

PUBLIC HEALTH REPORTS.

PROPHYLAXIS OF YELLOW FEVER.

Received through the Department of State from George E. Anderson, American Consul-General at Rio de Janeiro, Brazil.

The first authoritative and complete statement of the practical means by which, in accordance with modern theories of the spread of yellow fever, the number of deaths from that disease in Rio de Janeiro has been reduced from 4,852 in 1894 to none in 1908 and thereafter was made by Dr. Oswaldo Cruz, the head of the Public Health Service of Brazil, in a paper read before the Latin-American Medical and Sanitary Congress held in Rio de Janeiro August 1 to 10. Doctor Cruz's statement outlines in so practical and complete a way the methods followed that his paper is translated and submitted herewith. Doctor Cruz said:

We will not deal in this report with the scientific questions which served as the basis of the prophylactic campaign carried out against yellow fever in Rio de Janeiro from the point of view of the transmission of the disease by the mosquito. This is a subject well known to-day. We will record at the beginning the names of those who were pioneers in and the formulators of the wonderful theory which has brought such great benefits to humanity. It was Nott who, in 1848, first vaguely hinted at the fact that yellow fever and marsh fever might be transmitted by mosquitoes. But the real propagator of the modern ideas was the French physician Louis Daniel Beaupérthuy, who defended them and based them upon a rich store of experiences, and who, on May 23, 1854, in an article published in No. 57 of the fourth volume of "The Official Gazette of Cumaná" (Venezuela)—an article now of an importance recognized by Doctor Agramonte—expounded with such clearness and exactness the theory of transmission of the yellow-fever germ by mosquitoes that to the reader it would seem that the writer had written after the memorable experiments made by the American commission in Cuba. Finlay defended the same theory and indicated the striped mosquito as the offender, basing his assertions on his very careful observations, though he failed in the experiments which he attempted to make with them as a basis, which failure subsisted until 1900-1901 when the American commission, under the direction of the ardent Doctor Reed, refuted the assertions of Sanarelli and brought forth its irrefutable experimental demonstration, later corroborated in Sao Paulo by Lutz and Ribas and in Rio at the Pasteur Institute by Marchoux and Simoned.

In this country, before the American experiments, Doctor Utinguassú and afterwards Doctor Stapler, of Sao Paulo, also made references to the transmission of yellow fever by the mosquito.

We will review here only the technique used, with the improvements made during the five years that the campaign was, without cessation, carried out, though not until recently crowned with perfect success. It is now more than a year since there has been a case of mortality from yellow fever in Rio de Janeiro. We have, therefore, reason to believe that Rio de Janeiro is freed from the onus given to it as the great yellow-fever center. The initiation of the prophylactic service was beset with some difficulties. It was proposed to undertake a new prophylaxis in a city of more than 800,000 people, extended over an area of 1,116 square kilometers (430 square miles), very irregular topography, the altitude varying from 1 to 460 meters above sea level; with 82,396 houses, in many of which lived people who did not always facilitate the efforts of the sanitary authorities.

The campaign against yellow fever was begun on April 20, 1903, under the direction of the Public Health Service and was called the Service for Prophylaxis of Yellow Fever. The direction of this service was given to the energetic Carneiro de Mendonça, who died just when the struggle was the most severe. The existing organization was of temporary character; it was important that stability be given it and that it have efficient support in actual expression of law. This was done under the government of

Rodrigues Alves, which secured the passage in Congress of the law of January, 1904, and which in reorganizing the hygienic service of the Union created the service for the prophylaxis of yellow fever. For the expense of prophylaxis in the whole country, including the ports, Rs. 5,500,000\$000 (\$1,650,000) was appropriated annually.

In order to carry out the prophylaxis programme the following personnel was designated, which was aided by the corps of inspectors of the Public Health Service for the Union: One medical inspector, 10 sanitary inspectors (physicians), 1 administrator, 1 customs inspector, 1 accountant, 70 medical students, 9 subchiefs, 200 overseers, 18 guards of the first class, 18 guards of the second class, 1,000 workmen.

The city was divided into zones, according to density of population, and in these zones the work of the prophylaxis corps was performed by two groups of the service: First, the division of isolation and sanitation; second, the policing of infected districts. To the first division was allotted the work of removing cases to the pesthouse, or isolating the residents, and disinfecting the houses for the exclusion of mosquitoes. The second division, the sanitary police force, was required to visit every building in the city, dwellings or other public or private buildings, and to destroy any mosquitoes found in the larva stage, and to take precautions to prevent mosquitoes having access to standing water in which they might breed. This division was separated into two sections, one to work in buildings, the other in vacant lots, streams, marshy lands, etc. Coordinate with the service thus undertaken, the department of public health carried out a defensive campaign, exercising the greatest medical vigilance over those resident in the infected districts. Let us note briefly what technique was followed and what difficulties were encountered which experience taught us how to overcome.

Yellow-fever cases were made known to the sanitary inspectors by the reports of medical assistants, of the head of the family in which a case occurred, or by any one to whom the facts of the case were known, in accordance with the requirements of the law. The sanitary service being advised, a competent group of inspectors and authorities were at once dispatched to the locality, having with them a physician. The latter ascertained if the case was one for isolation treatment (whether under or over four days after the onset of the disease), and if the case required isolation the same was carried out either in the dwelling house or in the hospital, hospital treatment being resorted to only when the dwelling was unsuited to isolation treatment or when the patient wished it. In such cases the patient was taken to hospital in a vehicle closed against the entrance of mosquitoes and the house was disinfected in accordance with the system below outlined. In the case of isolation in the home the physician chose a roomy quarter of the house with door opening into another secluded part of the house and with windows. If there were more than one door, the others were temporarily closed. The patient was kept under a netting enveloping the bed upon which he lay during the time permanent quarters were being arranged. The doors and windows of the room to be isolated and of the rest of the house as well were sealed to prevent the exit of mosquitoes existing there, the windows of the isolated room being fitted with wire screens in such a way as not to interfere with ventilation, all other openings to the outside or to other parts of the house being sealed with cloth or paper. The only door to be used in the use of the room must be specially fitted with a double door drum, provided with an arrangement which does not permit of both doors being opened at the same time. This apparatus prevents the entrance and exit of mosquitoes, and after the room is thus prepared the door and windows are closed and camomile is burned in the room 3 to 4 hours in the proportion of 10 grams per cubic meter of space. The room is then well ventilated and is ready to receive the patient. The rest of the house is well calked and isolated from the room in which the patient is placed and disinfected with sulphur gas, as below indicated. During this operation a sanitary inspector remains in the room with the patient and stops the entrance of any gas which may possibly find its way through some overlooked crevice. During the preparation for disinfection the sanitary authorities make a thorough inspection and destroy any mosquito larva they find, pick up or destroy any vessels lying about which might serve as a receptacle for mosquito-breeding water and close water boxes against the same danger. The patient remains in isolation for seven days, after which isolation may terminate, if the family so wishes. The infected district is then treated as above indicated; that is, by disinfection, sanitary policing, and medical supervision. Disinfection is carried on in two ways, one force working from the center toward the outer limits of the district and the other from the boundaries of the district inward. The area of infection being determined over as large an area as possible, these two sections separate, one of which begins immediately with the house in which the case of yellow fever occurred, the other beginning at those houses which might possibly have been infected at the greatest possible distance from the case in isolation. The purpose of such a system was to destroy all mosquitoes which might have carried infection within the district.

While the disinfecting force is thus at work the police division, under the direction of a physician and of students who direct the different sections, operates throughout the infected district, making every effort to destroy all mosquito larvæ and to prevent the possible breeding of mosquitoes outside as well as inside the houses. Where larvæ are likely to exist in stagnant water or refuse of any sort, petroleum mixed with creoline, lysol, or similar products is thrown over the water or refuse in sufficient quantity to kill the larvæ instantly. Where it is impossible to use petroleum, as in the case of tanks and boxes for household use, a small fish, the "barrigudo" or "Girardinus caudimaculatus" is placed in large numbers in the water. This fish destroys the larvæ of mosquitoes most voraciously. Larvæ in the drains are destroyed by the use of Clayton gas, which is pumped into the sewer, which has been previously divided into compartments. Simultaneously with the disinfection the sanitary inspectors make daily inspection of the suspected district, examining every inhabitant supposed not to be immune, that is, children under 5 and all foreigners of less than 5 years' residence in Rio. These are subjected to the closest vigilance, being placed in isolation at the least tendency to rising temperature. Reports are made in writing, those to whom this duty falls being required to fill out daily a bulletin sent out by the medical inspector to the chief of each district. In this report must be given the record of any who work outside the district or who for any reason absent themselves therefrom, a record of their condition being also kept by the physician in the district in which they work or are temporarily resident. When any inhabitant absents himself from the district the record must show his address, where he will be subjected to vigilance on the part of the authorities there. If the person under vigilance evades the attention of the physician and withdraws without giving notice, the owner of the house in which he lived is fined, he himself is apprehended by the sanitary police, fined, and subjected to renewed vigilance.

The vigilance in each district extends over a period of one month after the appearance of the last case. To give an idea of this service we will note the figures covering the prophylactic campaign in the infected district about the cotton factory, "Fábrica das Chitas," in 1906. The inspection was carried out by 18 doctors, who examined daily all suspected persons, in all, 7,966 persons, of whom 2,989 were not immune. Sixty cases were reported, of which only 19 proved to be yellow fever, and the district was declared entirely freed of infection after six months. With the combination of the three systems there is no doubt about cleaning up effectively any district in which yellow fever may appear. In normal conditions the police service is carried out with equal painstaking, especially in the districts where infection last appeared. When, after some time, there seems no longer to be danger of new infection, the inspectors allow water to stand in several marked spots most favorable to mosquito breeding. These pools are then carefully watched, and examined at frequent intervals. This is a sure way to indicate the presence of the mosquito and is a trap for those about to spawn. They are thus most easily destroyed. In many zones of the city these traps revealed the presence of no mosquitoes whatever.

The disinfection of houses with sulphur gave the best results. The house to be disinfected was completely closed. Every opening or orifice where gas might escape was sealed with gummed paper. The furniture, too, after being thoroughly cleansed, is tightly closed. Metallic or gilded objects are protected with a covering of vaseline. After the roof is covered over with canvas the garrets are opened for the free access of sulphur gas. The canvas is fastened to the walls with lath. Then sulphur is burned in the proportion of 10 to 20 grams per cubic meter, being deposited in several receptacles distributed about the house and kept clear of the floor. Each receptacle should not contain more than 1 kilogram (2.2 pounds) in order to insure complete combustion. In the vacant spaces under the roof the burning sulphur should be placed in receptacles set into others containing water, to avoid danger of fire. After all the receptacles are placed the workmen close up the only exit left open and keep the house thus sealed for not less than 2 hours. The heated air and that displaced by the sulphur gas escapes through the crevices of the roof, but the mosquitoes are kept in by the canvas covering.

The disinfecting gangs always carry on their work at a greater distance from the focus in the direction of the wind, since mosquitoes are most apt to carry infection with the prevailing winds.

Thus were carried out the details of the yellow fever campaign in this city. In the exposition annexed to the present congress, in the part occupied by the public health service may be seen the demonstrations of the above methods, the materials used, the various processes described, as well as the graphic description of the results obtained. Those who are interested in the beginning of the campaign from the point of view of the above discussion and in the influence of the various factors in the development of the sanitary service as affecting yellow fever should read the important memorials of Dr. Bulhões de Carvalho, in "Contributions to the Epidemiological State of Yellow Fever," Rio, 1903, and of Oliveira Borges, in "Prophylaxis

of Yellow Fever in Rio de Janeiro," presented to the Third Latin American Medical Congress in Montevideo, March 17 to 23, 1907.

In closing we present below the statistics showing the death rate from yellow fever from 1872 to date, which serve to prove the statement in the beginning of this communication that yellow fever is wiped out in Rio de Janeiro.

Mortality from yellow fever in Rio de Janeiro from 1872 to August, 1909.

Year.	Deaths.	Year.	Deaths.
1872.....	102	1891.....	4,456
1873.....	3,659	1892.....	4,312
1874.....	829	1893.....	825
1875.....	1,292	1894.....	4,852
1876.....	3,476	1895.....	818
1877.....	282	1896.....	2,929
1878.....	1,176	1897.....	159
1879.....	974	1899.....	1,078
1880.....	1,625	1899.....	731
1881.....	257	1900.....	344
1882.....	89	1901.....	2,299
1883.....	1,608	1902.....	984
1884.....	863	1903.....	584
1885.....	445	1904.....	48
1886.....	1,449	1905.....	289
1887.....	137	1906.....	42
1888.....	747	1907.....	39
1889.....	2,156	1908.....	4
1890.....	719	1909.....	0

UNITED STATES.

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

Plague-prevention work in California.

Surgeon Blue reports:

SAN FRANCISCO, CAL.

Last case of human plague: Sickened, January 30, 1908.

Last case of rodent plague: Trapped, October 23, 1908.

Week ended October 30.

Dead inspected.....	124
Plague.....	0
Premises inspected.....	1,906
Houses disinfected.....	6
Buildings condemned.....	6
Nuisances abated.....	219
Rats found dead.....	34
Rats trapped.....	2,029
Total rats taken.....	2,063
Rats identified:	
Mus norvegicus.....	1,546
Mus rattus.....	84
Mus musculus.....	370
Mus alexandrinus.....	29
Total.....	2,029
Rats identified as to sex:	
Male.....	750
Female.....	841
Total.....	1,591
Rats examined bacteriologically.....	1,331
Plague rats.....	0
Poisons placed.....	12,300
Total number of rats found infected to date.....	398

OAKLAND, CAL.

Last case of human plague: Sickened, October 26, 1909.

Last case of rodent plague: Trapped, December 1, 1908.

Week ended October 30.

Dead inspected.....	31
Plague.....	0
Rats found dead.....	26
Rats trapped.....	575
Rats identified:	
Mus norvegicus.....	559
Mus rattus.....	1
Mus musculus.....	41
Mus alexandrinus.....	1
Total.....	601
Rats examined bacteriologically.....	560
Plague rats.....	0

A case of human plague which had taken sick on October 26 was diagnosed clinically as plague on November 5.

POINT RICHMOND, CAL.

Week ended October 30.

Dead inspected.....	4
Plague.....	0

CONTRA COSTA COUNTY, CAL. (EXCLUSIVE OF POINT RICHMOND).

Last case of human plague: Sickened, July 21, 1908.

Last case of rodent plague: Found, September 27, 1909.

Week ended October 16.

Dead inspected.....	3
Plague.....	0
Ranches inspected.....	27
Ground squirrels shot.....	84
Ground squirrels examined bacteriologically.....	82
Ground squirrels found infected with <i>B. pestis</i>	0
Total number of ground squirrels found infected to date.....	240

Week ended October 23.

Dead inspected.....	2
Plague.....	0
Total number of ground squirrels found infected to date.....	240

Week ended October 30.

