extracting the juice, and is a source of such great damage that in the period of four years between 1901 and 1904 the amount of loss occasioned by it reached the enormous sum of several million dollars. On this account the sugar planters' association established an experiment station and dispatched specialists to distant parts of the world for the purpose of investigating methods for the destruction of injurious insects and of searching for an enemy of this insect. Thus there was discovered in Australia a species of ant-like animal named *aphanomerus pusillus* parasitic within the egg mass of the leaf hopper. This beneficial insect was introduced into Hawaii in the year 1904 and propagated with the result that the great insect pest of the sugar cane *Perkinsiella* has shown a remarkable diminution and no longer causes the damage of former years. These two instances prove how beneficial to human activity is the study of the mutual interdependence between living beings in the realm of nature.

Again in Japan we find that, as a consequence of increasing interest in fruit culture, foreign apple trees have been imported from America and assiduously cultivated. Nevertheless through the ravages of the woolly *aphis* which was introduced at the same time, I learn that at present throughout the Tohoku district scarcely a single healthy fruit tree can be found. This condition of affairs is clearly due to an imperfect knowledge of the interrelation existing in the natural world.

Successful demurization must be based on this principle, namely, the seeking out and the utilization of the natural enemies of the rat. From an early date I have been carrying on researches regarding the enemies of rats and have used in my experiments a number of voracious animals, among them the ichneumon of Egypt, the mongoose of India as well as the common European ferret. As well as devouring rats these animals attack domestic poultry, so that their beneficial effects are offset by the loss they occasion, and their practical value is nil. On the other hand, from ancient times, cats have been the most common and best known to man of the enemies of the rat. When properly trained they do us no harm, and are in all respects most fitted for the task before us. Though these facts are familiar to everyone they have not yet been practically utilized in the prophylaxis of plague. Random researches in distant lands will not necessarily lead to the successful accomplishment of our object. The most useful things are rather to be found among the commonplace and the readily accessible, as in this instance.

However, in employing cats for this purpose we should determine a certain system and follow it out in an orderly manner, in the main, as follows:

1. Pass laws requiring each house to keep a certain number of cats and cause the police to make frequent inspections.
2. By establishing a system of prizes seek for cats of approved ability as ratters.
3. Carry on a world-wide search for strains of cats especially skilled as ratters and encourage their introduction and propagation.
4. We should stimulate interest in the breeding of improved strains of cats by promoting cat shows, etc., just as in the case of horses and cattle.
5. Vessels plying between plague-infected ports should be obliged to carry a fixed number of cats, the number depending upon the tonnage of the vessels.
6. Building regulations should require that attics and other places frequented by rats be provided with openings large enough to admit cats.
7. In the case of plague-infected districts or areas threatened with invasion by plague, special companies of cats should be organized and at fixed intervals they should be isolated and the presence or absence of plague among them should be determined.

The above is merely a sketch in rough detail of a scheme for employing cats in antipest work. The method is extremely easy of execution and by no means involves great expense. Further, as its efficacy is not merely of temporary duration,

we should eventually accomplish our object of exterminating the rat. Moreover, during the time of a plague epidemic, the trouble involved in rat examinations should be lessened. If from time to time we isolate and keep under observation the cats that have been feeding upon rats, not only do we obviate any fear of spreading the infection but at the same time we have a means of determining the exact extent of the spread of the disease.

Since a multitude of artificial devices of human contrivance are not equal in efficiency to one of nature's methods in destroying rats during antipest campaigns, the most efficacious means of accomplishing our object is the utilization of the cat.

Beginning with such places as Osaka and Kobe, where plague infection constantly lies dormant, the encouragement of the breeding of cats with a view to demurization is the urgent duty of the present hour.

## UNITED STATES.

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

### PLAGUE IN GROUND SQUIRRELS.

In a communication dated August 28, 1908, Passed Assistant Surgeon Blue, San Francisco, Cal., transmits a full bacteriological report by Passed Assistant Surgeon McCoy on the plague-infected ground squirrel found on the Farias ranch in the northern part of Contra Costa County, August 5, 1908. A case of human plague occurred on this ranch July 11, 1908. [See Public Health Reports, July 31, 1908, page 1096.]

Doctor Blue observes that this is perhaps the first demonstration of the occurrence in nature of bubonic plague in the ground squirrel (*Citellus beecheyi*) of California. There can be no further doubt, therefore, he writes, that these rodents are an important factor in the dissemination of infection.

Practically the same findings have been obtained by Acting Assistant Surgeon Wherry in the Oakland laboratory, and are reported under date of August 24, 1908.

The following is the report, dated August 27, 1908, of Passed Assistant Surgeon McCoy on the examination of the tissue from the squirrel suspected of being infected with plague:

#### EXAMINATION OF TISSUE.

The tissue presented for investigation was a piece of the lung of the squirrel. It was received on August 6, 1908. Smear preparations from this tissue, made as soon as received and stained with 1 per cent carbol-thionin, showed the presence of an organism that was morphologically as follows:

Short rods varying in length from 1 to 2 micra and in width from one-half to three-fourths of a micron, and staining most intensely at the ends. Circular bodies about three-fourths of a micron in diameter and staining rather faintly except at the rim. Forms intermediate between the two described. None of the organisms retained the stain when treated by Gram's method.

#### CULTURES.

Stroke cultures were made directly on agar. A pure culture of an organism that grew in the form of small, round, moist, shining colonies, which when touched with the needle were found to be viscid,

was obtained upon this medium. Stained films from this growth showed the organism to be a bacillus, averaging a trifle smaller than the first form described above. The staining was for the most part uniform throughout, but a few elements showed deeper staining at the ends. The organism was nonmotile, and special staining failed to show any spores. Heating a 4-day-old broth culture to 60° C. for five minutes was sufficient to kill the organism. At room temperature (about 17° C.) the growth was less vigorous than at 35° C.

From the original agar culture inoculations were made upon other media with the following results:

*Broth.*—In twenty-four hours a very fine granular precipitate was formed, and a few islands of growth were present upon the surface. The medium remained clear. After several days, a rather thick layer of feathery growth occurred in the upper layer of the medium. When the tube was shaken the growth fell to the bottom in globular masses. Stained film preparations showed an organism agreeing in appearance with the one grown upon agar, but always staining uniformly throughout. Many chains of from 2 to 10 or 15 elements were found.

*Salt agar.*—Upon agar made with 3 per cent chemically pure sodium chloride, the growth was rather scanty, and stained films made at the end of twenty hours showed a large variety of forms, none of which bore any resemblance to the organism planted. There were present spherical forms up to 5 micra in diameter, sausage-shaped forms from 3 to 6 micra in length and about one-fourth as broad as long, hour-glass shaped forms, and globular forms with a long filament. The length of one of the latter forms was found to be 26 micra. There were other forms similar to those described above, but smaller.

*Litmus milk.*—This medium was unchanged throughout the period of observation (seven days).

*Gelatin.*—Not liquefied (fourteen days). Small whitish granular colonies along line of inoculation.

*Glucose broth.*—No gas; slight acidity in four days.

*Lactose broth.*—No gas; no acidity in four days.

The medium used in all of the work was +1 (acid) to phenolphthalein.

#### ANIMAL INOCULATIONS.

Some of the tissue was rubbed into the shaven skin of the belly of a guinea pig (vaccination). After forty-eight hours a large, brawny swelling was present at the sight of vaccination, and the inguinal lymphatic glands were much enlarged. The animal died on the fourth day. At the site of the vaccination was a scab that had at its edges the appearance of a row of dried vesicles. There was a subcutaneous oedema. Both chains of inguinal glands were enlarged and surrounded by a considerable hemorrhagic area. The glands felt firm, but upon section were found to be caseous. The spleen was 2½ by 1 by ½ cm. in size, friable, light red, and contained many fine whitish granules. The liver had many fine whitish granules. A bipolar bacillus was found in smears from the liver and the spleen. Cultures were made from the liver. An organism was recovered that gave characteristic growths on broth and agar, and upon salt agar gave characteristic involution forms in twenty-four hours.

A small piece of the tissue was placed beneath the skin of the belly wall of another guinea pig. The animal died in twenty-four hours

from pneumonia, which was at this time destroying a considerable number of our guinea pigs.

We had no white rats in stock at the time the specimen was received, so that we were compelled to resort to the use of wild rats. Plague work with wild rats is unsatisfactory for two reasons: First, when more than one is kept in a cage, as was necessary on account of the limited space available, the ones that succumb first are very apt to be partly devoured by their comrades, and thus render a satisfactory post-mortem examination impossible. Second, a certain percentage of the wild *Mus norvegicus* in San Francisco are immune to plague. This has been demonstrated by work that will form the subject of a later report.

Our rats are kept in quarantine a week to obviate the possibility of any being used that are incubating plague or are suffering from the disease.

Two rats (small *Mus norvegicus*) had small pieces of the lung introduced beneath the skin of the belly wall.

One was found dead on the second day (forty-eight hours). It had been partly eaten, but an examination was made. A marked general injection was found. There was a bubo in the right inguinal region and a typical granular plague liver. Many bipolar bacilli were found in the bubo and in the liver. Cultures were not made. One was found dead on the third day, but it had been so badly mutilated by its companion that no satisfactory examination was practicable.

One small *Mus norvegicus* was "vaccinated" with the squirrel's lung. This rat was killed on the fifth day. The autopsy was negative beyond showing an enlarged axillary gland that had several yellowish points resembling those seen in rats that have been inoculated with plague, but are recovering. No organisms were found in smears. Cultures were not made.

It will be observed that one of these rats presented lesions that would justify a diagnosis of plague. One was probably resistant. The other could not be examined.

It may be stated here that under the conditions surrounding this experiment, there is practically no natural or accidental mortality in rats, so that it is fair to assume that the death of the rat that could not be examined was the result of the inoculation.

A culture of the organism is fully virulent for rats, and gives rise to characteristic lesions of plague in these animals, as is shown by the following experiments:

Three *Mus rattus* were inoculated, each one with 0.01 of a loopful of a 72-hour-old agar culture (second generation). The culture was one isolated directly from the squirrel's lung. Two of the rats died on the third day and one on the fourth day. All showed quite sufficient lesions of plague for a diagnosis, based upon the gross signs alone. In addition, all showed typical organisms in smears. Cultures were made from one of these, and a pure culture of *Bacillus pestis* obtained. No cultures were made from the others.

Three half-grown *Mus norvegicus* were inoculated at the same time with the same culture and with the same amount used for the *Mus rattus*. One died on the fourth day, one on the fifth day, and one on the sixth day. The gross findings were characteristic of plague in each case. Characteristic organisms were found in smears and isolated in culture directly from two of them. The third (dead on the sixth

day) failed to show any organisms in smears. A guinea pig was vaccinated with tissues from this rat. The guinea pig died with typical lesions of plague on the fourth day and a pure culture of *Bacillus pestis* was isolated from the liver.

While no doubt was entertained as to the nature of the organism under investigation, it seemed desirable to test it against antipest serum. For this purpose we used guinea pigs and rats (*Mus norvegicus*). The culture was the same as in the above experiment, but was the third generation, and the growth was 48 hours old. In each case the animal was given subcutaneously 0.01 of a loopful of the agar culture. Three guinea pigs were used. The first guinea pig was given 5 cc. of antipest serum intraperitoneally just prior to the inoculation. This animal never sickened, and is alive and well at the present time, 10 days after the inoculation.

The second guinea pig was given 5 cc. of antidiphtheria serum intraperitoneally just prior to inoculation. This was done to provide a serum control. This animal died on the fourth day with characteristic lesions of plague, and cultures from the liver gave a pure culture of *Bacillus pestis*.

The third guinea pig was inoculated with the culture in the same manner as the previous ones, but no serum was given; therefore it served as a control. This guinea pig died on the fourth day and presented lesions characteristic of plague. An organism agreeing with the one isolated directly from the squirrel was obtained in pure culture from its liver.

Four rats (*Mus norvegicus*) were inoculated with the same amount of the same culture as was given to the guinea pigs. Two of the rats that had previously been given 5 cc. of antipest serum were killed on the eighth day and were shown by post-mortem examination to be normal. The two that had not received serum (controls) died on the fourth day, and both presented typical lesions of plague as seen in rats, and a pure culture of *Bacillus pestis* was isolated from the liver in each case.

In order to determine whether the organism was as virulent as the *Bacillus pestis* isolated from rats here two series of guinea pigs were inoculated, with the results shown in the table below. An agar culture was used in each case.

Quantity of culture.	Guinea pig died.	
	Squirrel (second generation).	Rat No. 66 (fourth generation).
1 loopful, vaccinated .....	Fourth day...	Fifth day.
0.01 loopful, inoculated subcutaneously .....	Fifth day....	Third day.
0.001 loopful, inoculated subcutaneously .....	do .....	Seventh day.
0.0001 loopful, inoculated subcutaneously .....	Eighth day...	Sixth day.
0.00001 loopful, inoculated subcutaneously .....	Fifth day....	Seventh day.
0.000001 loopful, inoculated subcutaneously .....	Seventh day..	Sixteenth day.

The control was *Bacillus pestis*, isolated from plague rat No. 66. Neither of these cultures had ever been through an animal other than the ones in which they were found in nature. It will be observed that there is no material difference in the virulence of the cultures.

The only organism with which it is necessary to contrast the one under consideration is *Bacillus pseudotuberculosis rodentium* (Pfeiffer). We have not had an opportunity of working with this organism, but judged by MacConkey's work (Journal of Hygiene, Vol. 8, No. 3,

June, 1908), this organism is morphologically and culturally almost identical with *Bacillus pestis*, the difference being only that *Bacillus pseudotuberculosis rodentium* makes litmus milk alkaline and its growth upon agar is not viscid. *Bacillus pseudotuberculosis rodentium* gives involution forms on salt agar. The lesions observed in guinea pigs resemble those of plague, and it was even possible to produce immunization to *Bacillus pestis* by inoculations with *Bacillus pseudotuberculosis rodentium*. This organism, however, is not acutely pathogenic for rats. This appears to be the crucial point of difference.

