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## ON THE CULTIVATION OF THE BACILLUS OF LEPROSY BY THE METHOD OF CLEGG.

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This communication is to record our success in confirming the work of Clegg<sup>a</sup> in cultivating the bacillus lepra on artificial media. Our work having progressed to the point where an acid-fast bacillus has been grown on artificial media four times from three cases of leprosy and one of these obtained in pure culture, we think it proper to publish our work to date, reserving the question of cultural peculiarities and animal experimentation for a complete paper to be published later.

We are all the more anxious to publish this preliminary communication as our experience has shown that to workers less experienced than Clegg in amœba cultures the technical difficulties are so great that we fear that this most important advance will not receive the prompt recognition it deserves. We are frank to state that after four months' work we were about to abandon our experiments when the first culture was found growing in a series of inoculated tubes which were examined as a matter of conscientiousness before being discarded.

No attempt will be made to give a thoroughgoing description of the technique which is fully covered in Clegg's articles. We will rather emphasize certain points which seem important from our own experience.

I. *The amœba*.—The first amœba which we isolated was from pond water and was found unsuitable because it was so sluggish that it would not migrate from the center to the periphery of a plate and so could not be brought into "pure culture" with a single symbiotic bacterium of our own choice. Three other amœbas were subsequently isolated from three guinea-pig intestines and were finally brought into symbiotic relation with several known bacteria.

II. *The symbiant*.—After numerous trials we confined our work to the three strains of guinea-pig amœba in pure culture with a stock

<sup>a</sup> The Philippine Journal of Science, Vol. IV, pp. 77, 403. Also a personal communication at the time of Clegg's visit to this station, January, 1910.

cholera spirillum, which came originally from the Hygienic Laboratory, United States Public Health and Marine-Hospital Service. Each of us isolated an amœba independently for our work, but all used the same cholera culture as a symbiant.

III. *Culture media*.—We used the two agars recommended by Clegg. We think it important that these media be cleared with an egg in the usual manner. The media will hereafter be called Clegg I and Clegg II, the latter being that without beef extract.

IV. *Incubation*.—The stock cultures of amœba with cholera were carried along at room temperature (22° C.), while all cultures to which leprous material had been added were put at 36° to 37.5° C.

V. *Moisture*.—A large amount of water of condensation should be present in the culture tubes, and in Honolulu, where a part of the work was done, owing to the excessive dryness of the climate at this season of the year, it was found necessary to use an incubator with an air-moistening device or to put rubber caps on the tubes.

VI. *Selection of cases for material to inoculate*.—All our cases from which we succeeded in cultivating the bacillus were untreated or had received only a few doses of Chaulmoogra Oil and strychnine. Of course we chose individuals who showed active skin lesions of a tubercular sort.

VII. *Selection of lesions and technique of inoculation*.—An active lesion which was not undergoing purulent softening and was not ulcerated was rubbed with alcohol. The lesion was then firmly compressed with the fingers by an assistant, and while bloodless was incised with a sterile knife. The incision was carried to a depth of about 5 millimeters and given a similar lateral extent. The clear or faintly blood-stained serum which filled the incision was transferred by a platinum loop to the surface of the culture medium. We recommend the inoculation of only two such loops full for each tube and that they be stroked and not smeared over the whole surface. The reason for this is that the fewer organisms used in the inoculation, within reason, the easier it is for the beginner to convince himself when true multiplication occurs. Much confusion follows when heavy inoculations are made and it may not be convincing for several generations of the culture, owing to the difficulty of deciding between bacilli carried over and those which are growing.

VIII. *Preparation of cultures for inoculation*.—We all noted that if a twenty-four to thirty-six hour old amœba-cholera culture was inoculated with leprous juice that during the subsequent twenty-four to forty-eight hours there was a rapid disappearance of the bacilli, so that after two days it might be difficult to find a single clump of typical bacilli in a smear from the area of the culture media inoculated. One of us (D. H. C.) was able to show that this disappearance of the bacilli was associated with an active phagocytosis of the lepra bacilli by the amœba. To prevent this loss of organisms we resorted to the following modification of Clegg's technique. The amœba-cholera cultures were kept at 37° C. for five days before the leprous material was added. This incubation caused the encystment of the amœba, and all our successful cultures were obtained in this way. We strongly recommend this method, which, although it is only a variant of Clegg's repeated daily inoculation method, has this advantage—that when working in the Tropics,

where all bacteria and molds abound, the less one opens a culture tube the better.