Dead inspected.....	1
Plague.....	0
Total number of ground squirrels found infected to date.....	240

MERCED COUNTY, CAL.

No record of human or rodent plague in Merced County.

Week ended October 23.

Ranches inspected.....	4
Ground squirrels shot.....	67
Ground squirrels examined bacteriologically.....	66
Ground squirrels found infected with <i>B. pestis</i>	0

Week ended October 30.

Ranches inspected.....	20
Ground squirrels shot.....	213
Ground squirrels examined bacteriologically.....	202
Ground squirrels found infected with <i>B. pestis</i>	0

SAN BENITO COUNTY, CAL.

Last case of rodent plague: Found October 15, 1909.

Week ended October 23.

Ranches inspected.....	3
Ground squirrels shot.....	54
Ground squirrels examined bacteriologically.....	53
Ground squirrels found infected with <i>B. pestis</i>	0
Total number of ground squirrels found infected to date.....	1

Week ended October 30.

Ranches inspected.....	7
Ground squirrels shot.....	138
Ground squirrels examined bacteriologically.....	130
Ground squirrels found infected with <i>B. pestis</i>	0
Total number of ground squirrels found infected to date.....	1

SAN JOAQUIN COUNTY, CAL.

No record of human or rodent plague in San Joaquin County.

Week ended October 23.

Ranches inspected.....	10
Ground squirrels shot.....	57
Ground squirrels examined bacteriologically.....	55
Ground squirrels found infected with <i>B. pestis</i>	0

Week ended October 30.

Ranches inspected.....	18
Ground squirrels shot.....	90
Ground squirrels examined bacteriologically.....	85
Ground squirrels found infected with <i>B. pestis</i>	0

SANTA CLARA COUNTY, CAL.

No record of human or rodent plague in Santa Clara County.

Week ended October 23.

Ranches inspected.....	35
Ground squirrels shot.....	130
Ground squirrels examined bacteriologically.....	125
Ground squirrels found infected with <i>B. pestis</i>	0

SOLANO COUNTY, CAL.

No record of human or rodent plague in Solano County.

Week ended October 23.

Ranches inspected.....	4
Ground squirrels shot.....	30
Ground squirrels examined bacteriologically.....	28
Ground squirrels found infected with <i>B. pestis</i>	0

STANISLAUS COUNTY, CAL.

No record of human or rodent plague in Stanislaus County.

Week ended October 23.

Ranches inspected.....	7
Ground squirrels shot.....	255
Ground squirrels examined bacteriologically.....	250
Ground squirrels found infected with <i>B. pestis</i>	0

Week ended October 30.

Ranches inspected.....	5
Ground squirrels shot.....	198
Ground squirrels examined bacteriologically.....	190
Ground squirrels found infected with <i>B. pestis</i>	0

Smallpox in the United States.

[This table includes cases and deaths reported to the Surgeon-General of the Public Health and Marine-Hospital Service from June 25 to November 19, 1909. For reports received from December 25, 1908, to June 25, 1909, see Public Health Reports for June 25, 1909. In accordance with custom the tables of epidemic diseases are terminated semiannually and new tables begun.]

Place.	Date.	Cases.	Deaths.	Remarks.
Alabama:				
Mobile.....	Oct. 17-23.....	1		
Total for State.....		1		
California, general	Aug. 1-31.....		2	
Berkeley.....	July 25-31.....	1		
Hobart Mills.....	Apr. 1-30.....	1		
Sacramento.....	June 6-Oct. 23.....	2		
San Francisco.....	June 6-July 3.....	2		
Truckee.....	Mar. 23.....	3		
Total for State.....		9	2	
Colorado:				
Adams County.....	Apr. 1-June 30.....	5		
Boulder County.....	Apr. 1-June 30.....	8		
Clear Creek County.....	Apr. 1-June 30.....	1		
Denver County—				
Denver.....	Apr. 1-June 30.....	10		
El Paso County.....	Apr. 1-June 30.....	3		
Fremont County.....	Apr. 1-June 30.....	13		
Grand County.....	Apr. 1-June 30.....	1		
Huerfano County.....	Apr. 1-June 30.....	24		
Larimer County.....	Apr. 1-June 30.....	4		
Las Animas County.....	Apr. 1-June 30.....	1		
Mesa County.....	Apr. 1-June 30.....	20		
Montrose County.....	Apr. 1-June 30.....	2		
Morgan County.....	Apr. 1-June 30.....	17		
Otero County.....	Apr. 1-June 30.....	8		
Pueblo County.....	Apr. 1-June 30.....	1		
Rio Grande County.....	Apr. 1-June 30.....	1		
*San Miguel County.....	Apr. 1-June 30.....	4		
Weld County.....	Apr. 1-June 30.....	1		
Total for State.....		124		
Connecticut:				
Bridgeport.....	Oct. 2.....	1		
New Haven.....	May 1-31.....	1		
Total for State.....		2		
District of Columbia:				
Washington.....	Aug. 8-Oct. 23.....	9		
Total for District.....		9		
Georgia:				
Macon.....	June 14-Nov. 7.....	20		
Total for State.....		20		
Illinois:				
Alexander County—				
Cairo.....	May 1-June 30.....	25		
Bureau County.....	Aug. 1-31.....	1		
Champaign County.....	Apr. 1-May 31.....	25		
Christian County.....	Apr. 1-May 31.....	35		
Clay County.....	Apr. 1-30.....	1		
Clinton County.....	Apr. 1-June 30.....	7		
Cook County—				
Chicago.....	June 20-Oct. 30.....	9		
Dewitt County.....	May 1-31.....	7		
Edwards County.....	Apr. 1-May 31.....	3		
Effingham County.....	Apr. 1-30.....	2		
Fayette County.....	May 1-31.....	2		
Franklin County.....	Apr. 1-May 31.....	2		
Fulton County.....	Apr. 1-June 30.....			
Gallatin County.....	Apr. 1-May 31.....	16		
Iroquois County.....	May 1-31.....	1		
Jackson County.....	Apr. 1-May 31.....	14		
Murphysboro.....	Apr. 1-May 31.....	40		
Knox County.....	Apr. 1-30.....	8		
Lake County.....	Apr. 1-July 31.....	14		
LaSalle County.....	Apr. 1-30.....	3		
McDonough County.....	Apr. 1-30.....	25		
McHenry County—				
Marengo.....	May 1-June 30.....	97		

Present.

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Illinois—Continued.				
Macoupin County.....	Apr. 1-May 31....	6		
McLean County.....	June 1-30.....	1		
Madison County.....	May 1-June 30....	2		
Marion County.....	Apr. 1-June 30....	14		
Menard County.....	Aug. 1-31.....	5		
Massac County—				
Metropolis.....	Apr. 1-May 31....	29		
Montgomery County.....	May 1-June 30....	2		
Peoria County.....	Apr. 1-June 30....	13		
Peoria.....	June 1-Sept. 31....	54		
Perry County.....	Apr. 1-Aug. 31....	18		
Pulaski County.....	May 1-31.....	5		
Rock Island County—				
Moline.....	June 1-July 31....	2		
St. Clair County—				
East St. Louis.....	May 1-June 30....	11		
Saline County.....	May 1-31.....	30		
Sangamon County.....	Apr. 1-30.....	1		
Springfield.....	May 29-July 9....	3		
Schuyler County.....	May 1-31.....	1		
Shelby County.....	Apr. 1-July 31....	3		
Stephenson County.....	May 1-31.....	4		
Tazewell County.....	May 1-31.....	5		
Pekin.....	Apr. 1-Aug. 31....	78		
Union County.....	Apr. 1-May 31....	5		
Vermilion County.....	Apr. 1-May 31....	2		
Danville.....	June 14-Nov. 6....	15		
Warren County.....	June 1-July 31....	3		
Will County—				
Joliet.....	July 1-31.....	1		
Williamson County.....	Apr. 1-Aug. 31....	17		
Winnebago County.....	June 1-30.....	1		
Woodford County.....	Apr. 1-July 31....	25		
Total for State.....		693		
Indiana:				
Allen County.....	May 1-Aug. 31....	17		
Fort Wayne.....	June 6-Oct. 2....	103		
Carroll County.....	June 1-30.....	1		
Clay County.....	June 1-30.....	4		
Dearborn County.....	May 1-31.....	4		
Dekalb County.....	June 1-30.....	1		
Delaware County.....	May 1-31.....	1		
Muncie.....	June 20-Oct. 31....	13		
Fayette County.....	June 1-30.....	1		
Fountain County.....	July 1-31.....	1	1	
Gibson County.....	May 1-31.....	5		
Grant County.....	May 1-July 31....	4		
Greene County.....	June 1-July 31....	4	1	
Marion County—				
Indianapolis.....	June 14-Oct. 24....	3		
Montgomery County.....	May 1-June 30....	9		
Parke County.....	May 1-31.....	1		
Pulaski County.....	May 1-31.....	2		
St. Joseph County.....	June 1-30.....	4		
South Bend.....	June 13-Aug. 14....	5		
Tipton County.....	July 1-31.....	1		
Vanderburg County.....	May 1-June 30....	26		
Vermilion County.....	May 1-July 31....	43		
Vigo County.....	June 1-30.....	4		
Wayne County.....	May 1-July 31....	15	1	
White County.....	May 1-31.....	2		
Total for State.....		274	3	
Iowa:				
Cedar Rapids.....	July 1-Aug. 31....	2		
Keokuk.....	May 1-31.....	3		
Ottumwa.....	June 1-30.....	1		
Total for State.....		6		
Kansas:				
Allen County.....	May 1-31.....	5		
Atchison County.....	June 1-July 31....	8		
Brown County.....	June 1-30.....	1		
Chautauqua County.....	May 1-31.....	3		
Cherokee County.....	May 1-31.....	1		
Coffey County.....	May 1-31.....	1		
Comanche County.....	June 1-30.....	3		
Cowley County.....	May 1-31.....	14		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Kansas—Continued.				
Crawford County.....	May 1-31.....	20		
Pittsburg.....	May 1-June 30.....	4		
Decatur County.....	June 1-30.....	12	1	
Dickinson County.....	May 1-July 31.....	3		
Doniphan County.....	May 1-Aug. 31.....	29		
Douglas County.....	May 1-31.....	1		
Elk County.....	May 1-31.....	1		
Ellsworth County.....	June 1-30.....	1		
Franklin County.....	May 1-31.....	5		
Geary County.....	May 1-July 31.....	5		
Graham County.....	June 1-30.....	6		
Greenwood County.....	May 1-31.....	3		
Jackson County.....	May 1-June 30.....	24		
Jefferson County.....	May 1-31.....	2		
Jewell County.....	May 1-31.....	6		
Kearny County.....	May 1-31.....	1		
Kingman County.....	July 1-31.....	2		
Labette County—				
Parsons.....	May 1-Sept. 30.....	11		
Lincoln County.....	July 1-31.....	4		
Lyon County.....	May 1-July 31.....	28		
McPherson County.....	July 1-31.....	1		
Marion County.....	July 1-31.....	1		
Marshall County.....	May 1-Aug. 31.....	230		
Montgomery County.....	May 1-July 31.....	10		
Coffeyville.....	July 1-31.....	1		
Nemaha County.....	June 1-July 31.....	11		
Osage County.....	May 1-June 30.....	32		
Osborne County.....	May 1-June 30.....	11		
Ottawa County.....	May 1-31.....	3		
Phillips County.....	May 1-31.....	1		
Pottawatomie County.....	May 1-July 31.....	15		
Pratt County.....	May 1-July 31.....	6		
Rawlins County.....	May 1-31.....	13		
Republic County.....	June 1-30.....	5		
Riley County.....	May 1-June 30.....	8		
Rooks County.....	July 1-31.....	1		
Rush County.....	June 1-30.....	2		
Russell County.....	June 1-30.....	1		
Saline County.....	May 1-31.....	2		
Scott County.....	Aug. 1-Sept. 30.....	2		
Sedgwick County.....	May 1-31.....	11		
Wichita.....	July 11-Aug. 7.....	5		
Shawnee County.....	May 1-Aug. 31.....	13		
Topeka.....	May 1-Sept. 30.....	47		
Smith County.....	May 1-31.....	11		
Sumner County.....	May 1-31.....	3		
Thomas County.....	May 1-31.....	1		
Wabaunsee County.....	May 1-31.....	6		
Wyandotte County.....	May 1-31.....	4		
Kansas City.....	June 13-Nov. 6.....	11		
Total for State.....		672	1	
Kentucky:				
Covington.....	June 13-July 3.....	5		
Lexington.....	June 20-Oct. 30.....	17		
Newport.....	June 14-July 25.....	4		
Paducah.....	June 13-26.....	3		
Total for State.....		29		
Louisiana:				
New Orleans.....	June 13-Oct. 30.....	14		
Total for State.....		14		
Maryland, general				
Mar. 1-Apr. 30.....		9		
Total for State.....		9		
Massachusetts:				
Boston.....	Sept. 12-Oct. 23.....	3	1	
Lawrence.....	June 27-July 3.....	1		
Total for State.....		4	1	
Michigan:				
Bay County—				
Bay City.....	June 1-Aug. 31.....	2		
Berrien County.....	July 1-Aug. 31.....	9		
Branch County.....	July 1-Aug. 31.....	5		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Michigan—Continued.				
Calhoun County.....	June 1-30.....	1		
Cass County.....	July 1-Aug. 31....	8	1	
Cheboygan County.....	July 1-31.....	2		
Chippewa County.....	May 1-31.....	1		
Clinton County.....	Aug. 1-31.....	1		
Delta County.....	June 1-30.....	1		
Eaton County.....	May 1-Aug. 31....	46		
Emmet County.....	June 1-July 31....	2		
Genesee County.....	July 1-31.....	1		
Gogebic County.....	Aug. 1-31.....	1		
Houghton County.....	May 1-Aug. 31....	7		
Huron County.....	June 1-30.....	1		
Ingham County.....	May 1-31.....	1		
Jackson County.....	May 1-31.....	1		
Kalamazoo County—				
Kalamazoo.....	July 4-24.....	2		
Kent County—				
Grand Rapids.....	June 6-26.....	2		
Lapeer County.....	June 1-30.....	1		
Livingston County.....	Aug. 1-31.....	16		
Marquette County.....	May 1-July 31....	8		
Menominee County.....	July 1-31.....	4		
Muskegon County.....	May 1-Aug. 31....	16		
Newaygo County.....	June 1-30.....	1		
Oceana County.....	May 1-31.....	1		
Ottawa County.....	May 1-July 31....	8		
Saginaw County.....	May 1-July 31....	20		
Saginaw.....	July 25-Oct. 16....	4		
St. Clair County.....	May 1-June 30....	4		
Schoolcraft County.....	July 1-31.....	4		
Manistique.....	June 1-Aug. 31....	41		
Tuscola County.....	May 1-31.....	4		
Wayne County—				
Detroit.....	May 1-July 31....	2		
Total for State.....		228	1	
Minnesota, general.				
Becker County.....	June 15-21.....	5	3	
Bigstone County.....	June 8-14.....	1		
Carver County.....	July 6-Aug. 16....	6		
Clay County.....	July 28-Aug. 2....	1		
Cottonwood County.....	July 1-31.....	1		
Crawford County.....	Aug. 10-16.....	1		
Fairbault County.....	June 7-14.....	2		
Hennepin County—				
Minneapolis.....	May 1-June 30....	39		
Hubbard County.....	May 25-31.....	1		
Itasca County.....	May 25-June 14....	7		
Lesueur County.....	June 1-7.....	1		
McLeod County.....	May 25-July 19....	2		
Marshall County.....	June 8-July 5.....	6		
Meeker County.....	May 25-31.....	5		
Morrison County.....	June 21-Aug. 16....	2		
Nobles County.....	May 25-June 21....	2		
Olmsted County.....	June 8-14.....	2		
Pine County.....	May 25-31.....	1		
Ramsey County—				
St. Paul.....	Apr. 1-May 31....	10		
Redwood County.....	June 1-7.....	1		
Rock County.....	June 1-7.....	1		
St. Louis County.....	May 25-June 21....	3		
Duluth.....	June 10-Nov. 6....	22		
Sibley County.....	June 22-July 19....	4		
Stearns County—				
St. Cloud.....	July 13-19.....	1		
Steele County.....	May 25-June 21....	3		
Swift County.....	July 20-26.....	1		
Wabasha County.....	May 25-31.....	2		
Wadena County.....	May 25-July 19....	11		
Waseca County.....	May 25-31.....	8		
Wright County.....	June 15-Aug. 16....	10		
Total for State.....		162	3	
Mississippi:				
Holly Springs.....	Nov. 1-6.....	3		
Total for State.....		3		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Missouri:				
Kansas City.....	June 13-26.....	2	.....
St. Joseph.....	May 30-July 24.....	19	.....
St. Louis.....	June 20-Oct. 2.....	9	.....
Total for State.....		30	.....
Montana:				
Carbon County.....	June 1-July 31.....	6	.....
Cascade County—				
Great Falls.....	June 1-30.....	1	.....
Chouteau County.....	June 1-30.....	1	.....
Custer County.....	June 1-30.....	1	.....
Dawson County.....	May 1-Sept. 30.....	7	.....
Deerlodge County.....	May 1-31.....	1	.....
Fergus County.....	June 1-30.....	1	.....
Flathead County.....	May 1-31.....	4	.....
Gallatin County.....	May 1-31.....	4	.....
Jefferson County.....	May 1-31.....	2	.....
Lewis and Clark County—				
Helena.....	May 1-31.....	1	.....
Missoula County—				
Missoula.....	June 1-Aug. 31.....	6	.....
Park County.....	May 1-June 30.....	21	.....
Livingston.....	May 1-Aug. 31.....	14	.....
Sanders County.....	May 1-31.....	1	.....
Silverbow County.....	June 1-Sept. 30.....	25	.....
Butte.....	June 11-Oct. 21.....	56	.....
Teton County.....	May 1-31.....	1	.....
Valley County.....	May 1-31.....	1	.....
Yellowstone County.....	May 1-July 31.....	7	.....
Total for State.....		161	.....
Nebraska:				
Lincoln.....	May 1-July 31.....	34	.....
Total for State.....		34	.....
New Jersey:				
Newark.....	Sept. 19-25.....	1	.....
Total for State.....		1	.....
New York, general:				
Buffalo.....	May 1-Aug. 31.....	462	.....
	Oct. 3-30.....	3	.....
Total for State.....		465	.....
North Carolina:				
Beaufort County.....	June 1-30.....	1	.....
Bladen County.....	Apr. 1-30.....	5	.....
Buncombe County.....	Apr. 1-30.....	1	.....
Caldwell County.....	Apr. 1-June 30.....	19	.....
Camden County.....	Apr. 1-June 30.....	70	.....
Carteret County.....	Apr. 1-30.....	1	.....
Craven County.....	Apr. 1-Aug. 31.....	10	.....
Cumberland County.....	May 1-Aug. 31.....	2	.....
Davie County.....	Aug. 1-31.....	1	.....
Duplin County.....	Apr. 1-Aug. 31.....	35	.....
Harnett County.....	June 1-July 31.....	7	.....
Johnston County.....	Apr. 1-July 31.....	3	.....
Jones County.....	Aug. 1-31.....	8	.....
Lee County.....	Apr. 1-30.....	6	.....
Lenoir County.....	July 1-Aug. 31.....	6	.....
Madison County.....	May 1-June 30.....	7	.....
Mecklenburg County.....	May 1-31.....	2	.....
Charlotte.....	Sept. 26-Oct. 29.....	9	.....
Mitchell County.....	July 1-31.....	8	.....	Apr. 1-30, present.
Montgomery County.....	July 1-31.....	10	.....
Nash County.....	June 1-30.....	1	.....
Onslow County.....	Apr. 1-30.....	2	.....
Pamlico County.....	May 1-31.....	4	.....
Pasquotank County.....	Apr. 1-May 31.....	15	.....
Pitt County.....	Apr. 1-June 30.....	17	.....
Robeson County.....	June 1-July 31.....	14	.....
Rowan County.....	May 1-July 31.....	17	.....
Sampson County.....	Apr. 1-June 30.....	51	.....	In extreme northern part.
Transylvania County.....	May 1-31.....	5	.....
Wake County.....	Apr. 1-Aug. 31.....	3	.....
Watauga County.....	June 1-Aug. 31.....	38	.....