The result of this examination establishes beyond any question the fact that this squirrel was infected with a virulent strain of *Bacillus pestis*.

*Reports from Los Angeles, Cal.—A case of plague.*

In a telegram of August 20 and a letter of August 24 Surgeon Brooks, Los Angeles, reports a boy bitten in the finger by a ground squirrel on August 5 or 6, sickened August 11, was seen by a physician August 12, and was reported to the local health officer in Los Angeles as suspicious. The boy resided at Buena Vista Park. Though the squirrel was destroyed by a dog and a cat August 21, a search of the premises nearby resulted in the discovery of another dead squirrel. The boy is recovering. September 3, information was received by wire from Passed Assistant Surgeon Blue, San Francisco, that material taken from one of the buboes in the boy presented bacteriological evidence of plague. September 4, he further reported that the squirrel above referred to found dead in the park at Los Angeles also presented positive evidence of plague. Surgeon Brooks reports that the boy is isolated and the city officials have taken decisive action. By request of the secretary of the State board of health and of the local authorities, an expert bacteriologist of the Public Health and Marine-Hospital Service has been assigned to duty at Los Angeles.

*Reports from San Francisco, Cal.—Plague-prevention work.*

Passed Assistant Surgeon Blue reports:

SAN FRANCISCO, CAL.

Week ended August 29.

Date of last case .....	Sickened, January 30, 1908
Sick inspected .....	10
Dead inspected .....	120
Premises inspected .....	14, 446
Houses disinfected .....	262
Houses destroyed .....	9
Buildings condemned .....	9
Nuisances abated .....	1, 801
Rats found dead .....	458
Rats trapped .....	4, 301
Total rats taken .....	4, 759
Rats identified:	
<i>Mus norvegicus</i> .....	3, 478
<i>Mus rattus</i> .....	81
<i>Mus musculus</i> .....	1, 165
Total .....	4, 724
Poisons placed .....	143, 084

*Outgoing quarantine transactions.*

## Passed Assistant Surgeon Hobdy reports:

*Week ended August 22.*

Vessels fumigated and certified.....	27
Vessels certified.....	59

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

## Passed Assistant Surgeon Glover reports:

*Week ended August 29, 1908.*

## Date of finding of last plague rat, July 9, 1908.

Rats received .....	1,529
Rats necropsied .....	1,448
Plague rats found .....	0
Plague-infected rats to date .....	20
Vessels inspected.....	18
Vessels fumigated .....	2

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

CALIFORNIA.—Month of July, 1908. Estimated population, 2,001,193. Total number of deaths reported to the State board of health, 2,482, including diphtheria 23, enteric fever 41, measles 9, scarlet fever 2, whooping cough 24, plague 2, and 308 from tuberculosis.

CONNECTICUT—*Stamford*.—Month of August, 1908. Estimated population, 22,000. Number of deaths not reported. Cases: Diphtheria 4, scarlet fever 8, enteric fever 2, and measles 11.

FLORIDA.—Reports from the State board of health for the week ended August 29, 1908, shows as follows: Enteric fever—*Jacksonville*, 8 cases; *Tampa*, *Tallahassee*, *Fernandina*, and *Macclenny* each 1 case. Tuberculosis—*Jacksonville*, 2 cases; *Palatka*, *Pensacola*, *De Funiak Springs*, *West Tampa*, and *Chattahoochee*, each 1 case.

INDIANA—*Muncie*.—Month ended September 2, 1908. Estimated population, 34,036. Total number of deaths, 33, including 3 from tuberculosis. Cases: Enteric fever 5, scarlet fever 1, and whooping cough 2.

IOWA—*Davenport*.—Month of August, 1908. Estimated population, 40,000. Total number of deaths not reported. Cases: Diphtheria 3, enteric fever 6, measles 7, tuberculosis 1, and whooping cough 7.

MASSACHUSETTS.—Reports from the State board of health for the month of July, 1908, show as follows: Week ended July 4, 1908. Forty-five cities and towns, having an aggregate estimated population of 2,292,795, report 645 deaths, including diphtheria 7, enteric fever 5, measles 5, and 48 from phthisis pulmonalis. Cases: Diphtheria 100,



enteric fever 46, measles 286, scarlet fever 69, whooping cough 15, and tuberculosis 98.

Week ended July 11, 1908. Number of localities reporting, 46. Estimated population, 2,306,835. Total number of deaths, 659; diphtheria 9, enteric fever 3, measles 9, and phthisis pulmonalis 44. Cases: Diphtheria 117, enteric fever 49, measles 264, scarlet fever 58, whooping cough 7, and tuberculosis 94.

Week ended July 18, 1908. Number of localities reporting, 47. Estimated population, 2,318,465. Total number of deaths, 687; diphtheria 5, enteric fever 7, measles 1, and phthisis pulmonalis 61. Cases: Diphtheria 120, enteric fever 49, measles 169, scarlet fever 41, whooping cough 23, and tuberculosis 112.

Week ended July 25, 1908. Number of localities reporting, 44. Estimated population, 2,289,512. Total number of deaths, 736; diphtheria 9, enteric fever 11, measles 2, phthisis pulmonalis 50. Cases: Diphtheria 104, enteric fever 78, measles 109, scarlet fever 53, whooping cough 69, and tuberculosis 178.

MONTANA.—Month of July, 1908. Estimated population, 280,000. Reports to the State board of health show as follows: Total number of deaths, 335, including diphtheria 10, enteric fever 3, scarlet fever 7, measles 2, and 39 from tuberculosis. Cases: Diphtheria 73, enteric fever 18, measles 3, scarlet fever 48, and smallpox 73.

*Anaconda*.—Month of July, 1908. Estimated population, 12,267; Total number of deaths, 15, including diphtheria 2 and 2 from tuberculosis. Cases: Diphtheria 4.

*Billings*.—Month of July, 1908. Estimated population, 12,000. Total number of deaths, 7, including 1 from tuberculosis. Cases: Diphtheria 1, enteric fever 2, and scarlet fever 1.

*Bozeman*.—Month of July, 1908. Estimated population, 4,000. Total number of deaths, 4. Cases: Smallpox 25.

*Great Falls*.—Month of July, 1908. Estimated population, 16,000. Total number of deaths, 21, including diphtheria 1, enteric fever 1, and 4 from tuberculosis. Cases: Diphtheria 9, enteric fever 2, scarlet fever 2, and smallpox 1.

*Helena*.—Month of July, 1908. Estimated population, 16,770. Total number of deaths, 18, including diphtheria 1 and 2 from tuberculosis. Cases: Scarlet fever 4 and diphtheria 2.

*Livingston*.—Month of July, 1908. Estimated population, 3,500. Total number of deaths, 3, including diphtheria 1 and 1 from scarlet fever. Cases: Scarlet fever 6.

*Missoula*.—Month of July, 1908. Estimated population, 5,000. Total number of deaths, 12, including 1 from tuberculosis. Cases: Scarlet fever 1, diphtheria 7, and smallpox 1.

NEW JERSEY.—Reports to the State board of health for the month ended August 15, 1908, show a total of 3,209 deaths, including diph-

theria 25, enteric fever 20, measles 10, scarlet fever 21, whooping cough 17, and 326 from tuberculosis.

PENNSYLVANIA.—*Highspire*.—Month of August, 1908. Estimated population, 2,000. No deaths reported. Cases: Enteric fever 2.

*New Castle*.—Month of August, 1908. Estimated population, 38,000. Total number of deaths not reported. Cases: Diphtheria 7, enteric fever 9, and tuberculosis 5.

*Smallpox in the United States as reported to the Surgeon-General, Public Health and Marine-Hospital Service, June 27 to September 11, 1908.*

[For reports received from December 27, 1907, to June 26, 1908, see PUBLIC HEALTH REPORTS for June 26, 1908.]

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

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Alabama:</b>				
Huntsville .....	Jan. 5-June 18 .....	95	.....	And vicinity.
Mobile .....	June 7-Aug. 29 .....	10	.....	
Total for State .....		95	.....	
<b>Arkansas:</b>				
Texarkana .....	Dec. 1-June 15 .....	.....	.....	Present.
<b>California:</b>				
Angel Island Quarantine Station.	Jan. 1-May 18 .....	.....	.....	5 additional cases. Report received out of date. July 13, 1 case on schr. Alumna. Report for June not received.]
Los Angeles .....	June 7-July 4 .....	6	.....	
Oakland .....	Apr. 1-July 31 .....	16	.....	
Sacramento .....	May 1-July 31 .....	4	.....	Reported out of date. June 1-13, mainly on Pala Indian Reservation.
San Bernardino .....	Dec. 11-July 11 .....	54	.....	
San Diego County .....	June 1-Aug. 3 .....	98	.....	
Escondido .....	June 1-Aug. 3 .....	15	.....	June 6-27, 5 cases from day steamer City of Long Beach.
San Diego .....	June 1-Aug. 3 .....	25	.....	
San Francisco .....	June 6-Aug. 29 .....	45	.....	
Stockton .....	July 1-31 .....	1	.....	
Total for State .....		264	.....	
<b>Delaware:</b>				
Reedy Island Quarantine Station.	Aug. 9 .....	1	.....	From steamship Haverford.
Total for State .....		1	.....	
<b>District of Columbia:</b>				
Washington .....	June 14-27 .....	8	.....	
Total for District .....		8	.....	
<b>Idaho:</b>				
Carey .....	May 21-Aug. 4 .....	21	.....	
Total for State .....		21	.....	
<b>Illinois:</b>				
Alexander County .....	May 1-31 .....	3	.....	
Carroll County .....	May 1-31 .....	5	.....	
Cass County .....	May 1-31 .....	34	.....	
Champaign County .....	May 1-31 .....	4	.....	
Christian County .....	May 1-31 .....	3	.....	
Clark County .....	May 1-31 .....	11	.....	
Cook County—				
Chicago .....	June 14-Aug. 1 .....	10	.....	
Harvey .....	May 1-31 .....	1	.....	
Dupage County .....	May 1-31 .....	1	.....	
Emingham County .....	May 1-31 .....	1	.....	
Iroquois County .....	May 1-31 .....	3	.....	
Jo Daviess County .....	May 1-31 .....	1	.....	
Kane County .....	May 1-31 .....	37	.....	

*Smallpox in the United States, etc.—Continued.*

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Illinois—Continued.</b>				
Macon County	May 1-31	5		
Macoupin County	May 1-31	5		
Marshall County	May 1-31	9		
McLean County	May 1-31	5		
Mercer County	May 1-31	1		
Montgomery County	May 1-31	7		
Morgan County	May 1-31	20		
Jacksonville	June 1-30	10		
Peoria County	May 1-31	12		
Saline County	May 1-31	5		
Sangamon County— Springfield	June 19-July 23	4		
Stevenson County	May 1-31	25		
Tazewell County	May 1-31	64		
Warren County	May 1-31	6		
Will County	May 1-31	1		
Joliet	May 1-31	19		
Total for State		312		
<b>Indiana:</b>				
Allen County	Apr. 1-June 30	4		
Fort Wayne	June 21-Aug. 8	5		
Bartholomew County	Apr. 1-30	1		
Boone County	Apr. 1-June 30	4		
Carroll County	May 1-June 30	67	1	
Clark County	Apr. 1-June 30	34		
Jeffersonville	June 1-July 31	25	1	
Dearborn County	Apr. 1-June 30	5		
Dekalb County	Apr. 1-June 30	15		
Delaware County	Apr. 1-June 30	23		
Floyd County	June 1-30	1		
Fountain County	June 1-30	4		
Fulton County	Apr. 1-30	19		
Grant County	Apr. 1-June 30	55		
Hendricks County	Apr. 1-30	1		
Howard County	Apr. 1-30	15		
Huntington County	Apr. 1-30	88		
Jackson County	Apr. 1-June 30	4		
Jefferson County	June 1-30	6		
Johnson County	Apr. 1-30	9		
Knox County	Apr. 1-May 31	31		
Laporte County	Apr. 1-30	2		
Lawrence County	Apr. 1-30	12		
Madison County	Apr. 1-30	4		
Marion County	Apr. 1-June 30	41		
Indianapolis	June 8-Aug. 30	51	1	
Marshall County	Apr. 1-30	1		
Miami County	Apr. 1-30	16		
Morgan County	Apr. 1-30	2		
Newton County	Apr. 1-30	2		
Noble County	Apr. 1-June 30	15		
Orange County	Apr. 1-30	1		
Owen County	Apr. 1-30	4		
Park County	June 1-30	1		
Porter County	June 1-30	1		
St. Joseph County	June 1-30	6		
South Bend	June 29-Aug. 15	10		
Scott County	June 1-30	2		
Shelby County	Apr. 1-30	35	1	
Steuben County	May 1-31	30		
Sullivan County	Apr. 1-30	9		
Tippecanoe County	Apr. 1-May 31	11		
Lafayette	June 21-Aug. 10	6		
Tipton County	Apr. 1-30	1		
Vanderburg County	June 1-30	1		
Wabash County	Apr. 1-30	14		
Warrick County	Apr. 1-30	1		
Wayne County	Apr. 1-30	15		
Wells County	Apr. 1-30	1		
Vigo County	May 1-June 30	12		
Total for State		673	4	
<b>Iowa, general</b>				
Burlington	Jan. 1-June 30	2,092		
Cedar Rapids	July 15	1		
Davenport	June 1-July 1	4		
Keokuk	June 2-30	3		
Sioux City	June 1-30	1		
	June 1-Aug. 31	8		
Total for State		2,109		

## Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Kansas:</b>				
Allen County.....	Apr. 1-June 30...	27		
Anderson County.....	Apr. 1-30.....	6		
Atchison County.....	Apr. 1-June 30...	69		
Atchison.....	Apr. 1-May 31.....	29		
Barber County.....	June 1-30.....	1		
Barton County.....	Apr. 1-30.....	6		
Bourbon County.....	Apr. 1-June 30...	24		
Butler County.....	May 1-June 30...	29		
Chase County.....	Apr. 1-June 30...	9		
Cherokee County.....	Apr. 1-June 30...	14		
Cheyenne County.....	Apr. 1-30.....	2		
Clay County.....	May 1-31.....	2		
Cloud County.....	May 1-June 30...	2		
Crawford County.....	Apr. 1-June 30...	6		
Pittsburg.....	Apr. 1-30.....	8		
Decatur County.....	June 1-30.....	4		
Doniphan County.....	Apr. 1-30.....	3		
Douglas County.....	Apr. 1-June 30...	33		
Edwards County.....	Apr. 1-May 31.....	3		
Ford County.....	May 1-June 30...	2		
Franklin County.....	Apr. 1-May 31.....	3		
Graham County.....	June 1-30.....	2		
Greenwood County.....	Apr. 1-June 30...	11		
Hamilton County.....	Apr. 1-30.....	1		
Harper County.....	Apr. 1-June 30...	9		
Harvey County.....	Apr. 1-30.....	14		
Hodgeman County.....	Apr. 1-30.....	2		
Jackson County.....	Apr. 1-June 30...	39		
Jefferson County.....	Apr. 1-June 30...	11		
Jewell County.....	May 1-31.....	3		
Kingman County.....	Apr. 1-June 30...	24		
Labette County.....	Apr. 1-June 30...	24		
Parsons.....	Apr. 1-May 31.....	45		
Leavenworth County.....	Apr. 1-June 30...	62		
Leavenworth.....	May 1-31.....	3		
Lincoln County.....	Apr. 1-May 31.....	3		
Linn County.....	Apr. 1-June 30...	21		
Lyon County.....	Apr. 1-June 30...	31		
Marion County.....	June 1-30.....	2		
McPherson County.....	May 1-June 30...	2		
Meade County.....	June 1-30.....	6		
Miami County.....	Apr. 1-30.....	5		
Montgomery County.....	Apr. 1-June 30...	18		
Coffeyville.....	May 1-31.....	7		
Morris County.....	Apr. 1-30.....	14		
Nemaha County.....	Apr. 1-June 30...	70		
Neosho County.....	Apr. 1-30.....	2		
Osage County.....	Apr. 1-May 31.....	2		
Pawnee County.....	May 1-June 30...	6		
Pottawatomie County.....	Apr. 1-June 30...	7		
Pratt County.....	May 1-June 30...	12		
Reno County.....	Apr. 1-May 31.....	14		
Republic County.....	Apr. 1-June 30...	13		
Rush County.....	May 1-31.....	6		
Saline County.....	Apr. 1-30.....	11		
Sedgwick County.....	Apr. 1-June 30...	28		
Wichita.....	July 12-18.....	1		
Seward County.....	May 1-June 30...	21		
Shawnee County.....	Apr. 1-30.....	30		
Topeka.....	June 7-Aug. 22...	16		
Smith County.....	Apr. 1-30.....	7		
Stevens County.....	Apr. 1-30.....	1		
Sumner County.....	Apr. 1-30.....	3		
Trego County.....	Apr. 1-30.....	22		
Washington County.....	Apr. 1-30.....	2		
Wilson County.....	June 1-30.....	15		
Wyandotte County.....	May 1-31.....	7		
Kansas City.....	June 8-Aug. 22...	6		
Total for State.....		943		
<b>Kentucky:</b>				
Covington.....	June 21-Aug. 29..	5		
Lexington.....	July 12-18.....	3		
Total for State.....		8		
<b>Louisiana:</b>				
New Orleans.....	June 14-July 25...	20	1	
Total for State.....		20	1	

*Smallpox in the United States, etc.—Continued.*

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Maryland:</b>				
Baltimore .....	July 5-11 .....	1		
Total for State .....		1		
<b>Massachusetts, general.</b>	May 1-31 .....	1		
Total for State .....		1		
<b>Michigan:</b>				
Allegan County .....	May 1-31 .....	18		
Bay County .....	May 1-31 .....	10		
Benzie County .....	May 1-31 .....	1		
Berrien County .....	May 1-31 .....	1		
Branch County .....	May 1-31 .....	2		
Calhoun County .....	May 1-June 30 .....	26		
Battle Creek .....	May 1-June 30 .....	20		
Cass County .....	May 1-31 .....	17		
Chippewa County .....	June 1-30 .....	2		
Sault de Saint Marie .....	May 1-June 30 .....	5		
Clare County .....	May 1-31 .....	3		
Eaton County .....	June 1-30 .....	4	1	
Emmet County .....	May 1-31 .....	1		
Grand Traverse County .....	May 1-June 30 .....	12		
Gratiot County .....	June 1-30 .....	2		
Hillsdale County .....	May 1-June 30 .....	8		
Houghton County .....	May 1-June 30 .....	31		
Huron County .....	May 1-June 30 .....	18		
Ionia County .....	May 1-June 30 .....	8		
Jackson County .....	May 1-June 30 .....	10		
Kalamazoo County .....	May 1-31 .....	5		
Kent County .....	June 1-30 .....	9		
Lake County .....	May 1-31 .....	8		
Lapeer County .....	May 1-June 30 .....	2		
Manistee County, Manistee .....	May 1-31 .....	1		
Mason County .....	May 1-June 30 .....	4		
Midland County .....	May 1-31 .....	1		
Missaukee County .....	May 1-31 .....	6		
Montcalm County .....	May 1-31 .....	3		
Muskegon County .....	May 1-31 .....	38		
Newaygo County .....	May 1-June 30 .....	7		
Oakland County .....	June 1-30 .....	3		
Oceola County .....	June 1-30 .....	1		
Otsego County .....	June 1-30 .....	8		
Saginaw County <sup>a</sup> .....	May 1-30 .....	30		
Saginaw .....	June 21-27 .....	1		
St. Clair County .....	May 1-June 30 .....	16		
Port Huron .....	May 1-31 .....	9	1	
St. Joseph County .....	June 1-30 .....	1		
Shiawassee County .....	May 1-31 .....	1		
Wayne County, Detroit .....	July 4-Aug. 1 .....	2		
Wexford County .....	May 1-June 30 .....	21		
Total for State .....		371	2	
<b>Minnesota:</b>				
Aitkin County .....	Apr. 1-June 15 .....	7		
Anoka County .....	Apr. 28-May 10 .....	5		
Becker County .....	Apr. 28-June 15 .....	123		
Benton County .....	Apr. 28-June 15 .....	10		
Bigstone County .....	Apr. 7-May 17 .....	1		
Blue Earth County .....	Apr. 21-June 15 .....	21		
Brown County .....	Mar. 31-May 17 .....	12		
Carver County .....	Apr. 28-June 8 .....	19		
Cass County .....	June 1-8 .....	1		
Chippewa County .....	Apr. 21-June 1 .....	8		
Chisago County .....	Apr. 14-June 8 .....	2		
Clay County .....	Apr. 28-June 8 .....	18		
Crow Wing County .....	Apr. 28-June 15 .....	9		
Dakota County .....	Apr. 28-June 8 .....	8		
Douglas County .....	June 9-15 .....	2		
Faribault County .....	May 4-June 8 .....	18		
Fillmore County .....	May 4-17 .....	9		
Freeborn County .....	May 4-10 .....	1		
Goodhue County .....	May 4-June 4 .....	15		
Hennepin County .....	Apr. 28-June 15 .....	29		
Minneapolis .....	June 1-July 31 .....	25		
Houston County .....	Apr. 28-June 15 .....	3		
Hubbard County .....	Apr. 28-June 15 .....	26		
Isanti County .....	Apr. 28-May 17 .....	5		
Itasca County .....	Apr. 7-June 15 .....	20		
Jackson County .....	Apr. 13-June 15 .....	14		
Kanabec County .....	May 4-10 .....	5		

<sup>a</sup>In the Public Health Reports for August 21 and 28, and September 4, 1908, Saginaw County was erroneously entered as Sangamon County.

## Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Minnesota—Continued.				
Kandiyohi County.....	May 4-15.....	16		
Kittson County.....	Apr. 14-June 1.....	3		
Koochiching County.....	May 25-June 15.....	6		
Lac qui Parle County.....	May 4-June 15.....	6		
Lake County.....	May 27-June 15.....	12		
Lesueur County.....	Apr. 28-June 15.....	13		
Lincoln County.....	June 4-10.....	1		
Lyon County.....	May 4-10.....	2		
McLeod County.....	May 24-June 8.....	3		
Martin County.....	Apr. 28-June 15.....	5		
Meeker County.....	Apr. 28-June 8.....	24		
Millelacs County.....	Apr. 28-June 15.....	4		
Morrison County.....	Apr. 28-June 15.....	16		
Mower County.....	May 17-24.....	3		
Nicollet County.....	Apr. 28-June 1.....	14		
Nobles County.....	Apr. 28-May 3.....	1		
Norman County.....	May 10-June 15.....	2		
Olmsted County.....	Apr. 28-June 15.....	11		
Ottertail County.....	Apr. 28-June 15.....	15		
Pine County.....	May 17-June 1.....	8		
Pipestone County.....	June 1-8.....	1		
Polk County.....	Apr. 28-June 8.....	12		
Pope County.....	Apr. 28-May 3.....	1		
Ramsey County.....	Apr. 28-June 15.....	11		
St. Paul.....	May 1-31.....	49		
Red Lake County.....	May 4-17.....	4		
Redwood County.....	Apr. 28-June 15.....	13		
Renville County.....	May 10-15.....	4		
Rice County.....	Apr. 28-June 8.....	3		
Rock County.....	Apr. 28-June 8.....	3		
Roseau County.....	May 4-June 10.....	2		
St. Louis County.....	Apr. 28-June 15.....	9		
Duluth.....	Apr. 28-June 15.....	126		
Scott County.....	Apr. 28-June 15.....	147		
Sibley County.....	Apr. 27-June 8.....	6		
Stearns County.....	Apr. 28-June 8.....	43		
Steele County.....	Apr. 28-June 8.....	13		
Stevens County.....	Apr. 28-May 24.....	7		
Swift County.....	Apr. 28-June 8.....	16		
Todd County.....	Apr. 28-June 15.....	45		
Wabasha County.....	Apr. 28-May 10.....	5		
Washington County.....	May 24-June 15.....	6		
Wilkin County.....	Apr. 28-June 8.....	5		
Winona County.....	May 4-June 15.....	4		
Winona.....	June 21-July 18.....	2		
Wright County.....	Apr. 29-June 15.....	33		
Yellow Medicine County.....	May 4-June 15.....	8		
Total for State.....		1,159		
Missouri:				
Conway.....	Apr. 20-June 19.....	29		Present and in vicinity. And vicinity. Do.
Durham.....	May 1-July 1.....			
Kansas City.....	June 14-Aug. 8.....	6		
La Belle.....	May 1-July 1.....	7		
Lewiston.....	May 1-July 1.....	18		
Monticello.....	May 1-July 1.....	1		
St. Joseph.....	June 7-Aug. 22.....	31		
St. Louis.....	June 14-20.....	1		
Total for State.....		93		
Montana:				
Cascade County.....	May 1-June 30.....	4		
Chouteau County.....	May 1-31.....	22		
Dawson County.....	June 1-30.....	2		
Deerlodge County.....	May 1-31.....	1		
Fergus County.....	May 1-31.....	8		
Flathead County.....	May 1-June 30.....	33		
Gallatin County.....	May 1-June 30.....	2		
Bozeman.....	June 1-30.....	55		
Lewis and Clark County.....	May 1-31.....	3		
Helena.....	May 1-June 30.....	5		
Meagher County.....	May 1-June 30.....	2		
Missoula County.....	May 1-31.....	6		
Missoula.....	May 1-June 30.....	2		
Ravalli County.....	May 1-June 30.....	8		
Rosebud County.....	June 1-30.....	2		
Silverbow County—				
Butte.....	June 1-Sept. 1.....	4		
Valley County.....	May 1-31.....	4		
Total for State.....		163		

*Smallpox in the United States, etc.—Continued.*

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Nebraska:</b>				
Friend.....	Apr. 13-June 18...	13		
Lincoln.....	Mar. 1-May 31.....	22		
South Omaha.....	June 7-13.....	1		
Total for State.....		36		
<b>New Jersey:</b>				
Fort Hancock.....	July 30.....	1		
Total for State.....		1		
<b>New York, general</b> .....	May 1-June 30.....	102		
New York.....	June 14-20.....	1		
Niagara Falls.....	June 14-20.....	1		
Schenectady.....	June 1-30.....	2		
Total for State.....		106		
<b>North Carolina:</b>				
Anson County.....	May 1-31.....	30		
Cabarrus County.....	Apr. 1-May 31.....	38		
Camden County.....	Apr. 1-June 30.....	25		
Caswell County.....	June 1-30.....			Present.
Chatham County.....	Apr. 1-30.....	2		
Chowan County.....	Apr. 1-May 31.....	13		
Cleveland County.....	Apr. 1-30.....	8		
Davie County.....	Apr. 1-30.....	4		
Forsyth County.....	Apr. 1-30.....	1		
Gates County.....	Apr. 1-30.....	3		
Gulford County.....	Apr. 1-30.....	6		
Greensboro.....	Aug. 12-22.....	1		
Johnston County.....	Apr. 1-June 30.....	47		
Mecklenburg County— Charlotte.....	June 14-Aug. 15.....	4		
New Hanover County.....	Apr. 1-May 31.....	6		
Orange County.....	Apr. 1-May 31.....	3		
Richmond County.....	May 1-June 30.....	2		
Rowan County.....	Apr. 1-May 31.....	26		
Rutherford County.....	Apr. 1-30.....	12		
Wayne County.....	Apr. 1-30.....	5		
Yadkin County.....	Apr. 1-30.....	2		
Total for State.....		238		
<b>Ohio, general</b> .....	Apr. 25-June 13.....	200		
Canton.....	June 7-13.....	1		
Cincinnati.....	June 20-Aug. 28.....	8		
Dayton.....	June 14-Aug. 22.....	16		
Springfield.....	July 12-18.....	1		
Toledo.....	June 14-Aug. 16.....	12		
Troy.....	Apr. 15-July 3.....	28		
Zanesville.....	Aug. 1-31.....	1		
Total for State.....		267		
<b>Oregon:</b>				
Portland.....	Apr. 1-July 31.....	146		Report for June not received.
Total for State.....		146		
<b>Rhode Island:</b>				
Pawtucket.....	June 12-29.....	1		
Total for State.....		1		
<b>South Carolina:</b>				
General.....	Jan. 1-June 30.....	170	1	
Total for State.....		170	1	
<b>Tennessee:</b>				
Knoxville.....	June 21-July 25.....	2		
Livingston.....	June 13-Apr. 11.....	9	1	
Nashville.....	June 14-20.....	1		
Total for State.....		12	1	
<b>Texas:</b>				
Fort Worth.....	May 1-31.....	9		
San Antonio.....	June 14-July 25.....	9		
Total for State.....		18		