**IX. Rate of growth.**—In our early work we expected to find multiplication within ten days, and doubtless threw away many tubes which would have shown growth if incubated longer. Our present rule is not to open a primary inoculation tube for at least three weeks. By that time the examination of a smear will show in which tube multiplication is proceeding, and when such a tube is found no difficulty will be experienced in propagating the culture indefinitely. (We refer here to the mixed culture of amoeba-cholera-lepra.)

#### SUMMARY.

We have each succeeded, working independently, in establishing amoeba-cholera-lepra cultures from cases of leprosy (D. H. C. 1, W. R. B. 2, H. T. H. 1). One of us (D. H. C.) has obtained a strain in pure culture by the heating technique described by Clegg. The amoebacholera-lepra cultures have been carried through from three to ten generations. The pure culture is now growing in its third generation.

#### DISCUSSION.

We feel that the fact that we have been able to cultivate an acid-fast bacillus closely resembling the lepra bacillus four times from 3 cases of leprosy by following Clegg's method, taken in conjunction with his work, makes it exceedingly improbable that we are dealing with an accidentally introduced extraneous saprophyte. Of course we must suspend judgment till we can complete our control work and animal experimentation to exclude the tubercle bacillus, but we consider it so important for the advancement of our knowledge of leprosy that this work be taken up by others that we will publish our work so far as it has gone.

#### CONCLUSION.

An acid-fast bacillus resembling the lepra bacillus as seen in the human tissues can be isolated and grown in pure culture by the method of Clegg from the active skin lesions of cases of leprosy.

## ESTABLISHMENTS LICENSED FOR THE PROPAGATION AND SALE OF VIRUSES, SERUMS, TOXINS, AND ANALOGOUS PRODUCTS.

The following table contains a list of the establishments holding licenses issued by the Treasury Department in accordance with the act of Congress approved July 1, 1902, entitled "An act to regulate the sale of viruses, serums, toxins, and analogous products in the District of Columbia, to regulate interstate traffic in said articles, and for other purposes."

The number of the license of each firm is also given, together with the names of the several products for which licenses have been granted.

No. of license.	Establishment.	Products.
1	Parke, Davis & Co., Detroit, Mich....	Antidiphtheric serum, antitetanic serum, antigonococcic serum, antistreptococcic serum, antitubercle serum, tuberculins, bacterial vaccines, erysipelas and prodigious toxins (Coley), and vaccine virus.
2	H. K. Mulford Co., Philadelphia, Pa....	Antidiphtheric serum, antitetanic serum, antistreptococcic serum, antipneumonic serum, antigonococcic serum, antidysenteric serum, antimeningococcic serum, tuberculins, bacterial vaccines, and vaccine virus.
3	Dr. H. M. Alexander & Co., Marietta, Pa.	Antidiphtheric serum, antirabic virus, vaccine virus, and tubercullins.
5	Fluid Vaccine Co., Milwaukee, Wis....	Vaccine virus.
8	The Cutter Laboratory, Berkeley, Cal.	Antidiphtheric serum, antistreptococcic serum, tuberculin, bacterial vaccines, and vaccine virus.
9	Frederick Stearns & Co., Detroit, Mich.	Antidiphtheric serum, streptolytic serum, and pneumolytic serum.
11	Pasteur Institute of Paris, Paris, France.	Antidiphtheric serum, antistreptococcic serum, antiplague serum, antidysenteric serum, antimeningococcic serum, and serum antivenimeux.
12	Chemische Fabrik auf Actien (vorm. E. Schering), Berlin, Germany.	Antidiphtheric serum and antistreptococcic serum.
14	Health department of the city of New York.	Antidiphtheric serum and antitetanic serum.
15	Dr. W. R. Hubbert Serum Laboratory, Detroit, Mich.	Antidiphtheric serum.
16	National Vaccine and Antitoxin Institute, Washington, D. C.	Antidiphtheric serum, antigonococcic vaccine, vaccine virus, and normal horse serum.
17	Lederle Antitoxin Laboratories, New York City.	Antidiphtheric serum, antitetanic serum, antistreptococcic serum, suspension of lactic acid bacilli, and vaccine virus.
18	Burroughs, Wellcome & Co., London, England.	Antidiphtheric serum, antigonococcic serum, antistreptococcic serum, antistaphylococcic serum, antityphoid serum, antistreptococcic vaccine, antistaphylococcic vaccine, antigonococcic vaccine, and antityphoid vaccine.
19	Memorial Institute for Infectious Diseases, Chicago, Ill.	Antidiphtheric serum.
21	Swiss Serum and Vaccine Institute, Berne, Switzerland.	Antidiphtheric serum, antidysenteric serum, antipneumococcic serum, antimeningococcic serum, antiplague serum, antistreptococcic serum, anticholera vaccine, antiplague vaccine, antityphoid vaccine, and tubercullins.
22	Institut Bacteriologique de Lyon, Lyons, France.	Antidiphtheric serum and normal goat serum.
23	Bacterio-Therapeutic Laboratory, Asheville, N. C.	Tubercullins.
24	Farbwerke, vormals Meister Lucius & Brünning, Hoechst-on-Main, Germany.	Antidiphtheric serum, antistreptococcic serum, anti-dysenteric serum, antitetanic serum, antimeningococcic serum, and tubercullins.
25	Tuberculin Society of St. Petersburg, St. Petersburg, Russia.	Tuberculinum purum.
26	Institut de Vaccine Animale, Paris, France.	Vaccine virus.
27	Institut Pasteur de Lille, Lille, France.	Serum antivenimeux.
28	Bacteriologisches Institut Lingner, Dresden, Germany.	Pyocyanase.
29	The Behringwerk, Marburg, Germany.	Antitetanic serum and tuberculin.
30	Dr. G. H. Sherman, Detroit, Mich....	Bacterial vaccines.
31	E. Merck, Darmstadt, Germany.....	Antidiphtheric serum, normal horse serum (dried), normal horse serum, antimeningococcic serum, antipneumonic serum, antistreptococcic serum.
32	Kalle & Co., Biebrich, Germany.....	Tuberculin (Rosenbach).