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
North Carolina—Continued.				
Wayne County.....	May 1-31.....	14		
Wilson County.....	Apr. 1-30.....	1		
Yancey County.....	Apr. 1-Aug. 31....	10		
Total for State.....		403		
North Dakota:				
Bottineau County.....	May 1-July 31.....	2		
Cass County.....	July 1-31.....	2		
Emmons County.....	July 1-31.....	3		
Grand Forks County.....	May 1-July 31.....	13		
Henry County.....	Aug. 1-31.....	5		
Lamoure County.....	May 1-June 30.....	3		
McHenry County.....	May 1-31.....	1		
Stutsman County.....	June 1-July 31.....	15		
Walsh County.....	June 1-30.....	2		
Ward County.....	May 1-July 31.....	11		
Total for State.....		57		
Ohio:				
Cincinnati.....	June 12-Oct. 9....	5		
Columbus.....	Sept 12-18.....	1		
Dayton.....	July 18-Oct. 23....	21	1	
Springfield.....	Oct. 10-30.....	15		
Toledo.....	July 25-Aug. 7....	2		
Total for State.....		44	1	
Oklahoma:				
Coal County.....	Aug. 1-31.....	3		
Ellis County.....	Aug. 1-31.....	1		
Kay County.....	Aug. 1-31.....	5		
Kiowa County.....	Aug. 1-31.....	4		
Muskogee County.....	Aug. 1-31.....	1		
Oklahoma County— Oklahoma.....	Apr. 3-Aug. 21....	51	1	
Washington County.....	Aug. 1-31.....	1		
Total for State.....		66	1	
Oregon:				
Cass County.....	July 1-31.....	8		
Clackamas County.....	May 1-June 30.....	3		
Coos County.....	June 1-30.....	1		
Lane County.....	July 1-31.....	1		
Linn County.....	July 1-31.....	2		
Marion County.....	May 1-Aug. 31.....	14		
Multnomah County.....	May 1-June 30.....	3		
Portland.....	Apr. 1-Sept. 30....	48		
Tillamook County.....	July 1-31.....	1		
Umatilla County.....	June 1-30.....	2		
Union County.....	June 1-30.....	1		
Washington County.....	May 1-June 30.....	14		
Yamhill County.....	June 1-Aug. 31.....	4		
Total for State.....		102		
Pennsylvania:				
Philadelphia.....	July 10-24.....	4		
Total for State.....		4		
Tennessee:				
Knoxville.....	June 20-Aug. 21....	7		
Memphis.....	Nov. 1-6.....	3		
Total for State.....		10		
Texas:				
Anderson County.....	Aug. 1-31.....	5		
Archer County.....	June 1-30.....	1		
Baylor County.....	June 1-30.....	22		
Bee County.....	June 1-30.....	6		
Bexar County.....	June 1-July 31.....	1	1	
San Antonio.....	June 13-Oct. 2.....	14		
Bowie County.....	June 1-30.....	7		
Cameron County.....	June 1-30.....	1		
Cherokee County.....	June 1-30.....	1		
Childress County.....	June 1-30.....	4		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Texas—Continued.				
Concho County.....	Aug. 1-31.....	2	.....
Ellis County.....	May 1-June 30.....	2	.....
Galveston County.....	June 1-30.....	1	.....
Galveston.....	June 19-25.....	1	.....
Gonzales County.....	May 1-June 30.....	6	2	
Grayson County.....	June 1-30.....	9	.....
Harris County.....	June 1-30.....	12	.....
Houston.....	Mar. 28-June 19.....	17	.....
Harrison County.....	June 1-Aug. 31.....	17	.....
Hays County.....	July 1-31.....	8	.....
Henderson County.....	June 1-July 31.....	30	.....
Jefferson County.....	May 1-June 30.....	3	.....
Jones County.....	June 1-30.....	2	.....
Kinney County.....	June 1-30.....	1	1	
Lamar County.....	June 1-Aug. 31.....	27	.....
Matagorda County.....	May 1-Aug. 31.....	11	.....
McLennan County.....	June 1-30.....	19	.....
Milam County.....	June 1-30.....	5	.....
Runnels County.....	May 1-July 31.....	26	.....
San Saba County.....	Apr. 9-June 30.....	11	.....
Smith County.....	June 1-30.....	10	.....
Stephens County.....	June 1-30.....	33	1	
Tarrant County.....	May 1-June 30.....	19	3	
Fort Worth.....	June 1-July 31.....	5	.....
Travis County.....	May 1-June 30.....	19	.....
Upshur County.....	May 1-Aug. 31.....	52	.....
Van Zandt County.....	May 1-June 30.....	6	.....
Victoria County.....	Aug. 1-31.....	6	.....
Webb County.....	.....	.....	.....
Laredo.....	June 19.....	1	.....
Wharton County.....	June 1-30.....	2	.....
Wichita County.....	June 1-30.....	5	.....
Williamson County.....	June 1-Aug. 31.....	12	1	
Total for State.....	.....	442	9	
Utah:				
Boxelder County.....	May 1-Sept. 30.....	5	.....
Cache County.....	June 1-July 31.....	4	.....
Carbon County.....	June 1-July 31.....	3	.....
Davis County.....	May 1-July 31.....	30	.....
Emery County.....	June 1-July 31.....	4	.....
Garfield County.....	May 1-Aug. 31.....	20	.....
Juab County.....	Aug. 1-31.....	9	.....
Salt Lake County.....	May 1-Aug. 31.....	61	1	
Salt Lake City.....	June 1-Sept. 30.....	108	.....
Sanpete County.....	May 1-Sept. 30.....	32	.....
Summit County.....	May 1-Aug. 31.....	78	.....
Tooele County.....	May 1-31.....	5	.....
Uintah County.....	May 1-Sept. 30.....	48	.....
Utah County.....	May 1-Sept. 30.....	42	.....
Wasatch County.....	Aug. 1-Sept. 30.....	30	.....
Weber County.....	May 1-Aug. 31.....	6	.....
Total for State.....	.....	485	1	
Virginia:				
Lynchburg.....	June 20-26.....	1	.....
Total for State.....	.....	1	.....
Washington:				
Bellingham.....	Oct. 24-30.....	2	.....
Seattle.....	July 1-Aug. 31.....	8	.....
Spokane.....	June 6-July 3.....	7	.....
Tacoma.....	May 14-June 27.....	6	.....
Total for State.....	.....	23	.....
West Virginia:				
Wheeling.....	Oct. 17-23.....	1	.....
Total for State.....	.....	1	.....
Wisconsin:				
Ashland County.....	Jan. 1-Mar. 31.....	8	.....
Barron County.....	Jan. 1-June 30.....	93	.....
Brown County.....	Apr. 1-June 30.....	18	.....
Buffalo County.....	Jan. 1-Mar. 31.....	5	.....
Burnett County.....	Jan. 1-Mar. 31.....	11	.....

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Wisconsin—Continued.				
Calumet County.....	Jan. 1-June 30....	2		
Chippewa County.....	Jan. 1-June 30....	97	1	
Clark County.....	Jan. 1-June 30....	20		
Columbia County.....	Jan. 1-Mar. 31....	1		
Dane County.....	Apr. 1-June 30....	6		
Douglas County.....	Jan. 1-June 30....	11		
Dunn County.....	Jan. 1-June 30....	39	2	
Fond du Lac County.....	Jan. 1-June 30....	3		
Jackson County.....	Jan. 1-Mar. 31....	1		
Juneau County.....	Jan. 1-June 30....	42		
La Crosse County.....	Apr. 1-June 30....	10		
La Crosse.....	June 13-Nov. 6....	4		
Manitowoc County.....	Jan. 1-June 30....	41		
Marathon County.....	Jan. 1-June 30....	2		
Milwaukee County.....	Apr. 1-June 30....	24		
Milwaukee.....	June 2-Nov. 6....	9		
Oconto County.....	Jan. 1-June 30....	25	1	
Oneida County.....	Apr. 1-June 30....	1		
Outagamie County—				
Appleton.....	June 20-July 31....	22		
Ozaukee County.....	Jan. 1-Mar. 31....	13		
Peplin County.....	Jan. 1-Mar. 31....	2		
Pierce County.....	Jan. 1-Mar. 31....	4		
Polk County.....	Jan. 1-June 30....	19		
St. Croix County.....	Jan. 1-June 30....	65		
Sheboygan County.....	Jan. 1-June 30....	46		
Taylor County.....	Jan. 1-Mar. 31....	5		
Trempealeau County.....	Jan. 1-Mar. 31....	3		
Vernon County.....	Jan. 1-Mar. 31....	51		
Walworth County.....	Apr. 1-June 30....	1		
Washburn County.....	Jan. 1-June 30....	14		
Waukesha County.....	Jan. 1-Mar. 31....	5		
Waupaca County.....	Jan. 1-June 30....	27		
Waushara County.....	Jan. 1-Mar. 31....	1		
Winnebago County.....	Jan. 1-June 30....	17		
Wood County.....	Apr. 1-June 30....	2		
Total for State.....		770	4	
Grand total for the United States.....		5,358	27	

Plague in the United States.

[August 2–November 19, 1909.]

Place.	Date.	Cases.	Deaths.	Remarks.
California:				
Alameda County—				
Oakland.....	Oct. 26.....	1		
Sunol.....	Aug. 2-12.....	1	1	Case sickened July 27.
	Sept. 24.....	1		In vicinity of Sunol.

MORBIDITY AND MORTALITY.