*Smallpox in the United States, etc.—Continued.*

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Utah:</b>				
Cache County .....	May 1-31 .....	2		
Carbon County .....	June 1-30 .....	1		
Davis County .....	May 1-July 31 .....	3		
Salt Lake County— Salt Lake City .....	May 1-July 31 .....	29		
Uintah County .....	July 1-31 .....	1	1	
Utah County .....	May 1-July 31 .....	14		
Weber County .....	May 1-June 30 .....	21		
Total for State .....		71	1	
<b>Vermont:</b>				
Whiting .....	May 5 .....	1		
Total for State .....		1		
<b>Virginia:</b>				
Alexandria .....	June 25-27 .....	13		
Waynesboro .....	June 1-July 31 .....	20		
Total for State .....		33		
<b>Washington:</b>				
Seattle .....	May 1-July 31 .....	36		
Spokane .....	June 7-Aug. 8 .....	61		
Tacoma .....	June 8-Aug. 2 .....	4		
Total for State .....		101		
<b>West Virginia:</b>				
Moundsville .....	June 17-July 2 .....	1		
Total for State .....		1		
<b>Wisconsin:</b>				
La Crosse .....	June 16-Aug. 29 ..	65		
Manitowoc .....	Aug. 2-8 .....	1		
Milwaukee .....	June 14-Aug. 29 ..	22	1	
Total for State .....		88	1	
Grand total, United States .....		7,532	11	

*Plague in the United States as reported to the Surgeon-General, Public Health and Marine-Hospital Service, July 15-September 11, 1908.*

Place.	Date.	Cases.	Deaths.	Remarks.
<b>California:</b>				
Alameda County— Oakland .....	July 21 .....	1	1	
Contra Costa County— Concord .....	July 15 .....	1	1	
Prenois Valley .....	July 24 .....	1	1	10 miles from Martinez.
Los Angeles County— Los Angeles .....	August 11 .....	1		



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

[For smallpox and plague see special tables.]

Cities.	Week ended—	Popula- tion, United States census, 1900.	Total deaths from all causes	Tuber- culosis.		Enteric fever.		Scarlet fever.		Diph- theria.		Measles.		Whoop- ing cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Altoona, Pa.	Aug. 29	38,973	15			13		1							
Baltimore, Md.	do	508,957	172	7	24	67	7	11	1	11	1	1		6	
Bayonne, N. J.	do	32,722										1			
Berkeley, Cal.	Aug. 22	13,214	4					1		1					
Biddeford, Me.	Aug. 29	16,145	6												
Binghamton, N. Y.	do	38,647	19		2		1		2						
Boston, Mass.	do	560,892	228	45	18	37	1	20		45	2	17		10	2
Braddock, Pa.	do	15,564	10					2	1						
Bradford, Pa.	do	15,029	4		1	1									
Brockton, Mass.	do	40,063	13	4	1	4						1			
Butte, Mont.	Aug. 18	30,470	6	1	1			6		1					
Do	Aug. 25	30,470	7					5		1					
Cambridge, Mass.	Aug. 29	91,886	20	6	1	2		6		10		2			
Camden, S. C.	Aug. 22	2,441	1			1									
Do	Aug. 29	2,441	1			1									
Carbondale, Pa.	do	13,536	3			5									
Charlotte, N. C.	do	18,091	12												
Chelsea, Mass.	do	34,072	17	1	1										
Chicago, Ill.	do	1,698,575	584		65		9		5		9				1
Chicopee, Mass.	do	19,167	9		1			2		1	1				
Cincinnati, Ohio.	Aug. 28	325,902	85	8	6	11	1	1		4	1				1
Cleveland, Ohio.	do	381,768	130	23	7	12	1	2		14		14	1	9	1
Clinton, Mass.	Aug. 29	13,667	5	1											
Columbus, Ga.	do	17,614	3												
Covington, Ky.	do	42,938	16		1		1								
Danville, Ill.	do	16,354	11							1					
Dayton, Ohio.	do	85,333	21		2			2		1				1	
Detroit, Mich.	do	285,704	136					3		7	1				
Dunkirk, N. Y.	do	11,616	5	1								1			
Elizabeth, N. J.	July 18	52,130	36		1	1		2		3	3				
Do	July 25	52,130	22		1	2		2		9					
Do	Aug. 1	52,130	25		2	1	2			4					
Do	Aug. 8	52,130	29		2	5	2	2		5	1				1
Do	Aug. 15	52,130	21		2	5	1	2		6					
Do	Aug. 22	52,130	32		1			1		4					
Do	Aug. 29	52,130	17					1		3					
Elkhart, Ind.	do	15,184	4												
Elmira, N. Y.	do	35,672	11	1	3	6									
Erie, Pa.	do	52,733	13	9		4				1				10	1
Evansville, Ind.	do	59,007	12	8		10		1							
Everett, Mass.	do	24,336	9			4				1					
Fall River, Mass.	do	104,863	54	3	3	5		3		1	1			1	
Findlay, Ohio.	do	17,613	3			2		6							
Galesburg, Ill.	do	18,607	6							1					
Galveston, Tex.	Aug. 28	37,789	9	1		5				1					
Gloucester, Mass.	Aug. 22	26,121	10		1										
Gr. Rapids, Mich.	Aug. 29	87,565	23		1	2				4				1	
Greensboro, N. C.	do	10,035	1					2							
Greenville, S. C.	Aug. 22	11,860	3												
Do	Aug. 29	11,860	3											2	
Harrison, N. J.	do	10,596	4	1					1						
Hartford, Conn.	Aug. 23	79,850	25	10	3	15		5							
Do	Aug. 30	79,850	18	1	1	11		1							
Haverhill, Mass.	Aug. 29	37,175	12	6	3					1					
Hoboken, N. J.	do	59,364						1							
Hyde Park, Mass.	Aug. 29	13,244	4			2									
Indianapolis, Ind.	Aug. 30	169,164	46		4	31	1	1		2					
Jacksonville, Fla.	Aug. 29	28,429	22		6										
Jersey City, N. J.	Aug. 30	206,433	88		5	6	1	7			2	1			2
Johnstown, Pa.	Aug. 29	35,936	12	6		5	2	1						1	
Kansas City, Kans.	do	51,418	10		3	4		1		2					
Kansas City, Mo.	do	163,752	49		5	2	2	2		2					1
Kearny, N. J.	do	10,896	3												
Kingston, N. Y.	do	24,535	12		1		1								
Knoxville, Tenn.	do	32,637			2		1								
La Crosse, Wis.	do	28,895		13		1				2				1	
La Fayette, Ind.	Aug. 31	18,116	9			2									
Lancaster, Pa.	Aug. 29	41,459	15			2								9	
Lawrence, Mass.	Aug. 8	62,559	30	1	4	3					1				
Do	Aug. 15	62,559	34	5				3		3					
Do	Aug. 29	62,559	25		2			2		2					1
Lexington, Ky.	Aug. 29	26,368	7		1	3				1					

a Intervening week previously reported.

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

Cities.	Week ended—	Population, United States census, 1900.	Total deaths from all causes.	Tuberculosis.		Enteric fever.		Scarlet fever.		Diphtheria.		Measles.		Whooping cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Los Angeles, Cal..	Aug. 22	102,479	59	12	9	2	.....	14	.....	.....	.....	4	.....	.....	.....
Lowell, Mass.	Aug. 29	94,969	53	3	4	2	.....	1	.....	4	1	1	.....	.....	.....
Lynn, Mass.	Aug. 22	68,513	20	1	2	1	.....	.....	.....	4	.....	.....	.....	.....	.....
McKeesport, Pa.	Aug. 8	34,227	11	2	1	7	1	1	.....	2	.....	.....	.....	.....	.....
Do.	Aug. 15	34,227	11	.....	1	11	.....	.....	.....	1	.....	.....	.....	.....	.....
Do.	Aug. 22	34,227	15	1	1	11	1	.....	.....	2	.....	1	.....	.....	.....
Do.	Aug. 29	34,227	16	.....	2	8	3	.....	.....	1	.....	.....	.....	2	.....
Malden, Mass.	Aug. 22	33,664	13	3	2	1	.....	.....	.....	3	.....	.....	.....	.....	.....
Do.	Aug. 29	33,664	12	1	1	2	1	1	.....	1	1	.....	.....	.....	.....
Manitowoc, Wis.	do.	11,786	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marlboro, Mass.	Aug. 22	13,609	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.	Aug. 29	13,609	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Massillon, Ohio.	do.	11,944	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medford, Mass.	do.	18,244	6	.....	.....	.....	.....	3	.....	1	.....	.....	.....	.....	.....
Melrose, Mass.	do.	12,962	2	2	.....	.....	.....	8	.....	5	.....	.....	.....	.....	.....
Milwaukee, Wis.	do.	285,315	80	9	9	7	.....	7	.....	1	.....	2	.....	11	2
Mobile, Ala.	Aug. 22	38,469	25	.....	2	2	3	1	.....	.....	.....	.....	.....	.....	.....
Moline, Ill.	Aug. 30	17,248	4	.....	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Montclair, N.J.	Aug. 15	13,962	3	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Do.	Aug. 29	13,962	2	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Montgomery, Ala.	Aug. 28	30,346	16	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mt. Vernon, N. Y.	Aug. 29	21,228	4	.....	.....	.....	.....	1	.....	.....	.....	2	.....	.....	.....
Nanticoke, Pa.	Aug. 31	12,616	5	1	.....	1	.....	.....	.....	3	.....	.....	.....	.....	.....
Nashville, Tenn.	Aug. 29	80,865	41	1	3	9	1	8	.....	1	1	.....	.....	.....	3
Newark, N.J.	do.	246,070	83	.....	8	6	.....	8	1	9	.....	.....	.....	.....	1
New Bedford, Mass.	do.	63,442	36	2	2	6	2	2	.....	.....	.....	.....	.....	5	.....
Newburyport, Mass.	do.	14,478	9	.....	.....	3	1	1	1	.....	.....	.....	.....	.....	.....
New Orleans, La.	do.	278,104	104	23	27	11	2	6	.....	12	1	.....	.....	.....	.....
Newport, R. I.	Aug. 15	22,441	5	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Do.	Aug. 22	22,441	9	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Do.	Aug. 29	22,441	7	.....	.....	3	.....	.....	.....	4	.....	.....	.....	.....	.....
Newton, Mass.	do.	33,587	6	.....	.....	3	.....	1	.....	1	.....	.....	.....	.....	.....
New York, N. Y.	do.	3,437,202	1,284	464	141	144	14	85	4	140	15	71	3	30	3
Niagara Falls, N. Y.	do.	19,457	6	.....	1	.....	.....	1	.....	3	.....	.....	.....	.....	.....
North Adams, Mass.	do.	24,200	6	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Northampton, Mass.	do.	18,643	7	.....	.....	.....	.....	.....	.....	2	.....	2	1	.....	.....
Orange, N. J.	do.	24,141	8	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ottumwa, Iowa.	do.	18,197	11	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Palmer, Mass.	Aug. 15	7,801	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.	Aug. 22	7,801	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.	Aug. 29	7,801	5	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plainfield, N. J.	do.	15,369	6	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portsmouth, N. H.	do.	10,637	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portsmouth, Va.	Sept. 1	17,427	8	.....	.....	8	1	1	.....	.....	.....	.....	.....	.....	.....
Providence, R. I.	Aug. 29	175,597	49	20	4	2	.....	1	.....	6	1	.....	.....	.....	1
Racine, Wis.	do.	29,102	10	7	1	.....	.....	3	1	.....	.....	.....	.....	.....	.....
Reading, Pa.	Aug. 31	78,961	26	2	1	54	2	.....	.....	.....	.....	.....	.....	.....	.....
Richmond, Va.	Aug. 29	85,050	36	7	3	17	2	2	.....	1	.....	.....	.....	2	.....
Rock Island, Ill.	do.	19,493	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Joseph, Mo.	Aug. 22	102,979	25	25	.....	14	1	.....	.....	.....	.....	.....	.....	.....	.....
St. Louis, Mo.	Aug. 29	575,238	182	25	11	34	2	6	.....	14	2	.....	.....	3	1
San Antonio, Tex.	do.	53,321	.....	.....	.....	4	1	.....	.....	.....	.....	.....	.....	1	.....
San Francisco, Cal.	Aug. 22	342,782	89	35	9	4	1	.....	.....	7	.....	20	.....	7	.....
Somerville, Mass.	Aug. 29	61,643	16	3	2	1	.....	6	.....	2	1	1	.....	1	.....
South Bend, Ind.	do.	35,999	13	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
Springfield, Ill.	Aug. 27	34,159	11	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....
Springfield, Mass.	Aug. 29	62,069	19	2	2	1	2	1	.....	4	1	1	.....	.....	.....
Springfield, Ohio	do.	38,253	16	5	1	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Steelton, Pa.	do.	12,068	0	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....
Tacoma, Wash.	Aug. 23	37,714	18	.....	.....	.....	.....	1	1	1	.....	.....	.....	.....	.....
Taunton, Mass.	Aug. 29	31,036	15	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Titusville, Pa.	do.	8,244	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Topeka, Kans.	Aug. 22	33,608	7	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Do.	Aug. 29	33,608	14	.....	.....	.....	1	.....	.....	2	.....	.....	.....	.....	.....
Waltham, Mass.	do.	23,481	2	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....
Warren, Ohio.	do.	8,529	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wheeling, W. Va.	Aug. 22	38,878	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.	Aug. 29	38,878	13	3	.....	.....	.....	1	.....	3	1	.....	.....	.....	1
Wilkes-Barre, Pa.	Aug. 28	51,721	10	2	1	13	.....	3	.....	5	1	.....	.....	.....	.....

a Intervening week previously reported.