# UNITED STATES.

REPORTS TO THE SURGEON-GENERAL, PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

## PLAGUE-PREVENTION WORK.

Passed Assistant Surgeon McCoy reports:

### ANIMALS EXAMINED FOR PLAGUE INSPECTION.

During the week ended August 6, 1910, there were examined for possible plague infection at the Federal laboratory at San Francisco and the branch laboratories at Oakland and Los Angeles, Cal., animals as follows: Squirrels 3,297, gophers 9, rabbits 40, and rats 2,275. The rats were identified as follows: *Mus norvegicus* 1,961, *Mus rattus* 63, *Mus musculus* 184, *Mus alexandrinus* 67.

The total number of animals examined was 5,621. None was found infected.

### DISTRIBUTION OF POISON.

In connection with the making of a squirrel free zone around the cities on San Francisco Bay 1,175 acres of land in Alameda County were covered with poison during the week ended August 6, 1910.

### Record of Plague Infection.

Place.	Date of last case of human plague.	Date of last case of rodent plague.	Total number of rodents found infected since May, 1907.
<b>California:</b>			
<b>Cities—</b>			
San Francisco.....	Jan. 30, 1908	Oct. 23, 1908	398 rats.
Oakland.....	Oct. 28, 1909	Dec. 1, 1908	126 rats.
Berkeley.....	Aug. 28, 1907	None recorded.	
Los Angeles.....	Aug. 11, 1908	Aug. 21, 1908	1 squirrel.
<b>Counties—</b>			
Alameda (exclusive of the city of Oakland).....	Sept. 26, 1909	May 30, 1910	81 squirrels, 1 wood rat.
Contra Costa.....	July 21, 1908	June 1, 1910	248 squirrels.
Merced.....	None recorded.	June 6, 1910	2 squirrels.
Monterey.....	do	do	4 squirrels.
San Benito.....	June 5, 1910	July 11, 1910	20 squirrels.
San Joaquin.....	None recorded.	June 29, 1910	5 squirrels.
San Luis Obispo.....	do	Jan. 29, 1910	1 squirrel.
Santa Clara.....	do	June 22, 1910	22 squirrels.
Santa Cruz.....	do	May 17, 1910	3 squirrels.
Stanislaus.....	do	May 21, 1910	5 squirrels.
<b>Washington:</b>			
Seattle.....	Oct. 30, 1907	Feb. 8, 1910	22 rats.

**Rats Collected and Examined for Plague Infection.**

Place.	Week ended—	Found dead.	Total collected.	Examined.	Found infected.
California:					
Berkeley .....	Aug. 6, 1910	.....	a 154	120	None.
Oakland .....	do	45	b 619	519	Do.
San Francisco .....	do	27	c 2,256	1,636	

a Identified, *Mus norvegicus* 120, *Mus musculus* 34.  
 b Identified, *Mus norvegicus* 513, *Mus rattus* 1, *Mus musculus* 100, *Mus alexandrinus* 5.  
 c Identified, *Mus norvegicus* 1,728, *Mus rattus* 97, *Mus musculus* 350, *Mus alexandrinus* 81.