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.
Ann Arbor, Mich.	Oct. 30	14,509	9	3											
Ashtabula, Ohio.	Nov. 6	12,949	7					1							
Altoona, Pa.	do.	38,973	4					1		1					
Baltimore, Md.	do.	508,957	16	28	22	2		8		17	1			10	1
Bayonne, N. J.	do.	32,722						7	0	1					
Beaver Falls, Pa.	do.	10,000	0	2											
Berkeley, Cal.	Oct. 23	13,214	8		1			1							
Biddeford, Me.	Nov. 6	16,145	16	1	1										
Binghamton, N. Y.	do.	38,647	18					1	2		5	2			1
Boston, Mass.	do.	560,892	75	31	18			31	1	59	3	44	2	4	1
Brockton, Mass.	do.	40,063	13	4	1	2				2					
Bridgeport, Conn.	Oct. 30	70,996	25	5	2			9	2	5			1		
Butler, Pa.	do.	10,853	8					1	4		2				
Cambridge, Mass.	Nov. 6	91,886	31	5	6	1		8		5	1	26			
Camden, N. J.	do.	75,935	14					3	0	5	1				
Carbondale, Pa.	do.	13,536	4							1		2			
Chicopee, Mass.	do.	19,167	12		1			1	1	1					
Cincinnati, Ohio.	do.	325,902	83	51	10	5	3	14		25		7			
Cleveland, Ohio.	Nov. 5	381,000	141	18	18	8	2	17		29	3	18		4	1
Chelsea, Mass.	Nov. 6	34,072	6	1	1			4							
Chicago, Ill.	do.	1,698,575	622	96	67	26		161	7	158	22	75	1	29	2
Clinton, Mass.	do.	13,667	5												
Coffeyville, Kans.	do.	10,000	3	1		2				3					
Columbus, Ohio.	do.	125,560	34	2	3	1	2	5		11	1	16			
Covington, Ky.	do.	42,938	13	1	1			1							
Danville, Ill.	do.	16,534	13	1	1			3		5					
Dayton, Ohio.	do.	85,333	38		5			2				1			
Detroit, Mich.	do.	285,704	136					42	1	33	2				
Duluth, Minn.	do.	8,000	24	3	2			5		9	1	2			
Dunkirk, N. Y.	do.	11,616	7					1				1			
Elizabeth, N. J.	Oct. 30	52,130	19		3	1	0	4		11		3			
Elkhart, Ind.	Nov. 6	5,000	4			1	1	1							
Elmira, N. Y.	do.	35,672	14	1	1	2									
El Paso, Tex.	Nov. 2	16,800	18	7	1	25		1		3	1				
Erie, Pa.	Nov. 6	52,733	15	6	3	1	1	8				2			
Evansville, Ind.	do.	59,007	21	3	1	1	1	12		9		1			
Everett, Mass.	do.	24,336	8		3	1		3		1					
Everett, Wash.	Oct. 30	7,838	4		1										
Fall River, Mass.	Nov. 6	104,863	47	2	4	4	1	7		3	2				
Findlay, Ohio.	do.	17,613	5					4		5	1				
Forest, Miss.	do.	14,316	0					1							
Frederick, Md.	do.	10,000			4							13			
Galesburg, Ill.	Oct. 31	18,607	8							1					
Gloucester, Mass.	Nov. 6	26,121	3												
Haverhill, Mass.	Nov. 9	37,175	11	1	1			3		2		1		2	
Hyde Park, Mass.	Nov. 6	13,244	3												
Indianapolis, Ind.	do.	169,164	46	5	2	12		19	1	49		27			
Jacksonville, Fla.	do.	28,429	16		2			3		1					
Jersey City, N. J.	Nov. 7	206,438	65		4	1		14		13	2	5			
Johnstown, Pa.	Nov. 6	35,936	26	4	1	1		4		2		6			
Joplin, Mo.	do.	26,023	9		1		1			2			1		
Kalamazoo, Mich.	do.	24,404						1						2	
Kansas City, Kans.	do.	51,418	2	3	2			3	1	12	1				
Kearny, N. J.	do.	10,896	2							1					
Knoxville, Tenn.	do.	32,637	8		2										
La Fayette, Ind.	do.	18,116	6	1											
Lancaster, Pa.	do.	41,459	5	1		2		5				2			
Lexington, Ky.	do.	26,369	10		1	1	1	1							
Los Angeles, Cal.	Oct. 30	103,000	82	13	11	11	1	13		1		23	2		
Lynn, Mass.	do.	68,513	18		4	1		1		6					
Lawrence, Mass.	do.	62,559	18	3	1	3	1	2		5	1	1			1
Lebanon, Ohio.	Nov. 6	17,628	7		1	2	1	1							
Lowell, Mass.	do.	94,969	38	3	5	2				9	3	8			
Lynchburg, Va.	do.	18,891												2	
Macon, Ga.	do.	23,262	6	1	1	1		1							
Malden, Mass.	Oct. 30	33,664	8	2		3		6							
Manchester, N. H.	Nov. 6	56,987	29	2		2		4	0	18	1	39			
Manitowoc, Wis.	do.	11,786	4					1							
Marinette, Wis.	do.	16,195	4			1	1	3	1	2					

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.
Massillon, Ohio.	Nov. 6	11,944	6					2	1	2					
McKeesport, Pa.	Oct. 23	34,227	11							2					
Medford, Mass.	Nov. 6	18,244	8	4	2							1			
Melrose, Mass.	Oct. 30	12,962	4	1				6							
Memphis, Tenn.	Nov. 6	160,000	45	6	4	1		4		9					
Milwaukee, Wis.	do.	285,315	96	18	11	9	1	70	5	32	4			1	4
Montclair, N. J.	do.	13,962	4	1		1		2		1		1			
Marlborough, Mass.	Oct. 30	13,609	3	1	1			1		1	1				
Mobile, Ala.	do.	38,469	21		2			1	1						
Morristown, N. J.	do.	13,000	16	2											
Mount Vernon, N. Y.	Nov. 6	21,228	3	1		1				1		1			
Nanticoke, Pa.	Nov. 7	12,616	5	1				1		1	1				
Nashville, Tenn.	Nov. 6	80,865	43	1	1	4		7	2	6	1				
Nebraska City, Nebr.	do.	7,200	3			4						2			
Newark, N. J.	do.	246,070	103	16	11	5		20	3	48	4				2
New Bedford, Mass.	do.	63,442	30	5	2	6	1	15	2			2			
New Brunswick, N. J.	Oct. 30	20,006						1		2		1			
Newburyport, Mass.	Nov. 6	14,478	6			1				3	2				
New Orleans, La.	do.	287,104	135	21	16	12	5	21		18		1			
Newport, Ky.	do.	28,300	11							1	0				
New York, N. Y.	do.	3,437,202	386	140	96	16	167	10	303	29		161	8	32	8
Niagara Falls, N. Y.	do.	19,457	6	1	3	11									
Norristown, Pa.	do.	22,265	4	2	1	2		3							
North Adams, Mass.	do.	24,200	6	1											
Northampton, Mass.	do.	18,643	6	1		1									
Orange, N. J.	do.	24,141	14	1	3			1		2	1				
Ottumwa, Iowa.	do.	18,176	3												
Palmer, Mass.	do.	7,801	1			1				3					
Peekskill, N. Y.	do.	15,473	4	1						1					
Philadelphia, Pa.	Nov. 5	1,293,697				29	6	39	4	61	7	8			
Pittsfield, Mass.	Nov. 6	21,766	7												
Plainfield, N. J.	do.	15,369	4	2		2		6		1					
Portsmouth, N. H.	do.	10,637								2					
Pottstown, Pa.	do.	16,000	2					3							
Providence, R. I.	do.	175,597	35	13	2	5	1	12		7			2		
Reading, Pa.	Nov. 8	78,961	24	1	2	12	1	2		5		1			
Rutland, Vt.	Nov. 6	11,499	2					1							
St. Louis, Mo.	do.	575,235	192	30	21	16		21	2	37	3	11		13	1
San Antonio, Tex.	Aug. 28	53,321	2			7				1					
Sandusky, Ohio.	Oct. 30	19,664	3												
San Francisco, Cal.	do.	342,782	124	30	21	1		6		4		6		9	2
San Jose, Cal.	do.	25,000	6												
Schenectady, N. Y.	do.	31,682	13		1										1
Sioux City, Iowa.	Oct. 31	33,111						10		11	1				
Somerville, Mass.	Nov. 6	61,643	14	2		3	1	8		7					
South Bend, Ind.	do.	35,999	16	3	3	1		1							
South Bethlehem, Pa.	do.	8,000	6	2											
Spokane, Wash.	Oct. 30	38,848	23		2	15	1	10		2		8			
Springfield, Mass.	Nov. 6	62,059	22		2	4		5		12	1	3			
Steeltown, Pa.	do.	12,086	2							2		12			
Superior, Wis.	do.	31,091	4					2		1					
Tacoma, Wash.	Oct. 31	37,000	19		1	13		6		9					
Taunton, Mass.	Nov. 6	31,036	20	3		1	1							1	2
Tell City, Ind.	do.	18,993	2			1									
Titusville, Pa.	do.	8,244	4					5							
Trenton, N. J.	do.	73,307		3	1	1		9		3					
Vincennes, Ind.	do.	10,248	1					2							
Waltham, Mass.	do.	23,481	9	2		1		1		1					
Warren, Ohio.	do.	8,529	1												
Washington, D. C.	Oct. 30	278,718	112	17	12	25	4	15		21				2	
West Newton, Mass.	Nov. 6	33,587	12	1				3	1	2					
Weymouth, Mass.	do.	11,324	3												
Wheeling, W. Va.	Oct. 30	38,875	14		2	2				2					
Wichita, Kans.	Nov. 6	24,671	10	3		9	1			1		1			
Wilkes-Barre, Pa.	Nov. 5	51,721	19	4	1	4		6		1		2		9	
Wilkinsburg, Pa.	Nov. 7	13,000	9			4		1							
Williamsport, Pa.	Nov. 6	28,757	8		2	1	1	7		1					
Wilmington, Del.	do.	76,508	25		1					1					1
Woburn, Mass.	do.	14,254	3					1		2					
Worcester, Mass.	Oct. 30	118,421	36	3	3	3	1	5		14	1	1		1	
Zanesville, Ohio.	Nov. 6	23,000	5		1			2		1					

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

CONNECTICUT—*Stamford*.—Month of October, 1909. Cases: Enteric fever 5, scarlet fever 31, diphtheria 1, measles 1, tuberculosis 3.

ILLINOIS—*Peoria*.—Month of October, 1909. Total number of deaths 69, including diphtheria 2, tuberculosis 8. Cases: Smallpox 9, scarlet fever 1, diphtheria 15, tuberculosis 2.

Quincy.—Month of October, 1909. Total number of deaths 32, including tuberculosis 3. Cases: Enteric fever 2, diphtheria 9.

INDIANA—*Jeffersonville*.—Month of October, 1909. Total number of deaths 13, including diphtheria 1. Cases: Scarlet fever 1, diphtheria 6.

Muncie.—Month of October, 1909. Total number of deaths 29, including enteric fever 3, diphtheria 1. Cases: Enteric fever 8, scarlet fever 1, diphtheria 3, tuberculosis 3.

IOWA—*Cedar Rapids*.—Month of October, 1909. Total number of deaths 35, including enteric fever 4, tuberculosis 2. Cases: Diphtheria 1.

Sioux City.—Month of October, 1909. Deaths include 1 from diphtheria. Cases: Scarlet fever 10, diphtheria 11.

FOREIGN AND INSULAR.

BARBADOS.

Bridgetown—Inspection of vessels.

Acting Assistant Surgeon Urquhart reports, October 31:

Eight days ended October 31: Bills of health issued to 9 vessels, having a total of 461 members of crews and 70 passengers. One vessel was fumigated. The sanitary condition of vessels, cargoes, crews, and passengers was good. The sanitary condition of the port remains good; no quarantinable disease was reported for the port or island during the week.

CHINA.

Amoy—Inspection of vessels—Cholera and plague.

Passed Assistant Surgeon Foster reports, October 4:

Week ended October 2. One bill of health was issued from this office. September 30 the British steamship *Taisang* with 65 in crew, 19 cabin and 70 steerage passengers for Manila, was granted an original bill of health. One Chinese was rejected for favus. The crew and steerage passengers were bathed and their clothing was disinfected by steam. All on board were inspected at the time of sailing. Manifests were viséed for 1,420 pieces of freight. Vessel anchored in the stream while in port.

In Amoy there were 33 deaths from plague and 28 deaths from cholera. In the international settlement of Kulangsu there were 3 deaths from cholera.

Week ended October 9. No bills of health issued from this office. There were 38 deaths from plague and 37 from cholera in Amoy.

COSTA RICA.

Limon, fruit port.

Acting Assistant Surgeon Harris reports:

Week ended October 31. Estimated population, 8,000. General sanitary condition of this port and the surrounding country during the week, good. Prevailing diseases were uncinariasis, tuberculosis, and malaria.

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.
Oct. 26	Zent.....	55	1	0	0
27	Abangarez.....	88	5	33	0
30	Parismina.....	85	8	44	0
30	San Jose.....	44	8	0	0

CUBA.

Cienfuegos—Inspection of vessels.

Acting Assistant Surgeon Suarez reports, November 1:

Week ended October 30.

Vessels inspected.....	4
Bills of health issued.....	4
Members of crews inspected.....	116

No quarantinable disease reported.

Santiago—Inspection of vessels—House inspection.

Acting Assistant Surgeon Wilson reports, November 3:

Week ended October 30. Bills of health issued to 6 vessels bound for the United States and its dependencies. No vessel disinfected. No quarantinable disease reported.

The sanitary department reports that 2,936 houses were inspected.

GUATEMALA.

Puerto Barrios, fruit port.

Acting Assistant Surgeon Ames reports:

Week ended October 31. Present officially estimated population, 350. 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.
Oct. 25	Cartago.....	New Orleans via Belize.....	83	22	1
28	Belize.....	Mobile via Belize.....	17	0	0
29	Preston.....	New Orleans via Belize.....	29	0	3

HAWAII.

Plague-prevention work.

Chief Quarantine Officer Hobdy reports, October 25:

HONOLULU.

Last case rat plague (Aiea), 9 miles from Honolulu, August 22, 1907.

Last case human plague, Honolulu, July 17, 1907.

Week ended October 23.

Total rats taken.....	598
Trapped.....	575
Found dead.....	0
Shot from trees.....	23
Examined bacteriologically.....	429
Plague rats found.....	0

Classification of rats trapped:

<i>Mus alexandrinus</i>	72
<i>Mus musculus</i>	221
<i>Mus norvegicus</i>	102
<i>Mus rattus</i>	180

Classification of rats shot from trees:

<i>Mus alexandrinus</i>	7
<i>Mus rattus</i>	14

Average number of traps set daily..... 1, 294

HILO.

Last case rat plague (Hanomu), Hilo, October 11, 1909.