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

Cities.	Week ended—	Popula- tion, United States census, 1900.	Total deaths from all causes.	Tuber- culosis.		Enteric fever.		Scarlet fever.		Diph- theria.		Measles.		Whoop- ing cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Wilkinsburg, Pa. . .	Aug. 14	11,886	6	1	1	9	....	1	....	....	....	....	....	....	....
Do . . . . .	Aug. 21	11,886	4	....	....	....	....	1	....	....	....	....	....	....	....
Do . . . . .	Aug. 28	11,886	3	....	....	5	....	4	....	2	....	....	....	....	....
Williamsport, Pa. . .	Aug. 29	28,757	5	....	....	3	....	2	....	1	....	....	....	....	....
Wilmington, Del. . .	Aug. 15	76,508	22	....	1	....	....	....	....	....	....	....	....	....	....
Winona, Minn. . . .	Aug. 22	19,714	2	....	....	....	....	....	....	....	....	....	....	....	....
Do . . . . .	Aug. 29	19,714	7	....	....	....	....	....	....	....	....	....	....	....	....
Woburn, Mass. . . .	do . . .	14,254	3	....	1	....	....	....	....	....	....	....	....	....	....
Worcester, Mass. . .	Aug. 22	118,421	26	4	4	2	....	5	1	2	1	3	....	....	....

## FOREIGN AND INSULAR.

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### AZORES.

*Report from St. Michael—Status of plague at Terceira and Fayal.*

The following is received from Vice-Consul Nicholls, at St. Michael, under date of August 11:

Reports from Terceira give the total number of cases of plague since the outbreak as 29, with 15 deaths, and at Fayal 7 cases, with 2 deaths.

### BARBADOS.

*Report from Bridgetown—Inspection and fumigation of vessels—Sanitary conditions.*

Acting Assistant Surgeon Urquhart reports, August 22:

Week ended August 22. Bills of health were issued to 11 vessels with a total number of 206 passengers and 486 members of crews. Two vessels were fumigated. Sanitary conditions remain good at this port. No quarantinable diseases were reported for the week.

### BRAZIL.

*Report from Rio de Janeiro—Inspection of vessels—Smallpox at Santos, Brazil—Smallpox—Smallpox table from January 1 to August 2, 1908.*

Acting Assistant Surgeon Stewart reports:

Week ended August 2. The following vessels were inspected and granted bills of health: August 30, the British steamship *Corsican Prince*, for New York, in a cargo of coffee, with no passengers and no change of the crew personnel; the Brazilian steamship *Goyaz*, for New York, with a general cargo, coffee from here, and with 19 cabin and 13 steerage passengers, and a crew signed on here, her home port, and August 2 the British steamship *Byron*, for New York, with a cargo of coffee, 21 cabin and 3 steerage passengers, and with no change in the personnel of the crew while in this port.

All the members of the crew of the steamship *Byron* had been vaccinated during the last voyage to Brazil.

The crew of the steamship *Goyaz* were all vaccinated by the Brazilian health authorities, who have cooperated with me very heartily in regard to vaccination of the crews and steerage of all of their vessels leaving here for United States ports.

All the vessels above mentioned lay in the open bay except the steamship *Goyaz*, which vessel lay at the dock for 48 hours before departure.

*Smallpox at Santos, Brazil.*—Smallpox caused 1 death. The latest bills of health gave 7 new reported cases, with a note that the health authorities state that the outbreak is decreasing in severity and number of cases.

*Rio de Janeiro, Brazil.*—No deaths due to either yellow fever or plague. No cases of yellow fever. One case reported as due to plague. At the close of the week there were in the Hospital São Sebastião, 396 cases of smallpox under treatment and no cases of plague or yellow fever. In the hospital in Engenho de Dentro there were 82 cases of smallpox under treatment. In the Hospital Paulo Canido, there were 196 cases of convalescents from smallpox held until recovery. This makes a total of 674 cases of smallpox at that date under treatment.

*The epidemic of smallpox in Rio de Janeiro.*—I attach hereto a statement of the epidemic of smallpox at Rio de Janeiro since the beginning of the calendar year.

*The epidemic of smallpox in Rio from January 1 to August 2, 1908.*

Week.	Cases.	Deaths.
January 5 .....	32	15
January 12 .....	14	13
January 19 .....	39	13
January 26 .....	24	14
February 2 .....	29	13
February 9 .....	30	20
February 16 .....	22	16
February 23 .....	47	4
March 1 .....	65	28
March 8 .....	38	23
March 15 .....	87	21
March 22 .....	96	46
March 29 .....	100	24
April 5 .....	152	53
April 12 .....	88	51
April 19 .....	136	43
April 26 .....	163	59
May 3 .....	123	62
May 10 .....	141	50
May 17 .....	193	75
May 24 .....	171	78
May 31 .....	157	73
June 7 .....	201	93
June 14 .....	249	100
June 21 .....	378	151
June 28 .....	328	173
July 5 .....	410	192
July 12 .....	474	215
July 19 .....	537	250
July 26 .....	541	240
August 2 .....	519	231
Total .....	5,584	2,439

Vaccination is being generally performed here in the city.

BRITISH HONDURAS.

*Report from Belize, fruit port.*

Acting Assistant Surgeon Mengis reports:

Week ended August 27. Present officially estimated population, 10,000. General sanitary condition of this port and the surrounding country during the week, very good.

## Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
Aug. 21	Belize .....	Mobile .....	18	0	2
21	Preston .....	New Orleans .....	36	13	25

## CHINA.

*Report from Hankau—Cholera epidemic.*

The following is received from Consul Pontius, at Hankow, under date of July 27: Cholera is epidemic.

*Report from Hongkong—Quarantine restrictions—Cholera and plague—Inspection of vessels.*

Acting Assistant Surgeon Hough reports, July 30:

Week ended July 25: Restrictions enforced by Hongkong remain as reported on July 18. Restrictions enforced against Hongkong remain as reported on July 18.

Quarantinable diseases: Plague 17 cases, 14 deaths; cholera 4 cases, 3 deaths.

Vessels inspected and granted bills of health, 7.

## COSTA RICA.

*Report from Limon, fruit port.*

Acting Assistant Surgeon Goodman reports:

Week ended August 22: Estimated population, 6,000. General sanitary condition of this port and the surrounding country during the week, good.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
Aug. 16	Frey .....	United States ports via Cuba	25	0	0
16	Esparta .....	Boston .....	44	6	0
17	Prinz Joachim .....	New York .....	172	175	7
20	Parissima .....	New Orleans .....	80	17	0
21	Zent .....	New York .....	55	5	0
22	Hispania .....	Mobile .....	20	3	0

Two bills of health for Panaman ports were viséed, and 45 certificates issued to passengers bound for Colon.

## CUBA.

*Reports from Habana—Inspection and fumigation of vessels—House and water-deposit inspection—Stegomyia abundant—Yellow fever at Firmeza—Fatal case of yellow fever from Antilla—Land and marine quarantine against Antilla and Felton—Origin of case from Antilla—Stegomyia numerous at Antilla.*

Passed Assistant Surgeon Amesse reports:

Week ended August 29:

Vessels inspected.....	16
Bills of health issued.....	22
Members of crews of outgoing vessels inspected.....	902
Passengers of outgoing vessels inspected.....	536
Certificates of immunity to yellow fever issued.....	30
Certificates issued to passengers bound for New York.....	215
Certificates issued to passengers bound for Southern ports.....	131
Vessels fumigated prior to sailing.....	6

Ten thousand house inspections were reported in Habana during the week. Twenty-six deposits of mosquito larvæ were detected, of which 18 were those of *Stegomyia calopus*.

*Stegomyia* have appeared in large numbers along the water front, especially in the neighborhood of the Machina. The sanitary department reports that conditions at Daiquiri are now so satisfactory that the local quarantine against that settlement has been raised.

September 4. Positive diagnosis of yellow fever in a case taken sick August 22, at Firmeza, near Santiago de Cuba.

September 8. The sanitary department confirms a fatal case of yellow fever at Santiago de Cuba. The patient came from Antilla, Oriente province. There is considerable nonimmune travel between that port and Habana.

September 9. The sanitary department, with approval of the governor, imposed to-day land and marine quarantine against the towns of Antilla and Felton on Nipe Bay, Oriente Province. It has been definitely determined that the case of yellow fever at Santiago de Cuba from Antilla left Habana August 16 and was taken sick ten days later at Antilla. From this point he proceeded to Felton. *Stegomyia* are reported very numerous at Antilla.

*Report from Matanzas—Inspection and fumigation of vessels—Train inspection discontinued.*

Acting Assistant Surgeon Nuñez reports:

Week ended August 28.

Bills of health were granted to 3 vessels clearing for United States ports. Of these, the Spanish steamship *Conde Wifredo*, carrying 56 members of crew, 2 passengers in transit and 1 from this port, bound for New Orleans, and the Norwegian steamship *Times*, having 21 in the crew and with no passengers, were fumigated on August 25 and 26, respectively. Certificates of nonexposure to yellow-fever infection were granted to 7 passengers bound to United States via Habana.

In view of the fact that no cases of yellow fever have been reported within this province since December last, the medical inspection of trains has been discontinued.

*Reports from Santiago—Inspection and fumigation of vessels—Mosquito-inspection work—Fumigating force at Daiquiri reduced—Fatal case of yellow fever at Mayari.*

Acting Assistant Surgeon Wilson reports, August 25 and 26:

Week ended August 22. Bills of health were issued to 2 vessels bound for the United States. One vessel was fumigated.

No quarantinable disease was reported in the city during the week. No new case of yellow fever has been reported at Daiquiri.

During the week there were inspected 6,260 houses. In 54 of these larvæ were found. The fumigating force sent to Daiquiri at the beginning of the yellow-fever epidemic, consisting of almost 200 men, returned yesterday. They left behind one medical inspector, two inspectors, and nine workmen to continue the mosquito-extermination work.

September 7. A case of yellow fever from Mayari, Oriente Province, died in hospital at Santiago. Was under observation for several days. Diagnosis confirmed by autopsy.

GUATEMALA.

*Report from Puerto Barrios, fruit port.*

Acting Assistant Surgeon Wailes reports:

Week ended August 27. Present officially estimated population, 250. General sanitary condition of this port and the surrounding country during the week, not reported.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
Aug. 28	Jose .....	27	1	0
27	Bertha .....	28	1	0

HAWAII.

*Report from Honolulu—Examination of rats for plague infection.*

Passed Assistant Surgeon Currie reports, August 15, through Chief Quarantine Officer Cofer:

*Week ended August 15.*

Rats trapped in Honolulu.....	511
Rats found dead in Honolulu.....	0
Total rats taken in Honolulu.....	511
Rats from Honolulu examined in this laboratory.....	394
Total rats examined bacteriologically.....	394
Total rats destroyed.....	511

CLASSIFICATION OF RATS FROM HONOLULU.

Mus rattus.....	105
Mus norvegicus.....	92
Mus alexandrinus.....	42
Mus musculus.....	272
Total classified.....	511
Average number of traps set daily.....	1,438
Rats from Honolulu showing plague infection.....	0



## HONDURAS.

*Report from Ceiba, fruit port.*

Acting Assistant Surgeon Jumel reports:

Week ended August 25. Present officially estimated population, 6,500. General sanitary condition of this port and the surrounding country during the week, good.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.	Pieces of baggage disinfected.
Aug. 21	Joseph Vaccaro .....	34	4	0	0
23	Colombia .....	19	2	0	0
23	John Wilson .....	17	1	1	0
24	Bodo .....	17	0	0	0
24	Katie .....	22	3 <sup>a</sup>	0	0

<sup>a</sup> In transit to Puerto Cortez; inspected and passed, but not certified.

*Reports from Puerto Cortez, fruit port—Stegomyia calopus and Anopheles present.*

Acting Assistant Surgeon Ames reports:

Three weeks ended August 22. Present officially estimated population, about 2,400. General sanitary condition of this port and the surrounding country, very good. *Stegomyia calopus* and *Anopheles* present.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
Aug. 5	Mercator .....	New Orleans .....	18	4	0
6	Preston .....	do .....	37	1	7
7	Alabama .....	Mobile .....	18	0	0
12	Utstein .....	New Orleans .....	15	0	0
13	Helen .....	Mobile .....	22	1	0
14	Katie .....	do .....	22	0	0
14	Harald .....	New Orleans .....	18	0	8
18	Bodo .....	Mobile .....	17	0	0
19	Mercator .....	New Orleans .....	18	0	0
20	Preston .....	do .....	36	3	3
20	Alabama .....	Mobile .....	18	0	0

Temperature taken of all persons on above-named steamers day of sailing.

*Report from Tela, fruit port.*

Acting Assistant Surgeon Roe reports:

Week ended August 22. Present officially estimated population, about 1,250. General sanitary condition of this port and the surrounding country during the week, good.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
Aug. 21	Marietta de Georgea .....	New Orleans .....	20	0	0
22	John Wilson .....	do .....	19	1	0
22	Colombia .....	Mobile .....	19	0	0

## INDIA.

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

Acting Assistant Surgeon Allen reports, August 6:

During the week ended August 1 bills of health were issued to the steamship *Kalomo*, bound for Philadelphia and New York, with a total crew of 46, and to the steamship *Rauenfels*, bound for Boston and New York, with a total crew of 65. The usual precautions were taken, the holds fumigated, rat guards placed on wharf lines, and the Asiatics' effects disinfected.