**Squirrels Collected and Examined for Plague Infection.**

Place.	Week ended—	Trapped and shot.	Found dead.	Examined.	Found infected.
California:					
Cities—					
San Francisco .....	Aug. 6, 1910	18	.....	18	None.
Counties—					
Alameda .....	do	.....	45	45	Do.
Fresno .....	do	151	.....	148	Do.
Los Angeles .....	do	607	.....	598	Do.
Merced .....	do	229	.....	215	Do.
Monterey .....	do	585	2	570	Do.
Orange .....	do	174	.....	174	Do.
Riverside .....	do	51	.....	51	Do.
San Benito .....	do	301	.....	297	Do.
San Bernardino .....	do	9	.....	9	Do.
San Joaquin .....	do	390	.....	381	Do.
San Luis Obispo .....	do	534	.....	521	Do.
Santa Cruz .....	do	105	.....	105	Do.
Solano .....	do	213	.....	210	Do.

**Other Animals Collected and Examined.**

Place.	Week ended—	Animals collected.	Examined.	Found infected.
California:				
Cities—				
San Francisco .....	Aug. 6, 1910	13 gophers.....	9	None.
Counties—				
Alameda .....	do	36 rabbits.....	36	Do.
San Luis Obispo .....	do	4 rabbits.....	4	Do.

**SMALLPOX IN THE UNITED STATES.**

**SMALLPOX IN CLEVELAND.**

The outbreak of smallpox in Cleveland, Ohio, which began April 30 and continued during May, June, and July is of interest because of the case mortality, which was at the rate of 16 per cent. The type of smallpox which has prevailed generally throughout the United States for several years has been exceedingly mild, the case mortality rate being in some States as low as one-fifth of 1 per cent. The more virulent outbreaks, which during the last two years have not been uncommon, demonstrate that there is no special nor peculiar condition existing in this country which prevents smallpox from assuming its more usual virulent form.

The bureau is indebted to Dr. C. E. Ford, superintendent of health of Cleveland, for the following information in regard to the outbreak:

In all from April 30 to July 26, 1910, there were 62 cases with 10 deaths and 2 cases of permanent disability. There was no instance of the disease in the recently vaccinated. One case, about 45 years of age, gave an indefinite history of vaccination in childhood. There was, however, no scar. Another case had been vaccinated between 17 and 20 years previously according to his recollection. Two medical students were vaccinated on the day of exposure and had very mild attacks. All the other cases were among unvaccinated children.

Of the cases the ages were: Under 5 years, 22; from 5 to 9 years, 20; from 10 to 14 years, 9; over 20 years, 11.

Of the deaths the ages were: Under 5 years, 7; from 5 to 9 years, 2; from 10 to 14 years, 1.

**Reports Received During Week Ended August 26, 1910.**

Place.	Date.	Cases.	Deaths.	Remarks.
District of Columbia.....	Aug. 7-13.....	8	.....	
Illinois:				
Henry County.....	July 1-31.....	3	.....	
Jo Davless County.....	.....do.....	4	.....	
Kendall County.....	.....do.....	1	.....	
Knox County.....	.....do.....	1	.....	
Madison County.....	.....do.....	5	.....	
Peoria County.....	.....do.....	1	.....	
Richland County.....	.....do.....	6	.....	
Rock Island County.....	.....do.....	3	.....	
Louisiana:				
New Orleans.....	Aug. 4-10.....	8	.....	

**Reports Received from June 25 to August 19, 1910.**

Alabama:				
Birmingham.....	June 12-Aug. 6....	11	.....	
Mobile.....	June 12-July 30....	13	.....	
Montgomery.....	June 12-25.....	6	.....	
Total for State.....		30	.....	
Arkansas:				
Fort Smith.....	June 19-25.....	1	.....	
California, general.....	May 1-June 30....	27	.....	
Total for State.....		27	.....	
Colorado:				
Alamosa County.....	Apr. 1-30.....	.....	1	
Las Animas County.....	Mar. 1-Apr. 30....	.....	2	
Logan County.....	May 1-31.....	.....	1	
Montrose County.....	Apr. 1-30.....	.....	1	
Archuleta County.....	June 1-30.....	7	.....	
Conejos County.....	June 1-30.....	2	.....	
Delta County.....	June 1-30.....	2	.....	
Denver County.....	June 1-30.....	9	.....	
Huerfano County.....	June 1-30.....	10	.....	
Kit Carson County.....	June 1-30.....	4	.....	
Larimer County.....	June 1-30.....	1	.....	
Las Animas County.....	June 1-30.....	3	.....	
Logan County.....	June 1-30.....	1	.....	
Mesa County.....	June 1-30.....	1	.....	
Montrose County.....	June 1-30.....	5	.....	
Otero County.....	June 1-30.....	4	.....	
Frowers County.....	June 1-30.....	7	.....	
Rio Grande County.....	June 1-30.....	4	.....	