Last case human plague (Pepeekeo), Hilo, October 4, 1909.

Week ended October 23.

Rat cases referred to laboratory for bacteriological diagnosis..... 1

HONDURAS.

Ceiba, fruit port.

Acting Assistant Surgeon Jumel reports:

Week ended October 31. Present officially estimated population, 6,800. General sanitary condition of this port and the surrounding country during the week, good. The prevailing disease is malaria.

Bill of health issued to the following-named vessel:

Date.	Vessel.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.	Pieces of baggage disinfected.
Oct. 29	Rosina	33	8	2	0

INDIA.

Calcutta—Cholera and plague.

Acting Assistant Surgeon Allan reports, October 14:

Week ended October 2. There were 8 deaths from cholera and 11 from plague in Calcutta.

In Bengal there were 48 cases and 31 deaths from plague. In all India during the same period there were 4,377 cases and 3,460 deaths from plague.

Week ended October 9. Bill of health was issued to the steamship *Koranga*, bound for Philadelphia and New York, with a total crew of 64; to the steamship *Amberton*, bound for Boston and New York, with a total crew of 31; and to the steamship *Lichtenfels*, bound for Boston and New York, with a total crew of 61. The usual precautions were taken, holds were fumigated, rat guards placed on wharf lines, and Asiatics' effects disinfected.

ITALY.

Naples—Examination of emigrants—Smallpox.

Surgeon Geddings reports, October 25:
Week ended October 23. The following ships were inspected at Naples and Palermo:

NAPLES.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of baggage inspected and passed.	Pieces of baggage disinfected.
Oct. 17	Principe di Piemonte.....	New York.....	252	50	420
18	Verona.....	Philadelphia.....	497	110	680
19	Venezia.....	New York.....	535	120	660
19	Cretic.....	do.....	590	140	830
20	Ulonia.....	do.....			
23	Manuel Calvo.....	do.....	171	20	280
	Total.....		2,045	440	2,860

PALERMO.

Oct. 18	Principe di Piemonte.....	New York.....	217	125	50
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Rejections recommended.

NAPLES.

Date.	Name of ship.	Trachoma.	Favus.	Suspected trachoma.	Suspected favus.	Other causes.	Total.
Oct. 17	Principe di Piemonte.....	19		4		5	28
18	Verona.....	38	3	22		8	71
19	Venezia.....	12	1	7		7	27
19	Cretic.....	13	1	8	1	7	30
20	Ulonia.....						
23	Manuel Calvo.....	8	1	5		3	17
	Total.....	90	6	46	1	30	173

PALERMO.

Oct. 18	Principe di Piemonte.....	9		8		2	19
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Smallpox in Naples.—During the week ended October 24 there were 9 cases of smallpox with 1 death reported at the health office of the city of Naples.

Typhus fever in Naples.—During the week ended October 24 there was 1 case of typhus fever reported at the health office of the city of Naples.

JAPAN.

Kobe—Inspection of vessels—Plague—Cholera at Kyoto.

Acting Assistant Surgeon Knight reports, October 14 and 21.

Week ended October 9: Supplemental bills of health were granted to 4 steamships and an original bill of health to 1. There were inspected 958 members of crews and 725 steerage passengers. Thirty-five members of crews and 243 steerage passengers were bathed and had their effects disinfected by steam. The number of pieces of bag-

gage steamed was 896 and bedding 116. Manifests were viséed for 45,918 pieces of freight, amounting to 4,601 tons. During the week 22 cases of human hair and 8 cases of personal effects were disinfected with formalin.

Emigrants examined.—For steamship *Tango Maru*, for Seattle, passed 23, recommended for rejection 27; for steamship *Siberia*, for Honolulu, passed 240, recommended for rejection 25. The emigrants passed to Honolulu by the steamship *Siberia* included 212 Russians. They were inspected and bathed and their effects disinfected. The Russian emigrants were detained 3 days in quarantine at Ono before embarkation. The Japanese emigrants were 7 days in quarantine detention at Ono.

The official returns of infectious diseases for the week showed there were reported in Kobe 10 cases of plague with 9 deaths.

Week ended October 16. Supplemental bills of health were granted to 6 steamships and an original bill of health to 1 steamship. There were inspected 499 members of crews and 402 steerage passengers, and 76 members of crews and 43 steerage passengers were bathed, and had their effects disinfected by steam. The number of pieces of baggage steamed was 296, and bedding 62. Manifests were viséed for 36,967 pieces of freight, amounting to 2,417 tons. During the week 12 cases of human hair were disinfected with formalin.

Emigrants examined.—For steamship *Tacoma Maru* for Tacoma, passed 11, recommended for rejection 10; for steamship *China* for Honolulu, passed 31, recommended for rejection 18; for San Francisco, passed 1, recommended for rejection 1. The emigrants passed to Honolulu by the steamship *China* include 12 Russians who were inspected and bathed, and had their effects disinfected. The emigrants were 7 days in quarantine detention at Ono before embarkation.

The official returns of infectious diseases for the week show that there were reported in Kobe 18 cases of plague with 14 deaths. The increase in the number of cases of plague is in the same foci as previously reported.

There were reported from Kyoto, under date of October 19, 191 cases of cholera, of which 98 were fatal; 92 cases being still under treatment and 1 recovered.

Yokohama—Inspection of vessels—Cholera.

Passed Assistant Surgeon Cumming reports, October 20:

Week ended October 16. Bills of health issued to the following vessels: *Coulsdon*, for New York; *Siberia*, for San Francisco via Honolulu; *Tango Maru*, for Seattle; *Kumeric*, for Manila; *Yawata Maru*, for Manila; *Tacoma Maru*, for Seattle; *Oanfa*, for Seattle; *Amiral Duperre*, for San Francisco.

The holds, forecastle, and storerooms of the *Coulsdon* and *Yawata Maru* were fumigated with sulphur to destroy rats.

No quarantinable disease has been reported in this section of the Empire; but in Kyoto 150 cases of cholera, with 50 deaths, were reported to date.

Cholera cases are reported from Wakamatsu and 4 cases from Moji.

Plague and cholera have been reported at Matsuyama, near Kobe, and plague at Kochi, Shikoku Island. Cases of plague have occurred in Osaka and the price of rats has been raised to 10 sen per head.

Week ended October 23. Bills of health issued to the following vessels: *Bessie Dollar*, for San Francisco; *Suveric*, for Seattle; *China*, for San Francisco via Honolulu; *Ghazee*, for New York via Suez; *Cyclops*, for Manila.

The *Ghazee* was fumigated throughout and many rats were killed. This port and vicinity remain free from quarantinable disease.

KOREA.

Cholera in Korea.

Vice-Consul-General Gould reports, September 23:

Cholera has become epidemic in Seoul, Chemulpo, Fusen, and Pyeng Yang, Korea. In Seoul 260 cases were reported to the authorities, of which 146 were fatal.

Vice-Consul-General Gould further reports, September 29:

Cholera continues to be epidemic in Seoul. There is a gradual increase in the number of deaths and new cases, there being about 100 new cases daily. Of the 1,072 reported cases, 651 died. The Koreans are suffering more than the Japanese. It is reported that along the Yalu River there are many cases. In Seoul the local authorities have closed the wells and are taking precautions against the sale of bad fruit and are enforcing quarantine measures.

MEXICO.

Report from the superior board of health of Mexico.

In compliance with articles 1 and 2 of the International Sanitary Convention held at Washington, October 14, 1905, the president of the superior board of health of Mexico reports that for the week ended October 30 no case of nor death from yellow fever was registered in the Republic of Mexico, and that prophylactic measures against the disease continue to be carried out.

Salina Cruz.

Acting Assistant Surgeon Gochicoa reports, November 1:

During the period September 16 to October 31, inclusive, the following vessels were inspected and fumigated: September 24, the steamship *Virginian*, for San Francisco; September 27, the steamship *Nevadan*, for San Diego; October 8, the steamship *Mexican*, for San Francisco; October 9, the steamship *Manshu Maru*, for Honolulu; October 22, the steamship *Alaskan*, for San Francisco, and October 23, the steamship *Missourian*, for San Diego.

Veracruz—Inspection of vessels—Smallpox.

Acting Assistant Surgeon Carter reports, November 1:

Week ended October 31.

Bills of health issued.....	6
Vessels inspected.....	3
Vessels fumigated.....	3
Passengers inspected.....	155
Members of crews inspected.....	303

The sanitary condition of Veracruz remained good. Two new cases of smallpox and three deaths were reported.

MOROCCO.

Tangier—Plague at Casa Blanca.

Consul-General Robertson reports from Tangier, October 11:

There was reported October 4 a fatal case of bubonic plague at Casa Blanca, in the camp of the Senegalese (French) troops.

NETHERLANDS.

Jaarsveld—Cholera.

The following information was received through the Department of State, under date of November 8:

A fatal case of cholera occurred October 20 at Jaarsveld. This case has no connection with the last cases reported. All precautionary measures for the prevention of the spread of the disease have been taken.

NICARAGUA.

Bluefields, fruit port.

Acting Assistant Surgeon Layton reports:

Week ended October 26. Present officially estimated population, 3,000. General sanitary condition of this port during the week, good.

Bill of health issued to the following-named vessel:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
Oct. 23	Imperator	New Orleans.....	21	9	0

Week ended November 1: Present officially estimated population, 3,000. General sanitary condition of this port during the week, good.

Stegomyia calopus present in large numbers.

Bill of health issued to the following-named vessel:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
Nov. 1	Dictator .....	.....	22	8	0

PERU.

Callao—Inspection of vessels—Plague.

Acting Assistant Surgeon Gutierrez reports, October 20:

Week ended October 16. Two steamships were inspected and fumigated. They had an aggregate personnel of 136 members of crews, 46 cabin and 9 steerage passengers. Date of last case of plague in Callao, September 1. Information is received to the effect that plague is present in Chile at Antofagasta, Mejillones, and Iquique.

PHILIPPINE ISLANDS.

Manila—Inspection of vessels—Cholera—Smallpox.

Chief Quarantine Officer Heiser reports, September 21 and 28, October 6 and 13:

Week ended September 18. Fourteen cases of cholera, with 12 deaths, occurred in the city of Manila.

Cholera in the provinces.

Province.	Cases.	Deaths.
Albay.....	9	7
Camarines.....	57	44
Bataan.....	23	15
Bohol.....	19	11
Bulacan.....	41	34
Cagayan.....	2	1
Cebu.....	34	27
Oriental Negros.....	66	36
Pampanga.....	9	8
Rizal.....	9	8
Total.....	269	191

Consular bills of health issued: September 14, to the United States army transport *Buford*, en route from Manila to San Francisco; crew and steerage passengers were bathed, and their effects disinfected; ship partially disinfected. September 15, to the British steamship *Frankby*, en route from Newcastle, New South Wales, to Cebu, Philippine Islands. Personnel and cargo inspected and passed prior to sailing. September 15, to the British steamship *Dakotah*, en route from Manila to San Francisco. Personnel and cargo inspected prior to sailing.

Week ended September 25. Twenty-two cases of cholera, with 17 deaths, were reported in the city of Manila.

Cholera in the provinces.

Province.	Cases.	Deaths.
Camarines.....	28	18
Bataan.....	13	11
Bohol.....	15	5
Bulacan.....	22	18
Cebu.....	62	53
Leyte.....	6	3
Oriental Negros.....	45	45
Pampanga.....	17	12
Rizal.....	7	5
Tarlac.....	16	11
Total.....	231	181

Consular bills of health issued: September 20, to the American schooner *Atlas*, en route from Manila to New York; vessel fumigated; personnel and cargo inspected prior to sailing. September 23, to the British steamship *Suveric*, en route from Manila to Seattle; personnel and cargo inspected prior to sailing. September 23, to the American steamship *Siberia*, en route from Manila to San Francisco.

Week ended October 2. Fourteen cases of cholera, with 12 deaths, were reported for the city of Manila.

Cholera in the provinces.

Province.	Cases.	Deaths.
Camarines.....	48	36
Bataan.....	19	16
Bohol.....	15	9
Bulacan.....	13	4
Cavite.....	2	2
Cebu.....	67	55
Oriental Negros.....	78	57
Pampanga.....	9	8
Total.....	251	187

Consular bills of health issued: September 26, to the British steamer *Taiyuan*, en route from Hongkong to Australia via Zamboanga; personnel and cargo inspected prior to sailing. September 30, to the British steamer *Oanfa*, en route from Glasgow to Seattle and Tacoma; personnel and cargo inspected at hour of sailing. October 2, to the British steamer *Aragonia*, en route from Yokohama to New York and Boston; personnel and cargo inspected prior to sailing.

Week ended October 9. Twenty-three cases of cholera with 17 deaths were reported for the city of Manila.

Cholera in the provinces.

Provinces.	Cases.	Deaths.
Camarines.....	48	31
Bataan.....	27	23
Bohol.....	5	6
Bulacan.....	26	15
Oriental Negros.....	70	42
Tarlac.....	10	6
Rizal.....	5	4
Cebu.....	56	49
Cavite.....	2	2
Pampanga.....	4	4
Total.....	253	182

Smallpox.—A severe outbreak of smallpox occurred in the Province of Iloilo during July, particularly in the port of Iloilo. There were 119 cases and 98 deaths in July, and 118 cases and 44 deaths in August. In this connection it is worthy of mention that active vaccination was commenced during the first part of August, and while the number of cases did not greatly diminish, the death rate fell about 50 per cent, again demonstrating the efficacy of proper vaccination. During September active smallpox measures were continued, and the disease has practically disappeared in the port of Iloilo.

Cholera.—The number of cholera cases in Manila and the provinces has been about the same for the past week as was reported for the previous week. So far the efforts to confine the disease to the port of Cebu have been partially successful. A number of instances have occurred in which the disease was conveyed by passengers on the new railway line leading out of Cebu, but they were detected and isolated before there was an opportunity for them to become centers of infection. In this connection it is most interesting to observe that during the past few years, owing to the many miles of improved

highways which have been constructed, the great increase in the railway mileage, and the improvement in interisland transportation outside of ports of entry, cholera has spread with much greater rapidity than was the case when the means of communication were not as well established as now. This disadvantage has been in part offset by the improved organization and by the fact that it is more simple now to rush supplies and men over these better roads.

During the past 2 weeks most of the cholera cases have been found in persons who were reported to have died of meningitis. Out of 10 cases that were reported with this diagnosis, in 8, on autopsy, the cholera organism was recovered from the intestines. Owing to these erroneous diagnoses, the bureau of health is having autopsies made upon all cases in which there could be any possible doubt as to the cause of the death. In this way a number of additional cholera cases has been found. The disease shows no tendency to spread, and it is now hoped that a general outbreak can be avoided.

Consular bills of health issued: October 4, to the United States army transport *Dix*; personnel inspected on board prior to sailing. October 4, to the British steamship *Glenlyon*; personnel inspected on board prior to sailing. October 8, to the British steamship *Oceano*; personnel inspected on board at hour of sailing.