During the week ended July 25 there were 9 deaths from cholera, 22 from plague, and 5 from smallpox in Calcutta. In Bengal there were 26 cases of plague, with 25 deaths. In India during the same period there were 621 cases of plague, with 461 deaths.

## ITALY.

*Reports from Naples—Inspection and fumigation of vessels—Smallpox in Naples—Smallpox in Italy.*

Assistant Surgeon Wollenberg reports, August 3 and 10:

*Vessels inspected at Naples week ended August 15.*

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of baggage inspected and passed.	Pieces of baggage disinfected.
Aug. 12	Carpathia .....	New York .....			
12	Verona .....	New York and Philadelphia .....	407	120	650
15	Romanic .....	Boston .....	381	110	680
	Total .....	.....	788	260	1,330

*Rejections recommended.*

Date.	Name of ship.	Tra-choma.	Favus.	Sus-pected tra-choma.	Sus-pected favus.	Other causes.	Total.
Aug. 12	Carpathia .....						
12	Verona .....	23	1	10		2	36
15	Romanic .....	14		7			21
	Total .....	37	1	17		2	57

## SMALLPOX IN NAPLES.

During the week ending August 16, 1908, 3 cases and 1 death were reported at the health office of the municipality of Naples. From the date of the introduction of the disease, June 13, 1908, to the present, the total number of cases have been 74, with 7 deaths. The general health of the city is speedily regaining its normal condition.

*Smallpox in Italy.*—Week ended August 9. Martico Nuevo 1, Barile (Potenza) 1, Naples 2, Poggiomarino 1, Pollena Trocchia (Naples) 3.

## JAPAN.

*Reports from Kobe—Inspection of vessels—Emigrants recommended for rejection—Epidemic of smallpox at Osaka ceased.*

Temporary Acting Assistant Surgeon Smith reports, August 4 and 12:

Week ended August 1, seven supplemental bills of health were granted to 7 steamers. There were inspected 49 members of crews and 628 steerage passengers, 110 steerage passengers were bathed and disinfected. Their effects were disinfected by steam. The number of pieces of baggage steamed was 263; bedding 222. Manifests were viséed for 63,563 pieces of freight, amounting to 5,304 tons.

Emigrants were examined as follows: Steamship *Manchuria* for Honolulu, passed 33, recommended for rejection 33; steamship *Manchuria* for San Francisco, recommended for rejection, 3; steamship *Shinano Maru* for Seattle, passed 29, recommended for rejection 18; steamship *Tenyo Maru* for Manila, passed 8; steamship *Hongkong Maru* for Honolulu, passed 31, recommended for rejection, 26.

The emigrants passed, together with 5 intending passengers to Victoria by the steamship *Shinano Maru*, were inspected, bathed, and disinfected and their effects disinfected before embarkation.

During the week 132 cases of human hair and 2 trunks of personal effects were disinfected with formalin.

No cases of plague have been reported in Kobe since July 21.

Week ended August 8, two supplemental bills of health were granted to 2 steamers.

There were inspected 35 members of crews and 5 steerage passengers; there were 25 members of crews bathed and disinfected, and their effects were disinfected by steam. The number of pieces of baggage steamed was 70. Manifests were viséed for 28,905 pieces of freight, amounting to 1,095 tons.

The report from Osaka for the week ended August 1 shows 1 death from smallpox, with no new cases.

*Epidemic of smallpox at Osaka ceased.*

The following is received from Vice-Consul Gassett, at Kobe, under date of July 16:

Smallpox having ceased to be epidemic at Osaka, the quarantine laws and regulations of the United States appertaining to infected places will from this date be no longer enforced at this consulate.

*Report from Nagasaki—Cholera at Moji.*

The following is received from the Department of State under date of September 9:

This Department is in receipt of the following cablegram from the consul at Nagasaki:

Cholera, Moji.

*Report from Yokohama—Inspection and fumigation of vessels—Cholera in Japan.*

Passed Assistant Surgeon Cumming reports:

Week ended August 8. Bills of health were issued to 5 steamships having an aggregate personnel of 29 saloon and 117 steerage passengers, and with 487 members of crews.

Among the vessels were the steamship *Erroll*, for New York via Manila and ports, and the steamship *Tango Maru*, for Seattle via Moji. These vessels were fumigated in part for the purpose of destroying vermin.

No quarantinable disease has appeared in this city or vicinity.

Cholera is reported by the Japanese authorities to be epidemic in Hankow. Steps are being taken to avoid importation at Shanghai. Two cases are reported at Moji (Fakuoka) and Yamaguchi ken. A case is reported at Tokushima, on Shikoku Island near Kobe, and the Osaka authorities have already imposed railroad and steamer inspection, as well as examination of human excrement.

MEXICO.

*Report from City of Mexico—Yellow fever at Laguna del Carmen.*

The following is received from Dr. Eduardo Liceaga, President of the Superior Board of Health of Mexico:

September 1. There were 2 new cases of yellow fever at the port of Laguna del Carmen on August 29.

*Report from Progreso—Inspection and fumigation of vessels—History of case of yellow fever at Merida—Detention of passengers for United States ports—Sanitary conditions.*

Acting Assistant Surgeon Harrison reports, August 29:

Period from August 19 to August 29: Bills of health were issued to 4 steamers, with 34 passengers from this port and 125 persons in the crews. Two steamers were fumigated. The case of yellow fever reported August 25 [see Public Health Reports, August 28, 1908, page 1243] was a resident of Merida, a Spaniard who had been living several months in the city. Death occurred five or six days after sickness began. There is no satisfactory information as to origin of the infection. Hereafter passengers from this port for Gulf ports of the United States will be placed under five days' inspection.

General sanitary conditions are unchanged since the time of my last report. In Merida copious rains occur almost daily, while in this town there are but few rains and light.

*Report from Tampico—Inspection and fumigation of vessels.*

*Week ended August 24.*

Vessels inspected.....	5
Bills of health issued.....	5
Members of crews of outgoing vessels inspected.....	151
Passengers of outgoing vessels inspected.....	6
Vessels fumigated prior to sailing.....	3

No cases of quarantinable diseases were reported for this period. The sanitary condition of the port is good.

*Reports from Veracruz—Inspection and fumigation of vessels—Status of yellow fever—New case of yellow fever.*

Acting Assistant Surgeon Jacobs reports:

Week ended August 22. Bills of health issued, 8; vessels fumigated and inspected, 4; vessels inspected only, 4; total members of crews inspected, 282; total cabin passengers, 53; steerage passengers, 8.

Excepting yellow fever, no quarantinable disease was reported during the week.

Yellow fever status: Nine cases, with 7 deaths, since July 7, 1908.

September 7. One new case yellow fever to-day.

NICARAGUA.

*Report from Bluefields, fruit port—Mosquitoes abundant.*

Acting Assistant Surgeon Layton reports:

Twelve days ended August 28. Present officially estimated population, 2,500. General sanitary condition of this port and the surrounding country during the week, good. Rainfall has been heavy and frequent. *Culex* mosquitoes are present in abundance, to the exclusion of all other species. The *Stegomyia calopus* is noticeably absent.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
Aug. 22	Dictator .....	New Orleans.....	19	6	0
26	Bluefields .....	.....do .....	24	4	0

Temperatures of all on board above-named ships taken at hour of departure.

PANAMA.

*Report from Bocas del Toro, fruit port.*

Acting Assistant Surgeon Osterhout reports:

Two weeks ended August 25. General sanitary condition of this port and the surrounding country during the week, good. Present officially estimated population, 4,954.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.	Pieces of baggage disinfected.
Aug. 13	Fort Morgan .....	Mobile .....	25	0	0	0
13	Frutera .....	New York via Santa Marta, Cal. ....	25	2	2	0
14	Greenbrier .....	New Orleans.....	46	1	0	0
16	Karen .....	Mobile .....	23	0	0	0
19	Harry T. Inge .....	New Orleans.....	35	1	18	0
20	Fort Gaines .....	Mobile .....	22	0	0	0
22	Appomattox.....	New Orleans.....	46	0	0	0

## PERU.

*Report from Callao—Inspection and fumigation of vessels—Plague in Peru—Plague in Chilean ports.*

Acting Assistant Surgeon Gutierrez reports, August 11:

Week ended August 8. Bills of health were issued to two vessels with an aggregate personnel of 91 in the crews, 72 cabin and 66 steerage passengers. Both vessels were fumigated.

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

Locality.	Cases July 20.	New.	Recov- ered.	Died.	Remaining August 3.
Lima (city).....	8	3	4	.....	8
Lima (country).....	2	1	1	1	.....
Callao .....	.....	2	.....	.....	.....
San Eulalia (Huarochiri) .....	.....	1	.....	.....	.....
Trujillo (city).....	33	1	11	5	28
Trujillo (country).....	.....	10	.....	.....	.....
Chiclayo.....	2	.....	2	.....	.....
Mollendo.....	2	.....	2	.....	.....
Chepen.....	6	16	4	10	8
Perreñafe.....	.....	1	.....	.....	1
San Jose (Lambayeque).....	.....	4	.....	4	.....
Payta.....	.....	1	.....	1	.....

Plague is on the decrease in Salaverry. Since last report only one case of plague has occurred at Callao. The patient was isolated in the lazaretto. No new cases of smallpox have occurred at Lima.

The bills of health from Chilean ports report plague as follows: Antofagasta, July 26, 3 cases; Iquique, July 29, 3 cases and 3 deaths.

## PHILIPPINE ISLANDS.

*Report from Manila—Cholera and smallpox—Cholera in Manila and in the Provinces—Inspection and fumigation of vessels.*

Chief Quarantine Officer Heiser reports:

Week ended July 18. For the city of Manila, 1 case of cholera with 1 death and 15 cases of smallpox with 5 deaths were reported.

During the past 6 weeks cases which clinically resembled cholera have been occurring in Manila, and during the past week the cases have become more and more typical, clinically, at autopsy, and bacteriologically. It was not, however, until July 17, 1908, that the cholera spirillum was actually recovered from the intestines of one of these suspects. The case in question occurred in the person of an old Filipino woman, aged about 50, whose means of livelihood was by charity, and she lived in the district of Tondo. Diligent search has failed to trace any connection in this case with any other case, and it is therefore one of the first cases that originated in the city of Manila in the past few months.

The number of provinces infected remains the same as for the previous week, but during the latter part of this week there have been

no further infected towns reported. The number of cases reported for the week by provinces is as follows:

Province.	Cases.	Deaths.
Capiz.....	32	26
Ilocos Sur.....	118	87
Misamis.....	265	89
Nueva Ecija.....	170	130
Nueva Vizcaya.....	6	6
Pangasinan.....	695	341
Tarlac.....	74	49
Union.....	82	58
Other provinces.....	3	2
Total.....	1,445	788

There has been a considerable increase in the number of cases reported from northern Mindanao, the two principal towns infected being Cagayan and Balingasag, in the province of Misamis. In order to prevent the spread of the disease to islands close to the province of Misamis, a two-days' quarantine has been imposed upon all vessels leaving northern Mindanao.

Owing to the appearance of the disease at San Fernando, Union Province, during the past week, a circular letter was issued by this office which requires that all vessels coming from San Fernando and other ports on the island of Luzon north thereof await quarantine inspection at Manila.

During the week consular bills of health were issued at the port of Manila as follows:

July 15, the United States army transport *Buford*, with 154 in the crew and with 300 passengers, was granted a bill of health for San Francisco via Nagasaki and Honolulu. The crew and steerage passengers were bathed and their effects and baggage disinfected at the Mariveles station. The vessel was partially disinfected. All the cargo and baggage were either disinfected or passed after inspection. All the persons on board were inspected at the hour of sailing. July 17, the American barkentine *Kohala*, with 16 in the crew, was granted a bill of health for Port Townsend, after the usual inspection.

July 18, the United States army transport *Dix*, with 121 in the crew and with 4 passengers, was granted a bill of health for Seattle. The crew and passengers were inspected at the hour of sailing.

#### RUSSIA.

##### *Cholera situation in Russia.*

The following was received from Ambassador Riddle, at St. Petersburg, under date of August 11:

According to a communication from the committee instituted by imperial order to combat cholera there were 98 cases of cholera from July 21 to August 1, as follows:

	Cases.	Deaths.
Government of Astrakhan.....	34	16
Government of Saratov.....	63	31
Syzran, government of Simbirk.....	1	

The towns of Astrakhan and Tzaritzin are declared infected by cholera, and the governments of Astrakhan, Saratov, the Volga between Astrakhan and Samara; the districts of Samara and Nicolaievsk of the government of Samara; the district of Syzran of the government of Simbirsk; the districts of Borisoglebsk, Kirsanav, Koolov, and Tambov of the government of Tambov; the territory of the Don Cossacks, and the towns of Samara, Bakou, and Krasnovodsk are declared threatened with cholera.

There were 262 cases of cholera from August 1 to 7 in the governments of Astrakhan, Saratov, and Samara, as well as in the territory of the Don, as follows:

	Cases.	Deaths.
Government of Astrakhan.....	92	38
Government of Saratov.....	152	74
Government of Samara.....	4	3
Territory of the Don.....	14	10

The city of Saratov is declared infected by cholera. The Volga between Samara and Nijni-Novgorod, including the town of that name; the prefecture of Rostov on the Don; the district of Stavropol of the government of Samara; the town of Kazan and the districts of Spassk, Tetiouchi, Laicheff, Sirajek, and Kazan; the town of Simbirsk and the districts of Senguilui and of Simbirsk of the government of Simbirsk; the town of Penza and the districts of Gorovistche, Tcheboksary, and Penza of the government of Penza, as well as the village of Griazi, district of Lipetsk, in the government of Tambov, are declared threatened with cholera.

*Cholera, St. Petersburg, Government district.*

A telephone message was received September 10 from the Department of State stating that the consul-general at St. Petersburg, Russia, reports, under date of September 9, 15 cases of cholera in that district.