RUSSIA.

Libau—Cholera in St. Petersburg—Examination of emigrants.

Acting Assistant Surgeon De Forest reports, October 23:

Week ended October 22. In St. Petersburg there were 116 cases of cholera with 35 deaths. October 20, the steamship *Russia* sailed from Libau for New York with 1,106 passengers and 150 members of crew. All were in good physical condition and had been detained in Libau 5 days under observation. Three hundred and thirty-seven pieces of baggage were disinfected by formaldehyde gas.

ST. LUCIA ISLAND.

Castries—Inspection of vessels.

Acting Assistant Surgeon Maylie reports, October 11 and 18:

Week ended October 9. Vessels inspected, 12; fumigated, 10. Week ended October 16. Vessels inspected, 9; fumigated, 8.

Sanitary condition of port and island good. No quarantinable diseases reported.

SUMATRA.

Cholera on the east coast.

Consul Rairden at Batavia, Java, reports, September 29:

Cholera has appeared at Palembang, east coast of Sumatra, and September 28 this place was officially declared infected.

VENEZUELA.

La Guaira—Inspection of vessels.

Acting Assistant Surgeon Kellogg reports, October 24:
Week ended October 23:

Bills of health issued.

Date.	Vessel.	Destination.	Crew.	Passengers in transit.	Passengers taken.
Oct. 19	Montserrat.....	Porto Rio.....	118	25	44
20	Caracas.....	New York.....	69	0	7
20	Citta di Milano.....	Colon.....			21
23	Versailles.....	do.....	151	48	3

ZANZIBAR.

Zanzibar—Examination of rats.

Consul Garrels reports, October 5:
Week ended September 30. Number of rats examined for plague infection, 1,660. No infection found.

Cholera, yellow fever, plague, and smallpox.

[These tables include cases and deaths recorded in reports received by the Surgeon-General, Public Health and Marine-Hospital Service, from American consuls through the Department of State and from other sources from June 26 to November 19, 1909. For reports received from December 25, 1908, to June 25, 1909, see PUBLIC HEALTH REPORTS for June 25, 1909. In accordance with custom the tables of epidemic diseases are terminated semiannually and new tables begun.]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Belgium:				
Antwerp.....	Oct. 26-30.....	9	6	At Boom, 10 miles distant.
China:				
Amoy.....	June 13-Oct. 9.....		326	
Chefoo.....	Aug. 28.....		5	Among Europeans; Sept. 11, epidemic.
Hankow.....	July 17-Sept. 11....	13	5	Sept. 25, still present among natives.
Kang Thau.....	Apr. 1-June 30.....	4	2	
Shanghai.....	July 26-31.....	3	1	On s. s. Hudson; Aug. 7, present among foreigners and natives; Oct. 2, still present among natives.
Kulangsu.....	Oct. 2.....		3	
Swatow.....	May 11-29.....			Present in vicinity; Aug. 28, 3 cases, 2 deaths, on s. s. Walshing.
Germany:				
Andreschen district.....	Nov. 1.....	3		
Heydekrug district.....	Oct. 20-Nov. 1.....	4		
Konigsberg.....	July 21.....		1	
Ladian district.....	Nov. 1.....	3		
Niederung district.....	Oct. 16-Nov. 1.....	3	2	
Pakalisne.....	Sept. 20.....	2	1	Near Russ.
Stoltzenhagen.....	Sept. 18.....		1	25 miles from Stettin.
Tilsit.....	Oct. 11.....		1	
India:				
Bombay.....	May 30-Oct. 12.....		417	
Calcutta.....	May 16-Oct. 2.....		941	
Madras.....	May 29-Aug. 20.....		7	
Negapstam.....	May 8-Sept. 17.....		7	
Rangoon.....	May 16-Sept. 25.....		65	
Indo-China:				
Saigon.....	May 9-July 24.....	23	17	

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

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Japan:				
Amagasaki.....	Aug. 14-21.....	4	.....
Kagawa, prefecture.....	Aug. 8-14.....	7	.....
Karatsu.....	Sept. 1-9.....	11	2	On s. s. Taian Maru.
Kobe.....	Sept. 6-13.....	3	1	July 31, 1 case on s. s. Mile.
Kyoto.....	Oct. 10-26.....	200	98	
Moji.....	Oct. 9-16.....	4	.....
Shikoku, island:				
Matsuyama.....	Oct. 20.....	.....	.....	Present.
Wakamatsu.....	Oct. 16.....	.....	.....	Do.
Java:				
Batavia.....	Sept. 12-Oct. 2....	217	101	Among natives and Chinese.
Korea:				
Korea.....	Aug. 28.....	.....	.....	Epidemic in northern part.
Chemulpo.....	Sept. 11-23.....	.....	.....	Epidemic.
Seoul.....	Sept. 19-29.....	1,072	651	Sept. 29, epidemic at Fusen Peng Yan and along the Yalu River.
Manchuria:				
Dalny.....	Aug. 11-Oct. 9....	27	22	Case Aug. 11 on s. s. Kobe Maru.
Liaoyang.....	Aug. 10.....	.....	1	
Mukden.....	Aug. 14.....	.....	1	
Tashihchiao.....	Aug. 11.....	.....	1	
Yinkou.....	Aug. 14.....	6	1	
Netherlands, The:				
Aug. 20-Sept. 4....		.....	.....	5 deaths among boatmen from Rotterdam.
Amsterdam.....	Sept. 10.....	1	1	
Breda.....	Aug. 30-Sept. 4....	1	.....
Dirksland.....	Sept. 10.....	1	.....
Dordrecht.....	Aug. 30.....	.....	.....	Present.
Gorkum.....	Aug. 30-Sept. 4....	1	.....
Hansweert.....	Sept. 27-Oct. 2....	3	.....
Hattem.....	Oct. 1-8.....	4	1	
Holsteren.....	Sept. 1-7.....	1	.....
Hoogvliet.....	Sept. 1-7.....	1	.....
Lopik.....	Sept. 27-Oct. 2....	2	.....
Middleburg.....	Sept. 4.....	1	.....
Pernis.....	Sept. 1-7.....	2	.....
Rotterdam.....	Aug. 20-Sept. 11..	34	15	
Tholen.....	Sept. 4.....	1	.....
Uithorn.....	Aug. 30-Sept. 4....	1	.....
Utrecht, province—				
Jaarsfeld.....	Oct. 20.....	1	1	
Utrecht.....	Sept. 4.....	1	.....
Vlaardinger.....	Sept. 4.....	1	.....
Philippine Islands:				
Manila.....	July 11-Oct. 9....	106	81	Fourth quarter 1908, 308 cases and 190 deaths; first quarter 1909, 1 death (imported); sec- ond quarter 1909, no cholera.
Provinces:				
Fourth quarter 1908, 7,330 cases and 4,292 deaths; first quarter 1909, 2,221 cases and 1,405 deaths; second quarter 1909, 961 cases and 630 deaths.				
Albay.....	Aug. 27-Sept. 18..	262	265	
Ambos Camarines.....	July 4-Oct. 9.....	645	464	
Bataan.....	Sept. 5-Oct. 9.....	93	74	
Bohol.....	Aug. 28-Oct. 9.....	107	64	
Bulacan.....	July 4-Oct. 9.....	316	327	
Cagayan.....	July 11-Sept. 18..	222	117	
Cavite.....	Sept. 16-Oct. 2....	4	4	
Cebu.....	May 16-Oct. 9.....	345	266	
Dapitan.....	May 9-15.....	.....	.....	Present.
Ilocos Norte.....	Aug. 15-Sept. 11..	125	64	
Iloilo.....	May 23-June 19....	28	18	
Isabela.....	July 18-24.....	5	4	
Leyte.....	June 6-Sept. 25....	28	14	
Moro.....	May 29-July 3.....	9	9	
Mountain.....	June 20-26.....	27	15	
Negros Occidental.....	May 9-15.....	8	2	
Negros Oriental.....	May 16-Oct. 9.....	766	540	
Pampanga.....	May 9-Oct. 9.....	617	300	
Pangasinan.....	June 13-19.....	1	.....
Rizal.....	July 25-Oct. 9.....	23	19	
Samar.....	May 9-July 10.....	42	26	
Sorsogon.....	May 9-15.....	8	2	
Tarlac.....	July 4-Oct. 9.....	54	40	
Russia, general.....	May 23-Oct. 10....	11,777	4,944	July 23, present in Kreutzburg, Mahlgraben, Muravjevo, Pi- nega, Radswilischki, Reval, Schaulen, and Tver.

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

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Russia—Continued.				
Alexandrovsk.....	Aug. 28-Oct. 1.....	10	8	
Archangel.....	June 26-Oct. 1.....	355	191	
Astrachan.....	Sept. 17-Oct. 1.....	14	7	
Baku, government.....	July 4-Oct. 1.....	2	.....
Chmalysk, district.....	July 1.....	1	.....
Courland.....	July 6-Oct. 1.....	245	107	
Cronstadt.....	June 30-Sept. 17.....	66	26	
Dorpat.....	Aug. 14-20.....	1	.....
Drissa.....	July 23-Sept. 17.....	38	17	
Esthonia, government.....	July 1-Aug. 21.....	4	3	
Finland, general.....	July 16.....	1	.....
Mariengam.....	June 23-24.....	1	1	
Viborg.....	July 9-16.....	1	.....
Gadjatschesk.....	Aug. 3-Sept. 3.....	53	18	
Griva.....	Sept. 25-Oct. 1.....	128	56	
Hungerburg.....	July 30-Oct. 1.....	11	7	
Jaroslav, government.....	Sept. 11-Oct. 1.....	361	177	
Jaroslav.....	July 4-Oct. 1.....	470	237	
Kem.....	Aug. 8-Oct. 1.....	47	24	
Kharkov.....	Aug. 1-Sept. 3.....	20	10	
Kherson.....	Oct. 1.....	1	.....
Kief.....	Sept. 11-Oct. 1.....	26	17	July 30, present.
Kostroma.....	July 23-Oct. 1.....	136	64	
Kretsky, district.....	July 1.....	1	.....
Livonia.....	July 5-Aug. 21.....	85	41	
Mitau.....	July 15-Oct. 1.....	28	17	
Mohileve, government.....	Aug. 2-Oct. 1.....	131	67	
Moscow.....	July 9-Oct. 9.....	26	9	
Nishni Novgorod.....	July 4-Sept. 17.....	57	31	
Novgorod, government.....	July 4-Oct. 1.....	393	131	
Olonez, government.....	June 20-Aug. 14.....	11	7	
Pern.....	Aug. 2-Oct. 1.....	27	11	
Polotzk.....	June 27-Oct. 1.....	711	202	
Poltava, government.....	Aug. 15-Oct. 1.....	105	47	
Pskov.....	July 1-Sept. 17.....	120	42	
Reval.....	Aug. 21-27.....	2	.....
Riga.....	July 1-Oct. 16.....	327	129	
Rjasin.....	June 24-July 6.....	3	3	
Rubinsk.....	July 30-Sept. 17.....	185	103	
Samara.....	Aug. 15-17.....	5	2	
Saratov.....	Aug. 15-Oct. 1.....	7	1	
Simbirsk.....	July 13.....	2	.....
St. Petersburg, government.....	June 9-Oct. 10.....	919	476	
St. Petersburg.....	June 2-Oct. 22.....	5,857	2,271	
Tver, government.....	Aug. 15-Oct. 1.....	348	81	
Viatka, government.....	July 6-24.....	2	.....
Vilna.....	July 11-Aug. 21.....	61	20	
Vitebsk, government.....	July 9-Sept. 17.....	703	261	
Vologda, government.....	May 31-Oct. 1.....	544	231	
Slam:				
Bangkok.....	Apr. 25-May 28.....	1	.....
Siberia:				
Vladivostok.....	Sept. 23-Oct. 1.....	32	14	
Straits Settlements:				
Singapore.....	May 9-Sept. 18.....	.....	20	
Sumatra:				
Djambi.....	July 15-Aug. 20.....	220	113	Among natives.
Palembang.....	Sept. 28.....	.....	.....	Present.
Sweden:				
Stockholm.....	Aug. 12.....	1	.....	Imported.

YELLOW FEVER.

Barbados, general.....	June 13-Aug. 14.....	2	1	St. Joseph Parish, December* to June, 14 deaths not previously reported.
Brazil:				
Bahia.....	May 22-Sept. 17.....	46	22	
Manaos.....	May 23-Aug. 14.....	.....	11	Apr. 24-May 1—2 deaths. Reported out of date.
Para.....	May 30-Oct. 16.....	66	56	
Pernambuco.....	Apr. 15-Aug. 31.....	.....	11	
British Guiana:				
Suddie.....	July 22.....	1	1	35 miles from Georgetown.
Ecuador:				
Guayaquil.....	May 23-Oct. 9.....	.....	56	

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

YELLOW FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Mexico:				
Merida.....	June 5-Oct. 21.....	13	5	Sept. 11, 2 cases imported from the district of Acanceh.
Tekik.....	Oct. 1.....	1		
Veracruz.....	Sept. 24.....		1	On s. s. Sonora.
Panama:				
Canal Zone—				
Ancon.....	Mar. 1-31.....			1 case at Culebra Island quarantine station, from a vessel, and 1 fatal case en route from Guayaquil.
Venezuela:				
Maquetia.....	Aug. 15-25.....	2	2	

PLAGUE.

Australia:				
Adelaide.....	Apr. 30-June 12...	2		And vicinity.
Bunbury.....	June 4.....	1		On s. s. Zoroaster.
Mackay.....	Jan. 21-June 6...	2	2	
Sydney.....	Apr. 18-May 29...	5	1	
Azores:				
Terceira.....	June 16.....	3	1	
Bahrein Island, Persian Gulf...	May 29-June 10...		6	
Brazil:				
Bahia.....	May 22-Oct. 8.....	42	34	
Rio de Janeiro.....	May 17-Oct. 10.....	7	3	
British East Africa:				
Kisumu.....	July 10-Aug. 24...	12	12	
Chile:				
Antofagasta.....	May 9-30.....	13	5	Oct. 16, still present.
Iquique.....	May 20-Sept. 22...	23	12	Do.
Mejillones.....	May 4-Oct. 16.....			Present.
China:				
Amoy.....	June 1-Oct. 9.....		1,102	
Canton.....	May 9-Aug. 7.....	325	211	
Chang-Poo.....	July 23.....			Epidemic.
Chinchew.....	May 22.....			Do.
Eng-Ta-Tau.....	July 1-31.....	11	4	
Hongkong.....	May 2-Aug. 18.....	92	83	
Kang-be.....	July 24.....	61	59	
Kang Thau.....	Apr. 1-July 31.....	125	62	
Pollam.....	May 23-29.....	8	7	
Swatow district.....	May 16-July 3.....		450	July 1, 200 cases still present in Touchowfu and Yin Shan.
Swatow.....	May 16-July 19.....		2	
Ecuador:				
Babohoyo.....	Sept. 21.....			Present.
Chunchi.....	June 1-30.....	3	1	
Duran.....	July 16-31.....	3		Sept. 21, again present.
Guayaquil.....	May 23-Oct. 9.....	149	90	
Huigra.....	May 1-June 15.....	16	3	
Egypt:				
Alexandria.....	May 30-Sept. 20.....	14	10	
Port Said.....	May 29-Sept. 21.....	14	5	
Provinces—				
Assiout.....	May 14-Sept. 28...	48	8	
Beherach.....	June 14-Sept. 8.....	37	14	
Galyoobeeyeh.....	June 2-Sept. 6.....	10	2	
Garbleh.....	June 2-Sept. 14.....	47	18	
Fayum.....	June 3-23.....	15	6	
Menouf.....	Jan. 18-Aug. 17.....	87	17	
German East Africa:				
Muanza district.....	Apr. 30-May 22.....		12	
Hawaii:				
Hilo.....	Aug. 19-Oct. 4.....	4	3	Cases Sept. 6 and 19 at Papakou.
Honolulu.....	July 20.....	1		The case arrived on the s. s. Korea, had been ill 11 days, and probably received infection at Hongkong.
Olaa plantation.....	Aug. 20-22.....	3	2	
India:				
Bombay Presidency and Sind.....	May 16-Sept. 4.....	5,548	4,150	
Madras Presidency.....	May 16-Sept. 4.....	1,944	1,217	
Bengal.....	May 16-Sept. 4.....	1,008	846	
United provinces.....	May 16-Sept. 4.....	4,202	3,615	
Punjab.....	May 16-Sept. 4.....	7,167	6,135	

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

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India—Continued.				
Burma.....	May 16-Sept. 4....	1,415	1,348	
Central provinces, including Berar.....	May 16-Sept. 4....	967	703	
Mysore State.....	May 16-Sept. 4....	1,364	972	
Central India.....	July 18-Sept. 4....	302	173	
Rajputana and Ajmer-Merwara.....	May 16-Sept. 4....	1,062	887	
Kashmir.....	May 16-June 12....	4	3	
Grand total.....		24,983	20,049	
Indo-China:				
Saigon.....	May 9-Sept. 13....	114	110	
Japan:				
Formosa.....	May 23-July 17....	223	156	In south and central parts.
Kobe.....	May 30-Oct. 16....	106	79	Hogoken, including Kobe, Jan. 1 to Oct. 22, 159 cases.
Osaka.....	July 4-10.....	1	1	Oct. 20, present.
Nagasaki.....	Sept. 11.....			Present on a vessel.
Shikoku, island.....	July 17-Aug. 3....	3	1	Oct. 20, present in Koki and Matsugama.
Shimonoseki.....	Sept. 11.....			Present.
Tokyo.....	June 26.....	3		
Yokohama.....	May 25-Aug. 7....	28	24	
Mauritius.....	Apr. 1-Sept. 9....	36	31	
Morocco:				
Casablanca.....	July 15-Oct. 4....		5	Among troops.
Peru:				
Arequipa, department.....	May 8-Sept. 23....	15	4	
Chala.....	July 3-15.....			Present.
Mollendo.....	July 3-15.....			Do.
Gajamarca, department.....	May 8-July 15....	20	6	
Callao, department.....	May 8-Aug. 12....	10	4	
Callao.....	June 20-Aug. 7....			Present. Sept. 1, again present.
Ica, department.....	July 3-Sept. 9....	2		
Lambayeque, department.....	May 8-Aug. 12....	18	11	
Eten.....	July 15.....			Present.
Libertad, department.....	May 8-Sept. 23....	26	13	
Salaverry.....	July 15.....			Do.
Lima, department.....	May 8-Sept. 23....	37	16	
Cerro Azul.....	July 15.....			Do.
Moquegua, department.....	July 16-29.....	6	2	
Ilo.....	July 15.....			Do.
Pescadores Islands.....	June 27-July 3....	4		From s. s. Lodore.
Piura, department.....	June 18-Sept. 23....	46	33	
Paíta.....	June 20-July 15....			Present.
Russia:				
Kirgisenaul.....	Aug. 5-8.....	19	18	In the Ural district to Aug. 14, 22 deaths.
Siam:				
Bangkok.....	Apr. 25-Aug. 28....	22	22	
Trinidad:				
Port of Spain.....	June 13-July 18....	6	5	
Turkey in Asia:				
Adalia.....	June 25-July 29....	5	3	
Beirut.....	June 25-July 4....	1		In Harrett Aryk.
Uruguay:				
Montevideo.....	May 1-June 30....		2	
Venezuela:				
Caracas.....	June 18-Aug. 16....	13	3	
Zanzibar.....	July 14-Oct. 26....	5	5	

SMALLPOX.

Algeria:				
Algiers.....	May 1-Sept. 30....	27	23	
Bona.....	June 1-Sept. 30....	53	28	
Arabia:				
Aden.....	Aug. 3-9.....		1	
Argentina:				
Buenos Aires.....	Mar. 1-Aug. 31....		74	
Rosario.....	Apr. 1-July 31....	3	3	
Austria:				
Bohemia.....	Sept. 26-Oct. 2....	1		Imported.
Gallcia.....	June 6-July 31....	6		
Silesia.....	June 20-Aug. 7....	17		

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

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Belgium:				
Antwerp.....	July 18-24.....	4		
Brazil:				
Bahia.....	May 22-Oct. 8.....	125	65	
Pernambuco.....	Apr. 1-Aug. 31.....		93	
Rio de Janeiro.....	May 17-Oct. 10.....	90	31	
Santos.....	May 10-16.....		1	
São Paulo.....	May 10-July 18.....		12	
Canada:				
British Columbia—				
Vancouver.....	June 1-July 31.....	4		
Nova Scotia—				
Halifax.....	June 13-Aug. 7.....	5		
Ontario—				
Hamilton.....	Sept. 1-30.....	2		
Quebec—				
Montreal.....	June 17.....			2 cases additional at Grosse Isle on s. s. Virginian.
Ceylon:				
Colombo.....	May 23-29.....	2		
Chile:				
Valparaiso.....	Oct. 10-16.....	2		May 16-Aug. 28, present.
Santiago.....	May 29-Aug. 21.....			Present.
China:				
Amoy.....	June 1-Sept. 11.....		32	May 9-15, present.
Eng-Ta-Tau.....	July 1-31.....	9		
Hankow.....	Aug. 21.....	1		Apr. 26-June 12, present among natives.
Hongkong.....	May 2-June 26.....	16	12	
Kang Chau.....	Apr. 1-June 30.....	7	1	
Newchwang.....	Aug. 1-14.....	2	1	
Shanghai.....	May 10-Oct. 3.....		9	Sept. 25, still present among natives. Sept. 4, 1 case on s. s. Wilmington.
Tientsin.....	June 27-July 3.....	1	2	
Egypt, general	Apr. 30-Oct. 7.....	1,601	371	
Alexandria.....	June 1-30.....	3		
Cairo.....	May 21-Sept. 30.....		20	
Suez.....	May 21-July 8.....	46	3	
Ecuador:				
Ensenada.....	Aug. 25.....			Epidemic.
Guayaquil.....	June 1-Aug. 10.....	3		In July, 4 cases and 1 death in vicinity.
France:				
Bordeaux.....	Sept. 4.....		1	
Marseille.....	June 1-Sept. 30.....		7	
Nantes.....	July 1-31.....	1		
Paris.....	May 23-Oct. 2.....	41	3	
Toulon.....	July 25-31.....		1	
Germany, general	May 30-Sept. 25.....	23		
Gibraltar.....	Aug. 8-Oct. 24.....	4		
Great Britain:				
Cardiff.....	July 6.....	1		
Liverpool.....	June 21-26.....	2		Case, June 22, from s. s. Canada.
London.....	Oct. 3-23.....	2		
Greece:				
Athens.....	Sept. 19-25.....		2	
Hungary:				
Budapest.....	Sept. 26-Oct. 9.....	2	1	
India:				
Bombay.....	May 26-Oct. 12.....		96	
Calcutta.....	May 16-Sept. 4.....		128	
Madras.....	May 22-Oct. 1.....		21	
Rangoon.....	May 12-Sept. 25.....		30	
Indo-China:				
Saigon.....	May 9-Aug. 7.....	21	20	
Italy, general	May 31-Oct. 24.....	361		
Genoa.....	June 1-Oct. 15.....	21		
Naples.....	May 31-Oct. 24.....	329	56	
Ottiana.....	June 23.....	1		
Rome.....	Mar. 7-13.....	1	1	
Japan:				
Formosa.....	June 13-19.....	1		
Moji.....	June 6.....	1		From s. s. Selja.
Osaka.....	Jan. 1-May 31.....	3		
Yokohama.....	June 1-7.....	1		
Java:				
Batavia.....	May 6-Sept. 11.....	31	1	
Malta:				
Valetta.....	Sept. 11-18.....	3		
Mauritius:				
Port Louis.....	Apr. 1-30.....	1	1	

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

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Mexico				Oct. 31, present at Orizaba, Puebla, and along the lines of railroad.
Acapulco.....	Oct. 19-25.....	1		
Aguascalientes.....	June 21-27.....		1	
Chihuahua.....	Aug. 16-22.....	1		
Guadalajara.....	June 11-Sept. 9.....		4	
Medellin.....	Oct. 31.....	1		Oct. 24, present in vicinity.
Mexico.....	May 16-Oct. 9.....		89	
Monterey.....	June 14-Oct. 31.....		30	
Soledad.....	Oct. 24.....	3		
Veracruz.....	June 1-Oct. 31.....	29	9	Aug. 12-Oct. 2, 7 cases imported from Medellin. Oct. 26, 1 case from Orizaba and 1 case on s. s. Montevideo.
Newfoundland:				
St. Johns.....	Sept. 4.....	3		
Norway, general.	Apr. 1-May 30.....	3		
Panama:				
Canal Zone—				
Ancon.....	Mar. 1-31.....	1		At Culebra Island quarantine station; from a vessel.
Persia:				
Khorassan.....	June 1-30.....			Epidemic.
Kurdistan.....	June 1-30.....			Do.
Mazanderan.....	July 1-31.....			Do.
Meshed-i-Sur.....	Sept. 30.....			Present in June; epidemic in vicinity.
Shiraz.....	May 1-31.....			Present.
Turbat-i-Haidari.....	May 1-31.....			Do.
Peru:				
Lima.....	July 4-10.....	1		In the lazaretto.
Mollendo.....	Aug. 28.....			Present.
Philippine Islands:				
Manila.....	May 9-July 31.....	17	7	Fourth quarter, 1908, 28 cases and 8 deaths; first quarter, 1909, 55 cases and 16 deaths; second quarter, 1909, 76 cases and 9 deaths.
Iloilo, province.....	July 1-Aug. 31.....	237	144	
Portugal:				
Lisbon.....	May 30-Oct. 9.....	150		
Russia:				
Libau.....	May 6-Aug. 1.....	4		
Moscow.....	May 16-Oct. 9.....	261	114	
Odessa.....	May 30-Oct. 9.....	106	22	
Riga.....	June 6-Oct. 2.....	74		May 1-July 31, 24 deaths.
St. Petersburg.....	May 16-Sept. 25.....	369	87	
Warsaw.....	Apr. 25-Sept. 18.....		29	
Slam:				
Bangkok.....	Apr. 25-June 28.....	2	1	
Siberia:				
Vladivostok.....	May 15-June 3.....	4	1	
Spain:				
Almeria.....	June 1-Sept. 30.....		14	
Barcelona.....	June 1-Oct. 25.....		77	
Huelva.....	May 1-Sept. 30.....		43	
Madrid.....	May 1-Sept. 30.....		461	
Seville.....	May 1-June 30.....		2	
Tarragona.....	July 20-26.....		1	
Valencia.....	May 20-Oct. 23.....	78	3	
Vigo.....	May 23-Oct. 16.....		18	
Straits Settlements:				
Penang.....	Aug. 15-21.....	1		
Singapore.....	May 16-July 10.....		2	
Switzerland:				
Argau, canton.....	June 20-26.....	1		
Fribourg, canton.....	June 13-19.....	1		
Geneva.....	May 30-June 26.....	9		
Tripoli:				
Tripoli.....	May 23-Aug. 28.....	84	17	Present in interior.
Turkey in Asia				Present.
Bagdad.....	May 9-Sept. 25.....			Do.
Bassorah.....	May 23-June 26.....			Do.
Hadjin.....	July 19.....			
Smyrna.....	May 7-Sept. 17.....		143	
Turkey in Europe:				
Constantinople.....	May 31-Oct. 24.....		10	
Uruguay:				
Montevideo.....	Apr. 1-July 31.....		16	

MORTALITY.