*Reports from Odessa—Cholera at Rostov.*

Consul Grout reports, August 9 and 18:

There have been 2 cases of cholera with 1 death reported at Rostov on the Don. There is reason to believe that the condition there is worse than the report indicates.

From August 10 to 12, 47 cases of cholera with 19 deaths were reported at Rostov, on the Don River. Altogether, from the beginning of the epidemic, there have been, up to August 14, 87 cases and 37 deaths. The authorities in this district are taking every necessary precaution to prevent a further spread.

ST. LUCIA ISLAND.

*Report from Castries—Sanitary conditions.*

Acting Assistant Surgeon Maylie reports, August 17:

Week ended August 15. Sanitary condition of this port and vicinity is good; no quarantinable diseases exist.



## SIAM.

*Report from Bangkok—Plague.*

According to a report dated July 1, 1908, of the Belgian legation at Bangkok, published in the bulletin of the Belgian "Administration du Service de Santé et de l'Hygiène," 3 cases of plague were reported at Bangkok, Siam, during the week ended June 20, 1908.

## VENEZUELA.

*Report from Maracaibo—Plague continues at La Guaira and Caracas.*

Consul Plumacher reports, August 5:

Bills of health show that plague still continues to exist at La Guaira and Caracas, being worse at the latter place. This port is still free of the disease.

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

ARGENTINA—*Rosario de Santa Fe*.—Month of June, 1908. Estimated population, 154,370. Total number of deaths, 246, including measles 1, scarlet fever 1, whooping cough 2, and 38 from tuberculosis.

AUSTRALIA—*State of South Australia*.—Five weeks ended July 4, 1908. Estimated population, 392,431. Total number of deaths, 358, including diphtheria 2, enteric fever 2, and 10 from tuberculosis.

QUEENSLAND—*Brisbane*.—Month of June, 1908. Estimated population, 135,655. Total number of deaths, 123, including enteric fever 2, diphtheria 2, plague 1, and 14 from tuberculosis.

BRAZIL—*Pernambuco*.—Month of July, 1908. Estimated population, 210,000. Total number of deaths, 627, including smallpox 55, enteric fever 1, malarial fever 30, leprosy 2, measles 1, and 100 from tuberculosis.

CANADA—*Ontario, Niagara Falls*.—Month of August, 1908. Estimated population, 9,500. Total number of deaths, 13.

GIBRALTAR.—Two weeks ended August 23, 1908. Estimated population, 36,830. Total number of deaths, 15, including 1 from enteric fever.

GREAT BRITAIN—*England and Wales*.—The deaths registered in 76 great towns in England and Wales during the week ended August 15, 1908, correspond to an annual rate of 15.0 per 1,000 population, which is estimated at 16,234,952.

LONDON.—One thousand two hundred and fifteen deaths were registered during the week, including measles 28, scarlet fever 9, diphtheria 6, whooping cough 14, tuberculosis 138, and 189 from diarrhea. The deaths from all causes correspond to an annual rate of 13.2 per 1,000. In Greater London 1,734 deaths were registered. In the

"outer ring" the deaths included 4 from measles, 1 from scarlet fever, 3 from diphtheria, and 4 from whooping cough.

*Salford*.—Two weeks ended August 15, 1908. Estimated population, 239,294. Total number of deaths, 156, including measles 1, whooping cough 4, diphtheria 1, scarlet fever 3, and 18 from phthisis pulmonalis.

*Ireland*.—The average annual death rate represented by the deaths registered during the week ended August 15, 1908, in the 21 principal town districts of Ireland was 17.9 per 1,000 of the population, which is estimated at 1,131,959. The lowest rate was recorded in Drogheda, viz, 4.1, and the highest in Clonmel, viz, 35.9 per 1,000.

*Scotland*.—The deaths registered in 8 principal towns during the week ended August 15, 1908, correspond to an annual rate of 13.4 per 1,000 of the population, which is estimated at 1,839,038. The highest rate of mortality was recorded in Perth, viz, 19.3, and the lowest in Paisley, viz, 5.2 per 1,000. The aggregate number of deaths registered from all causes was 471, including measles 3, scarlet fever 2, enteric fever 2, diphtheria 3, and 18 from whooping cough.

*Spain—Huelva*.—Month of July, 1908. Estimated population, 24,000. Total number of deaths, 79, including enteric fever 1, measles 3, whooping cough 3, and 2 from tuberculosis.

*Seville*.—Month of July, 1908. Estimated population, 148,315. Total number of deaths, 361, including enteric fever 3, scarlet fever 3, measles 1, diphtheria 1, and 64 from tuberculosis.

*WEST INDIES—Curaçao*.—Two weeks ended August 21, 1908. Estimated population, 30,400. Total number of deaths, 23.

*Cholera, yellow fever, plague, and smallpox, from June 27 to September 11, 1908.*

[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 27, 1907, to June 26, 1908, see PUBLIC HEALTH REPORTS for June 26, 1908.]

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

#### CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Ceylon, general .....	May 17-23.....		1	
Colombo .....	June 7-July 18....	32	22	20 cases in the asylum for the insane.
China:				Present.
Amoy .....	Aug. 11 .....			Do.
Canton .....	June 21-27 .....			Prevalent among Europeans,
Hankau .....	July 19-25 .....	8	5	and, July 27, epidemic among natives.
Hongkong .....	June 14-July 25....	21	15	
India:				
Bombay .....	May 20-July 30 .....		19	
Calcutta .....	May 10-July 25 .....		537	On S. S. Annie en route May 23-June 1, 2 deaths.
Madras .....	May 16-July 31 .....		67	
Rangoon .....	May 17-July 18 .....		56	
Indo-China:				
Bien Hoa .....	June 21-27 .....	60	59	
Cholen .....	May 10-July 25 .....	151	147	
Saigon .....	May 10-July 11 .....	91	62	Reports May 23 and June 6 include Cholen.

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

## CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Japan:				
Moji.....	Aug. 8.....	2	.....	One case from Yamaguchi Ken.
Tokushima.....	Aug. 2-8.....	1	.....	
Yokohama.....	Aug. 17.....	3	1	On British steamer in quarantine.
Persia:				
Teheran.....	July 3.....	1	1	
Philippine Islands:				
Manila.....	June 7-18.....	2	2	3 cases to June 23 on railroad from Pangasinan Province. First quarter calendar year 1908, 203 cases, 167 deaths.
Provinces, general.....	July 12-18.....	3	2	First quarter calendar year 1908, 806 cases, 628 deaths. Provinces north of Manila, June 28-July 4, 614 cases, 331 deaths.
Bataan.....	Jan. 1-Mar. 31.....	20	18	
Bulacan.....	Jan. 1-Mar. 31.....	91	72	
Capiz.....	Jan. 1-July 18.....	278	225	
Cavite.....	Jan. 1-Mar. 31.....	22	20	
Ilocos Sur.....	July 12-18.....	118	87	
La Laguna.....	Jan. 1-Mar. 31.....	3	2	
Mindoro.....	Jan. 1-Mar. 31.....	32	20	
Misamis.....	July 12-18.....	265	189	
Nueva Ecija.....	July 4-18.....	170	130	Including Balingasang and Cagayan.
Nueva Vizcaya.....	July 12-18.....	6	6	
Pampanga.....	Jan. 1-Mar. 31.....	145	128	July 4, still present.
Pangasinan.....	Jan. 1-July 18.....	1,083	609	
Rizal.....	Jan. 1-Mar. 31.....	143	116	
Tarlac.....	Jan. 1-July 18.....	84	57	
Union.....	July 12-18.....	82	58	
Zambales.....	Feb. 2-Mar. 31.....	62	48	
Russia:				
Astrakhan govt. district.....	July 19-Aug. 7.....	92	38	
Batoom.....	Aug. 10.....	.....	.....	Present in vicinity.
Don, territory of.....	July 19-Aug. 7.....	14	10	
Moscow district.....	Aug. 10.....	.....	.....	Present.
Rostov.....	July 26-Aug. 14.....	87	37	
Samara govt. district.....	July 19-Aug. 7.....	4	3	
Saratov.....	July 19-Aug. 7.....	152	74	July 19, present, also, on vessels.
Simbirsk govt. district.....	July 31.....	.....	.....	Present.
St. Petersburg, govt. dist.....	Sept. 9.....	15	.....	
Tambov govt. district.....	July 31.....	.....	.....	Do.
Zarizyn.....	July 24-Aug. 6.....	96	55	July 19, present, also, on vessels.
Siam:				
Bassein.....	May 10-16.....	.....	.....	Do.
Straits Settlements:				
Singapore.....	May 10-16.....	.....	1	

## YELLOW FEVER.

Brazil:				
Bahia.....	July 22.....	3	.....	From Italian bark Sacro Cuore de Jeso.
Manaos.....	May 26-Aug. 1.....	27	27	
Para.....	May 31-Aug. 8.....	29	27	
Pernambuco.....	June 15-30.....	.....	1	
Rio de Janeiro.....	June 1-28.....	3	3	
Cuba:				
Santiago Province—				
Antilla.....	Sept. 8.....	1	1	
Daiquiri.....	June 27-Aug. 15.....	20	4	
Firmeza.....	Aug. 22.....	1	.....	
Santiago.....	Sept. 7.....	1	1	From Mayari.
Curaçao.....	June 28-Aug. 1.....	1	1	Imported.
Ecuador:				
Guayaquil.....	May 31-Aug. 1.....	.....	12	
Martinique:				
Fort de France.....	June 27-Aug. 8.....	3	2	Aug. 17, still present.
Mexico:				
Frontera.....	July 12.....	1	.....	
Laguna del Carmen.....	Aug. 29.....	2	.....	
Laguna de Terminos.....	June 9-July 12.....	8	2	From May 18, 4 cases additional from S. S. Lembit.
Merida.....	Aug. 23.....	1	.....	
Tierra Blanca.....	July 27.....	1	.....	
Veraacruz.....	July 7-Sept. 7.....	11	7	
Porto Rico:				
San Juan.....	July 5.....	.....	.....	1 case on S. S. Julia.
Venezuela.....	June 26.....	80	40	Estimated. In Upata, Guasi-pati, and Callao.

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

## PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Australia:</b>				
Brisbane .....	June 6-20 .....	2	1	Case, June 6-11, at Clifton.
Sydney .....	Feb. 25-June 24 .....	4	.....	
<b>Azores:</b>				
Fayal .....	Aug. 10 .....	7	2	
Terceira .....	July 1-Aug. 11 .....	29	15	
<b>Brazil:</b>				
Bahia .....	July 29 .....	1	.....	
Pernambuco .....	June 1-15 .....	.....	1	
Rio de Janeiro .....	May 11-July 19 .....	9	.....	
Sao Paulo .....	May 18-31 .....	.....	2	
<b>British East Africa:</b>				
Port Florence .....	June 11-July 11 .....	27	22	
<b>British Gold Coast:</b>				
Akkra .....	May 20-26 .....	3	3	Aug. 8, present.
<b>Chile:</b>				
Antofagasta .....	May 18-July 26 .....	61	6	
Arica .....	July 15-22 .....	2	.....	From Jan. 1-Apr. 30, 179 cases and 47 deaths.
Iquique .....	May 20-July 29 .....	21	7	
<b>China:</b>				
Amoy .....	Apr. 26-July 11 .....	.....	.....	Present in native city and up-country districts. July 21, epidemic.
Canton .....	May 1-June 9 .....	10	.....	Mainly imported. June 27 still present.
Foochoo .....	Apr. 6-July 18 .....	.....	.....	Present.
Hongkong .....	May 10-July 25 .....	859	704	
Hsing-Sua .....	June 2-8 .....	.....	.....	Do.
Swatow .....	July 4 .....	.....	.....	Do.
<b>Ecuador:</b>				
Guayaquil .....	May 31-Aug. 1 .....	.....	21	
<b>Egypt:</b>				
Alexandria .....	May 27-Aug. 18 .....	54	28	Case, July 9, from ss. Perseo.
Port Said .....	July 3-Aug. 18 .....	8	6	July 5, 1 case on S. S. Orenoque.
<b>Provinces—</b>				
Assiout .....	May 27-July 5 .....	6	3	
Minieh .....	May 15-July 31 .....	6	2	
Dakahlieh .....	June 27 .....	1	.....	
Garbieh .....	May 16-Aug. 17 .....	23	8	
Fayoum .....	May 28-Aug. 4 .....	81	45	
Beni Souef .....	May 29-Aug. 8 .....	42	18	
Kena .....	May 28-July 25 .....	44	44	
Galyoobeeyeh .....	May 21-July 20 .....	26	17	
Menouf .....	May 26-Aug. 19 .....	67	12	
<b>India:</b>				
Bombay Presidency and Sind .....	Apr. 26-July 18 .....	4,486	3,754	
Madras Presidency .....	Apr. 26-July 18 .....	576	383	
Bengal .....	Apr. 26-July 18 .....	890	885	
United Provinces .....	Apr. 26-July 18 .....	1,498	1,356	
Punjab .....	Apr. 26-July 18 .....	13,473	11,097	
Burma .....	Apr. 26-July 18 .....	1,619	1,591	
Central provinces, including Berar .....	Apr. 26-May 16 .....	23	19	
Coorg .....	May 24-June 27 .....	8	5	
Mysore State .....	Apr. 26-July 18 .....	798	618	
Central India .....	Apr. 26-May 16 .....	4	4	
Rajputana .....	Apr. 26-June 27 .....	624	469	
Kashmir .....	Apr. 26-June 27 .....	21	13	
Northwest frontier province .....	Apr. 26-July 18 .....	456	404	
Grand total .....	.....	24,475	20,548	
<b>Indo-China:</b>				
Cholen .....	May 10-July 25 .....	65	62	
Saigon .....	May 10-July 18 .....	69	69	Cholen included, July 6 and 13.
<b>Japan:</b>				
Formosa .....	May 10-Aug. 1 .....	611	504	From May 15 epidemic at Taiwan; 25 cases reported daily.
Kobe .....	May 24-July 25 .....	5	4	
Nara .....	June 14-20 .....	14	.....	
Osaka .....	May 10-June 27 .....	19	18	
Mauritius .....	May 31-June 11 .....	6	2	
<b>Peru:</b>				
Callao .....	May 20-Aug. 3 .....	25	9	
Chepen (Pacasmayo) .....	July 8-Aug. 3 .....	27	14	And vicinity.
Chiclayo .....	May 20-July 20 .....	10	8	
Ferrenafe .....	July 21-Aug. 3 .....	1	.....	
Lima .....	May 20-Aug. 3 .....	43	25	Do.

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

## PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Peru—Continued.</b>				
Mollendo.....	June 2-22.....	2	1	
Monsefu.....	June 2-8.....	1	.....	
Niepos (Hualgayoc).....	June 2-8.....	2	.....	
Paíta.....	July 21-Aug. 3.....	1	1	
Salaverry.....	May 2-July 19.....	17	.....	
Santa Eulalia (Huarochiri).....	July 21-Aug. 3.....	1	.....	
San Jose (Lambayeque).....	July 21-Aug. 3.....	4	4	
Trujillo.....	May 20-Aug. 3.....	147	69	And vicinity.
<b>Siam:</b>				
Bangkok.....	June 14-20.....	3	.....	Present.
Puket.....	May 9.....	.....	.....	Do.
Tongkah.....	May 4.....	.....	.....	
<b>Straits Settlements:</b>				
Singapore.....	May 17-30.....	.....	2	
<b>Trinidad:</b>				
Port of Spain.....	June 4-July 28.....	15	11	
<b>Turkey in Asia:</b>				
Adalia.....	July 27.....	2	.....	
Bagdad.....	June 7-Aug. 15.....	72	47	
<b>Uruguay:</b>				
Montevideo.....	Apr. 1-May 31.....	.....	5	
<b>Venezuela:</b>				
Caracas.....	June 10-Aug. 9.....	47	11	
La Guaira.....	June 16-30.....	5	2	Aug. 5, present.
Maiquetia.....	June 28.....	1	.....	Suburb of La Guaira.

## SMALLPOX.

<b>Algeria:</b>				
Algiers.....	June 29-July 4.....	.....	2	
<b>Arabia:</b>				
Aden.....	May 28-Aug. 10.....	.....	32	
<b>Argentina:</b>				
Buenos Aires.....	Mar. 1-May 31.....	.....	4	
<b>Austria:</b>				
Bukovina.....	July 12-18.....	1	.....	
Galicia.....	May 24-June 28.....	4	.....	
Silesia.....	July 19-25.....	4	.....	
<b>Borneo:</b>				
Sandakan.....	Apr. 16-June 30.....	43	16	
<b>Brazil:</b>				
Bahia.....	May 1-June 30.....	229	13	
Campinas.....	June 29-July 5.....	.....	2	
Para.....	June 28-July 4.....	2	2	
Pernambuco.....	May 1-July 30.....	.....	165	
Rio de Janeiro.....	May 11-Aug. 2.....	4,158	1,921	July 8-16 one case and 1 death on S. S. Peruviana in voyage to Castries and Baltimore.
Santos.....	May 18-July 26.....	.....	16	1 case July 10 from S. S. Spartan Prince.
<b>British South Africa:</b>				
East London.....	July 12-18.....	5	.....	
<b>Canada:</b>				
<b>Nova Scotia—</b>				
Halifax.....	June 14-Aug. 29.....	34	.....	
<b>Ontario—</b>				
Hamilton.....	June 1-30.....	3	.....	
<b>Ceylon, general.....</b>				
Apr. 1-30.....	.....	.....	2	
Colombo.....	June 29-July 25.....	32	6	
<b>China:</b>				
Amoy (Kulansu).....	Apr. 5-May 16.....	.....	1	July 21, present.
Poochoo.....	Apr. 26-June 27.....	.....	.....	Present.
Hongkong.....	May 10-July 18.....	30	18	
Nanking.....	June 11.....	.....	.....	Epidemic.
Shanghai.....	May 18-July 19.....	α 2	12	
<b>Ecuador:</b>				
Guayaquil.....	May 31-Aug. 8.....	.....	33	
<b>Egypt, general.....</b>				
May 14-July 22.....	.....	495	125	
Cairo.....	May 31-Aug. 12.....	45	20	
Suez.....	June 18-July 1.....	5	.....	
<b>France:</b>				
Marseille.....	July 1-31.....	.....	1	
Paris.....	May 31-Aug. 8.....	12	.....	
Toulon.....	May 1-31.....	1	.....	

α Cases among foreigners; deaths among natives.

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

## SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Germany, general.....	May 24-July 25...	44	.....	
Bremen.....	May 24-June 6....	3	.....	
Chemnitz.....	Aug. 2-8.....	1	.....	
Königsberg.....	Aug. 2-8.....	1	.....	
Great Britain:				
Liverpool.....	Apr. 30-Aug. 15...	4	.....	
India:				
Bombay.....	May 20-Aug. 4.....	.....	194	
Calcutta.....	May 10-July 25....	.....	119	
Madras.....	May 23-29.....	.....	1	
Indo-China:				
Cholen.....	May 24-July 25...	9	5	
Saigon.....	July 19-25.....	2	1	
Italy, general.....	June 8-Aug. 16....	414	.....	
Catania.....	May 22-July 31....	.....	4	
Genoa.....	May 1-31.....	2	.....	
Messina.....	July 19-25.....	.....	.....	Present.
Naples.....	June 7-Aug. 15....	81	5	
Palermo.....	May 24-Aug. 15....	28	4	
Turin.....	June 8-14.....	1	.....	
Japan:				
Formosa.....	June 7-13.....	1	.....	
Kobe.....	May 31-July 4....	12	.....	May 30, 1 case on S. S. Mongolia; June 13, 1 case on S. F. Muncester Castle.
Nagasaki.....	May 26-31.....	1	.....	
Osaka.....	May 10-Aug. 1....	115	59	
Yokohama.....	June 2-29.....	3	.....	
Java:				
Batavia.....	May 10-July 25....	42	1	
Mexico:				
Aguascalientes.....	June 8-July 12....	.....	8	
Mexico City.....	May 10-July 25....	.....	197	
Monterey.....	June 8-14.....	.....	1	
Netherlands, The:				
Amsterdam.....	July 27-Aug. 1....	1	.....	
Norway:				
Christiania.....	Aug. 9-15.....	22	.....	
Peru:				
Lima.....	June 1-July 18....	4	.....	Aug. 3, 3 cases in the lazaretto.
Philippine Islands:				
Manila.....	May 3-July 18....	123	42	First quarter calendar year 1908, 42 cases, 12 deaths.
Porto Rico:				
Mayaguez.....	June 7-27.....	6	.....	
Portugal:				
Lisbon.....	May 31-Aug. 15....	29	.....	
Russia:				
Batum.....	May 1-31.....	1	.....	
Moscow.....	May 24-Aug. 1....	212	84	
Odesa.....	May 24-Aug. 8....	38	4	
Riga.....	June 7-Aug. 15....	21	.....	
St. Petersburg.....	May 17-July 25....	434	103	
Warsaw.....	May 10-July 4....	.....	45	
Siberia:				
Vladivostok.....	May 6-June 21....	11	.....	
Spain:				
Barcelona.....	June 1-Aug. 10....	.....	8	
Cadiz.....	July 27.....	.....	.....	Present.
Malaga.....	Mar. 1-Apr. 30....	.....	4	July 27, present.
Valencia.....	June 1-Aug. 15....	81	9	
Straits Settlements:				
Singapore.....	May 24-July 13....	.....	5	
Turkey in Asia:				
Bagdad.....	May 10-July 25....	105	44	
Smyrna.....	May 13-June 16....	.....	6	
Turkey in Europe:				
Constantinople.....	June 1-Aug. 16....	.....	68	
Zanzibar.....	June 8-July 21....	.....	2	

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.
Aguascalientes .....	Aug. 23	40,000	57	1						2				
Aix-la-Chapelle .....	Aug. 8	158,358	58	1										
Amsterdam .....	Aug. 15	564,989	107	13					1				3	2
Antwerp .....	do	312,571	80	10										
Athens .....	do	241,058	59	15					5	5				1
Baracosa .....	Aug. 22	27,000	3											
Barmen .....	Aug. 15	160,000	42	6										1
Barranquilla .....	Aug. 8	40,000	32	2						3				
Do .....	Aug. 15	40,000	31	2						2				
Basel .....	Aug. 8	131,000	38	7										
Belfast .....	Aug. 15	880,344	103	17										2
Berlin .....	Aug. 8	2,100,009	618	76						3		1	5	4
Bordeaux .....	Aug. 15	253,000	70	9										
Bradford .....	do	232,136	105	3					1					
Brussels .....	do	680,078	177	16									1	1
Cardiff .....	do	191,446	57	4										
Cartagena, Colombia .....	Aug. 9	30,000	11	1										
Ceiba .....	Aug. 22	6,500	2											
Chemnitz .....	Aug. 8	272,611	110	6					1	1	2			2
Do .....	Aug. 15	272,611	103	6										1
Christiania .....	do	233,000	67											1
Cienfuegos .....	Aug. 22	37,000	15	2								1		
Coatzacoalcas .....	Aug. 15	3,300	4											
Coburg .....	do	23,245	11											
Cognac .....	do	19,483	2											
Cologne .....	Aug. 8	463,699	242	21										
Do .....	Aug. 15	463,699	227	20					1	1	1	13		5
Colombo .....	July 25	130,262	118	15										
Constantinople .....	Aug. 16	1,000,000	223	34			6		10	8			5	
Copenhagen .....	Aug. 8	440,000	114	15					1	1		1		2
Dalny .....	Aug. 1	35,219	6											
Denia .....	Aug. 15	12,421	5	1										
Dresden .....	do	539,900	130	25									1	2
Dublin .....	Aug. 8	394,525	149	23					1			1	2	
Do .....	Aug. 15	394,525	167	25								1	3	1
Dundee .....	do	168,616	37	5						1				2
Durban .....	July 25	60,972	16	4										1
Edinburgh .....	Aug. 15	350,524	90											2
Fiume .....	Aug. 14	49,850	26	5										
Flushing .....	Aug. 15	20,257	6											
Do .....	Aug. 22	20,257	3											
Frankfort-on-the-Main .....	Aug. 15	358,000	102							1			1	8
Fronteira .....	do	9,000	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.
Monrovia	July 25	7,000	6										
Monterey	Aug. 24	100,000	48	4					1				
Montreal	Aug. 22	378,856	172	8					1	1	1	2	2
Munich	Aug. 1	556,000	206	34					1	1	3		1
Do	Aug. 8	556,000	183	26						2		1	2
Nantes	Aug. 16	133,247	61	10								1	
Naples	Aug. 8	593,729	198	8				1					
Do	Aug. 15	593,729	173	7				1					
Newcastle-on-Tyne	do	272,969	81	6									
Nuevo Laredo	Aug. 22	8,000	3	1									
Nuremberg	Aug. 8	311,650	118	19						2	1		4
Palermo	July 11	330,000	160	9				1	1			8	
Do	July 18	330,000	139	7						1	1	3	
Do	July 25	330,000	127	9				1				4	
Do	Aug. 1	330,000	121	8				1		1		4	
Para	do	185,000	58	9			7						
Penang	July 11	101,469	92	18					1				
Do	July 18	101,469	89	17					1				
Port Elizabeth	Aug. 1	32,959	11	1									
Port of Spain	July 25	60,000	38	8									
Do	Aug. 1	60,000	25	2	1								
Do	Aug. 8	60,000	33	8					1				
Rio de Janeiro	July 19	811,265	529	57				250	4			1	1
Do	July 26	811,265	514	54				240	1		1	4	1
Rotterdam	Aug. 22	408,145	116						1	4			
St. John, N. B.	Aug. 29	40,789	13	1					1				
Salaverry	Aug. 5	1,750	1										
Salina Cruz	Aug. 15	4,000	8										
Do	Aug. 22	4,000	9										
San Feliu de Guixols	do	11,094	2										
Santa Cruz de Tenerife	Aug. 15	46,000	14	1									
Santiago de Cuba	Aug. 22	45,497	26	8									
Sheffield	Aug. 8	440,000	122	10						5		3	1
Do	Aug. 15	440,000	138	7								1	
Singapore	July 25	260,000	271	27						3			
Southampton	Aug. 15	122,196	81										4
South Shields	do	115,535	37	4									
Stettin	do	230,000	147	11						2	1		2
Sunderland	do	157,495	47	3							1		
Tamatave	July 18	7,086	1										
Do	July 25	7,086	3										
Do	Aug. 1	7,086	3									1	
Tegucigalpa	Aug. 19	24,000	7										
Toronto	Aug. 8	272,600	99					1		1			
Do	Aug. 15	272,600	90						1		1		
Trieste	do	213,719	79						1	1			
Turin	Aug. 9	373,701	134	14					3		1	2	
Do	Aug. 16	373,701	81	7									
Valencia	Aug. 15	250,000	80	6				1					
Venice	July 18	176,815	61	10					1			1	
Do	July 25	176,815	57	9					2		1		
Do	Aug. 1	176,815	57	5					1			1	1
Do	Aug. 8	176,815	75	8					4		1		2
Vevey	do	14,000	3										
Victoria, B. C.	Aug. 22	27,500	4										1
Vienna	Aug. 15	2,021,052	568	91							3	8	5
Vigo	Aug. 15	40,000	12										
Warsaw	June 20	751,595	250	49			5	2		6	1	4	
Do	July 4	751,595	265	35			4	1	3	4		5	
West Hartlepool	Aug. 15	66,750	7										
Winnipeg	Aug. 22	117,000	27						1				
Zurich	Aug. 15	180,000	34	6									

a Intervening week previously reported.

By authority of the Secretary of the Treasury:

WALTER WYMAN,  
Surgeon-General.

United States Public Health and Marine-Hospital Service.