Weekly mortality table, foreign and insular cities.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—										
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Aguascalientes.....	Oct. 24	40,000	4	1										
Aix-la-Chapelle.....	Oct. 9	160,191	44	5										
Antwerp.....	Oct. 16	323,921	61	10									1	1
Bahia.....	Oct. 1	265,000	86	9		5		8						
Do.....	Oct. 8		97	8				7		1				
Barcelona.....	Oct. 18	600,000	310	17						7				
Barranquilla.....	Sept. 25	40,000	17	1				2				9		
Do.....	Oct. 2		19	2										
Do.....	Oct. 9		19	3										
Do.....	Oct. 16		21	2										
Belize.....	Oct. 28	9,113	8	1										
Berlin.....	Oct. 9	2,105,202	546	67						4	13	16	2	11
Birmingham.....	Oct. 23	558,336	151					1		1	2	1		1
Bombay.....	Oct. 5	977,822	585	47	15					3	3			
Breslau.....	Oct. 9	335,186	292	10					4	3	4	2	1	1
Bristol.....	Oct. 23	377,642	70	8								2	2	
Brussels.....	Oct. 16	704,975	174	13						2			1	2
Budapest.....	do	804,200								3	4	2		
Calcutta.....	Sept. 25	847,796	451	33	5	10								
Canton.....	Sept. 11	1,000,000	300	25						8				
Do.....	Sept. 18		350	30						10				
Do.....	Sept. 25		375	30						12				
Chemnitz.....	Oct. 16	277,988	77	6										
Chihuahua.....	Oct. 31	37,000	13	2										
Coburg.....	Oct. 16	23,374	4	1										
Cologne.....	do	471,872	135	15						2	1		1	5
Colombo.....	Sept. 25	183,872	103	16						7				
Constantinople.....	Oct. 17	1,000,000	186	18								1		
Copenhagen.....	Oct. 9	450,000	117	13						7		1	1	
Dalny.....	Oct. 2	38,364	24	2		7								
Dresden.....	Oct. 16	546,400	145	26						1		3		1
Dundee.....	Oct. 23	169,409	42	1								1		1
Erfurt.....	Oct. 16	107,497	39	1						1		1		
Fiume.....	do	50,811	16	7										
Frankfort on the Main.....	do	368,800	80									1		1
Georgetown.....	Oct. 2	56,000	44	3						1				
Do.....	Oct. 9		53	6						1		1		
Ghent.....	Oct. 16	164,579	34	2							1			
Gibraltar.....	Oct. 17	26,830	80	1										
Glasgow.....	Oct. 9	872,021	470								3	6	3	1
Gothenburg.....	Oct. 16	162,400	34	8										
Guadalajara.....	Oct. 21	125,000	65								2			
Hamburg.....	Oct. 16	872,252	224	25							1	8		4
Hilo.....	do	3,500	7							1				1
Hull.....	Oct. 23	275,552	77					2		1		3	1	
Kobe.....	Oct. 2	380,717		3								2		
Konigsberg.....	Oct. 16	240,000	99	3								1	2	1
La Guaira.....	Oct. 9	10,000	13	2						1				
Do.....	Oct. 16		10	3										
Leeds.....	Oct. 23	484,012	107											
Leipzig.....	Oct. 16	537,686	143	19						1	1	1		2
Liege.....	do	175,738	30	5									1	
Liverpool.....	Oct. 23	760,357	239	23						2	4	1	1	2
Madras.....	Oct. 1	509,346	371					2					3	
Manaos.....	Oct. 9	52,000	26	3										
Do.....	Oct. 16		31	5										
Mannheim.....	Oct. 9	184,152	42	11						1				
Matamoras.....	Oct. 30	8,000	4	1										
Mexico City.....	Oct. 2	400,000	338	28								1		1
Do.....	Sept. 25		338	32					20	1	3	2	3	
Moncton.....	Oct. 30	13,500	3							4		1		
Monterey.....	Oct. 24	100,000	56	4			1							
Moscow.....	Oct. 9	1,500,000	923	89		1					3	35	18	7
Munich.....	do	566,000	181	24								1	1	14
Do.....	Oct. 16		185	25								1		4
Nagasaki.....	Oct. 3	175,936	57	2						1				
Nottingham.....	Oct. 16	260,000	67							1		2		
Nuevo Laredo.....	Oct. 30	8,000	3	1										
Nuremberg.....	Oct. 2	316,180	98	7								1		1
Do.....	Oct. 9		80	9						1	2	1	1	2

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.
Paris.....	Oct. 16	2,776,394	751	171	.....	.....	.....	.....	.....	7	1	1	6
Do.....	Oct. 23	.....	750	181	.....	.....	.....	.....	.....	5	1	3	5
Para.....	Oct. 16	185,000	58	3	.....	.....	2	.....	.....	.....	.....	.....	.....
Pernambuco.....	Aug. 31	210,000	351	.....	.....	.....	1	11	.....	.....	.....	.....	.....
Rangoon.....	Sept. 18	252,155	202	8	.....	6	.....	.....	.....	.....	.....	10	.....
Do.....	Sept. 25	.....	193	7	3	4	.....	1	.....	.....	.....	.....	.....
Rio de Janeiro.....	Oct. 3	811,443	227	57	.....	.....	.....	.....	.....	.....	.....	2	1
Do.....	Oct. 10	.....	247	61	.....	.....	.....	.....	1	.....	.....	.....	.....
St. Petersburg.....	Oct. 2	1,678,000	790	108	.....	105	.....	11	5	11	20	18	13
Do.....	Oct. 9	.....	800	108	.....	104	.....	8	9	16	15	21	15
Do.....	Oct. 16	.....	791	103	.....	107	.....	9	2	22	21	29	11
Santa Cruz de Tenerife.....	Oct. 15	46,000	14	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shanghai.....	Sept. 25	565,000	259	21	.....	.....	.....	.....	.....	.....	.....	.....	.....
Southampton.....	Oct. 23	124,667	20	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stettin.....	Oct. 16	230,000	90	9	.....	.....	.....	.....	1	1	1	.....	1
Tarragona.....	do.....	20,400	10	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Tientsin.....	Sept. 11	750,000	18	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trinidad.....	Sept. 30	60,000	30	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Oct. 2	.....	37	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Oct. 9	.....	31	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turin.....	Oct. 14	381,439	116	16	.....	.....	.....	.....	2	.....	1	.....	.....
Valencia.....	Oct. 16	240,000	88	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Veraacruz.....	Oct. 23	32,000	30	2	.....	.....	.....	1	.....	.....	.....	.....	.....
Victoria.....	do.....	35,000	7	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vienna.....	Oct. 16	2,085,888	559	86	.....	.....	.....	.....	1	7	9	1	.....
Vigo.....	do.....	40,000	15	8	.....	.....	.....	1	.....	.....	.....	.....	.....
Warsaw.....	Sept. 11	764,054	299	49	.....	.....	.....	2	1	.....	10	1	8
Winnipeg.....	Oct. 30	122,000	38	1	.....	.....	.....	.....	.....	1	.....	2	.....

MORTALITY—FOREIGN AND INSULAR—COUNTRIES AND CITIES—
UNTABULATED.

ARGENTINE REPUBLIC—*Buenos Aires*.—Month of August, 1909. Estimated population, 1,209,536. Total number of deaths 1,644, including smallpox 23, typhus fever 10, scarlet fever 8, diphtheria 4, measles 15, whooping cough 2, tuberculosis 178.

CANADA—*Sherbrooke*.—Month of October, 1909. Estimated population, 15,300. Total number of deaths from all causes 23, including 1 from tuberculosis.

CUBA—*Matanzas*.—Ten days ended October 10, 1909. Estimated population, 36,009. Total number of deaths 18, including 2 from tuberculosis. Eleven days ended October 31, 1909. Total number of deaths 20, including diphtheria 1, tuberculosis 1.

Matanzas.—Ten days ended October 20, 1909. Estimated population, 36,009. Total number of deaths 20, including 2 from tuberculosis.

Matanzas.—Ten days ended September 30, 1909. Estimated population, 36,009. Total number of deaths 27, including 3 from tuberculosis.

DANISH WEST INDIES—*St. Thomas.*—Third quarter of 1909. Population, 11,000. Total number of deaths 68, including tuberculosis 8.

FRANCE—*Nice.*—Month of September, 1909. Population, 150,881. Total number of deaths 177, including enteric fever 3, scarlet fever 0, diphtheria 1, tuberculosis 18.

St. Etienne.—Two weeks ended October 15, 1909. Population, 150,000. Total number of deaths 88, including diphtheria 3, tuberculosis 9.

GREAT BRITAIN—*Salford.*—Two weeks ended October 9, 1909. Population, 241,950. Total number of deaths 164, including scarlet fever 6, diphtheria 4.

Scotland.—The deaths registered in 8 principal towns during the week ended October 16, 1909, correspond to an annual death rate of 12.8 per 1,000 of the population, which is estimated at 1,839,038. The highest rate of mortality was recorded in Perth, viz, 15.6, and the lowest in Leith, viz, 6.7, per 1,000 of population. The aggregate number of deaths registered from all causes was 456, including measles 2, scarlet fever 2, diphtheria 3, whooping cough 17.

Scotland.—The deaths registered in 8 principal towns during the week ended October 23, 1909, correspond to an annual death rate of 24.8 per 1,000 of population, which is estimated at 1,839,038. The aggregate number of deaths registered from all causes was 470, including measles 5, scarlet fever 3, diphtheria 11, whooping cough 5.

Ireland.—The average annual death rate represented by the deaths registered during the week ended October 23, 1909, in the 21 principal town districts of Ireland was 14.8 per 1,000 of population, which is estimated at 1,142,308. The lowest rate was recorded in Drogheda, viz, 4.1, and the highest in Armagh, viz, 27.5, per 1,000.

HUNGARY—*Budapest.*—Month of August, 1909. Total number of deaths 1,268, including smallpox 1, enteric fever 3, scarlet fever 3, and measles 1.

INDIA—*Rangoon.*—Month of August, 1909. Population estimated, 295,803. Total number of deaths 922, including smallpox 4, enteric fever 1, measles 1, plague 104, tuberculosis 31.

ITALY—*Genoa.*—Two weeks ended October 15, 1909. Population 279,163. Total number of deaths 165, including tuberculosis 24.

RUSSIA—*Odessa.*—Two weeks ended October 9, 1909. Estimated population 520,000. Total number of deaths 263, including smallpox 5, enteric fever 9, scarlet fever 22, diphtheria 4, measles 5, whooping cough 1, tuberculosis 25.

SPAIN—*Almeria.*—Month of September, 1909. Estimated population 50,910. Total number of deaths 109, corresponding to an annual death rate of 2.14 per 1,000 of population, including smallpox 3, enteric fever 7, scarlet fever 1, diphtheria 1, whooping cough 0, tuberculosis 5.

Cadiz.—Month of September, 1909. Population 69,382. Total number of deaths 147, including enteric fever 2, scarlet fever 1, whooping cough 13, and tuberculosis 20.

Huelva.—Month of September, 1909. Estimated population 24,000. Total number of deaths 92, including smallpox 14, enteric fever 1, diphtheria 3, tuberculosis 2.

Malaga.—Month of September, 1909. Estimated population 135,000. Total number of deaths 257, including enteric fever 2, diphtheria 3, tuberculosis 23.

URUGUAY—*Montivideo*.—Month of August, 1909. Estimated population 318,908. Total number of deaths 489, including smallpox 8, enteric fever 2, scarlet fever 19, diphtheria 5, measles 1, tuberculosis 53.

The following cases of, and deaths from, smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended November 19, 1909:

SMALLPOX—UNITED STATES.

Place.	Date.	Cases.	Deaths.	Remarks.
California:				
Sacramento.....	Oct. 17-23.....	1	.....
Georgia:				
Macon.....	Oct. 30-Nov. 6.....	3	.....
Illinois:				
Danville.....	Oct. 30-Nov. 6.....	2	.....
Kansas:				
Kansas City.....	Oct. 30-Nov. 6.....	1	.....
Kentucky:				
Lexington.....	Oct. 24-30.....	1	.....
Minnesota:				
Duluth.....	Oct. 30-Nov. 6.....	1	.....
Mississippi:				
Holly Springs.....	Oct. 30-Nov. 6.....	3	.....
Montana:				
Butte.....	Oct. 15-21.....	7	.....
Tennessee:				
Memphis.....	Oct. 30-Nov. 6.....	3	.....
Texas:				
Eagle Pass.....	Oct. 24-30.....	3	.....
Washington:				
Bellingham.....	Oct. 24-30.....	2	.....
Wisconsin:				
La Crosse.....	Oct. 30-Nov. 6.....	1	.....
Milwaukee.....	Oct. 30-Nov. 6.....	6	.....

SMALLPOX—FOREIGN.

Argentina:				
Buenos Aires.....	Aug. 1-31.....		23	
China:				
Shanghai.....	Sept. 27-Oct. 3.....		1	
Chile:				
Valparaiso.....	Oct. 9-16.....	2	.....
Gibraltar:				
Oct. 18-24.....	1	.....	
Hungary:				
Budapest.....	Oct. 3-9.....		1	
Italy:				
General.....	Oct. 18-24.....	58	.....
Naples.....	Oct. 18-24.....	9	1	
Mexico:				
Acapulco.....	Oct. 19-25.....	1	.....	In vicinity.
Medellin.....	Oct. 31.....	1	.....
Orizaba.....	Oct. 31.....			Present.

SMALLPOX—FOREIGN—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Mexico—Continued.				
Puebla and present along the lines of railroad.	Oct. 31.....	.....	.....	Present.
Versacruz.....	Oct. 24-31.....	2	3	
Persia:				
Meshed.....	Sept. 4.....	.....	.....	Do.
Philippine Islands:				
Iloilo.....	July 1-Aug. 31.....	237	142	
Russia:				
Warsaw.....	Sept. 12-18.....	.....	6	
Spain:				
Barcelona.....	Oct. 19-25.....	.....	1	
Valencia.....	Oct. 17-23.....	1	.....
Vigo.....	Oct. 17-23.....	.....	.....	Do.
Turkey:				
Bagdad.....	Sept. 17-25.....	.....	.....	Do.
Constantinople.....	Oct. 18-24.....	.....	.....

CHOLERA.

China:				
Amoy.....	Sept. 26-Oct. 9.....	.....	65	
Kulangsu.....	Sept. 26-Oct. 2.....	.....	3	
Shanghai.....	Sept. 26-Oct. 2.....	.....	.....	Present.
India:				
Bombay.....	Oct. 6-12.....	.....	3	
Calcutta.....	Sept. 26-Oct. 2.....	.....	8	
Negapatam.....	Sept. 11-17.....	.....	3	
Java:				
Batavia.....	Sept. 26-Oct. 2.....	17	1	
Japan:				
Kyoto.....	To Oct. 26.....	200	98	
Moji.....	Oct. 16.....	4	.....
Shinkoku (island)— Matsuyama.....	Oct. 20.....	.....	.....	Do.
Wakamatsu.....	Oct. 16.....	.....	.....	Do.
Korea: a				
Chemulpo.....	Sept. 28-Oct. 9.....	.....	.....	Do.
Pyeng Yang.....	Sept. 28-Oct. 9.....	.....	.....	Do.
Seoul.....	Sept. 19-28.....	1,072	651	
Manchuria:				
Dalny.....	Oct. 3-9.....	1	.....
Netherlands:				
Utrecht (province)— Jaarsfeld.....	Oct. 20.....	1	1	
Philippine Islands:				
Manila.....	Sept. 12-Oct. 9.....	73	58	
Provinces.....	Sept. 12-Oct. 9.....	1,004	741	
Russia:				
General.....	Oct. 3-10.....	570	254	
St. Petersburg.....	Oct. 17-22.....	116	35	

YELLOW FEVER.

Ecuador:				
Guayaquil.....	Oct. 1-15.....	13	4	

PLAGUE.

British East Africa:				
Kisumu.....	July 10-Aug. 24.....	12	12	
Chile:				
Antofagasta.....	Oct. 16.....	.....	.....	Present.
Iquique.....	Oct. 16.....	.....	.....	Do.
Mejillones.....	Oct. 16.....	.....	.....	Do.
China:				
Amoy.....	Sept. 26-Oct. 9.....	.....	71	
Ecuador:				
Guayaquil.....	Oct. 1-15.....	.....	16	
India:				
General.....	Sept. 26-Oct. 2.....	4,377	3,460	
Bengal.....	Sept. 26-Oct. 2.....	48	31	

a Epidemic along the Yalu River.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India—Continued.				
Bombay.....	Sept. 22-28.....		24	Present.
Calcutta.....	Sept. 26-Oct. 2.....		11	
Rangoon.....	Sept. 26-Oct. 2.....		5	
Japan:				
Kobe.....	Oct. 3-16.....	28	21	Do.
Shinkoku (Island)—				
Kochi.....	Oct. 20.....			Do.
Matsuyama.....	Oct. 20.....			Do.

By authority of the Secretary of the Treasury:

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