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from June 25 to August 19, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Colorado—Continued.</b>				
Saguache County.....	June 1-30.....	1		
San Miguel County.....	June 1-30.....	1	1	
Teller County.....	June 1-30.....	1		
Weld County.....	June 1-30.....	5		
Total for State.....		68	6	
<b>District of Columbia.....</b>				
	July 3-Aug. 6.....	4		
Total for District.....		4		
<b>Florida:</b>				
Duval County.....	June 19-25.....	2		
Gadsden County.....	July 3-Aug. 6.....	7		
Hillsboro-County.....	July 17-Aug. 6.....	2		
Jackson County.....	June 19-Aug. 6.....	3		
Jefferson County.....	July 10-Aug. 6.....	4		
Leon County.....	Mar. 1-31.....		1	
Liberty County.....	July 17-23.....	14		
Santa Rosa County.....	July 31-Aug. 6.....	2		
Taylor County.....	July 3-9.....	1		
Walton County.....	June 12-18.....	1		
Total for State.....		36	1	
<b>Georgia:</b>				
Columbus.....	July 3-9.....	6		
Macon.....	Apr. 1-June 30.....	8		
Total for State.....		14		
<b>Illinois:</b>				
Adams County.....	June 1-30.....	2		
Clay County.....	June 1-30.....	1		
Coles County.....	June 1-30.....	22		
Cook County.....	June 1-30.....	1		
Chicago.....	June 1-30.....	1		
Edgar County.....	June 1-30.....	2		
Franklin County.....	June 1-30.....	1		
Iroquois County.....	June 1-30.....	1		
Jo Daviess County.....	June 1-30.....	5		
Kendall County.....	June 1-30.....	1		
Knox County.....	June 1-30.....	5		
Madison County.....	June 1-30.....	17		
Marion County.....	June 1-30.....	3		
Montgomery County.....	June 1-30.....	6		
Peoria County.....	June 1-30.....	4		
Perry County.....	June 1-30.....	1		
Pulaski County.....	June 1-30.....	1		
Randolph County.....	June 1-30.....	1		
Richland County.....	June 1-30.....	2		
Rock Island County.....	June 1-30.....	2		
St. Clair County.....	June 1-30.....	1		
Sangamon County.....	June 1-30.....	1		
Tazewell County.....	June 1-30.....	2		
Union County.....	June 1-30.....	4		
Wayne County.....	June 1-30.....	3		
Williamson County.....	June 1-30.....	2		
Total for State.....		92		
<b>Indiana:</b>				
Allen County.....	May 1-31.....	6		
Clinton County.....	May 1-31.....	1		
Delaware County.....	May 1-31.....	4		
Elkhart County.....	May 1-31.....	1		
Gibson County.....	May 1-31.....	1		
Grant County.....	May 1-31.....	5		
Greene County.....	May 1-31.....	9		
Howard County.....	May 1-31.....	18		
Marion County.....	May 1-31.....	5		
Orange County.....	May 1-31.....	18		
Owen County.....	May 1-31.....	20		
St. Joseph County.....	May 1-31.....	3		
Tipton County.....	May 1-31.....	1		
Vigo County.....	May 1-31.....	6		
Total for State.....		98		



## SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from June 25, to August 19, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Iowa:</b>				
Benton County	June 1-July 31	4		
Buchanan County	June 1-30	2		
Cedar County	July 1-31	1		
Clayton County	June 1-30	1		
Dallas County	June 1-30	1		
Delaware County	June 1-30	10		
Dubuque County	June 1-30	1		
Linn County	June 1-July 31	36		
Polk County	June 1-July 31	19		
Pottawattamie County	June 1-July 31	17		
Scott County	June 1-July 31	4		
Webster County	July 1-31	1		
Winneshiek County	June 1-30	1		
Woodbury County	June 1-30	1		
Total for State		99		
<b>Kansas:</b>				
Allen County	May 1-June 30	38		
Atchison County— Atchison	Apr. 1-May 31	7		
Barton County	June 1-30	6		
Butler County	Apr. 1-June 30	8		
Cherokee County	June 1-30	4		
Cowley County	Apr. 1-June 30	11		
Crawford County	June 1-30	4	1	
Decatur County	Apr. 1-June 30	33		
Dickinson County	May 1-June 30	10		
Doniphan County	Apr. 1-30	10		
Edwards County	Apr. 1-June 30	4		
Elk County	May 1-June 30	4		
Ellsworth County	Apr. 1-30	1		
Finney County	Apr. 1-30	2		
Ford County	June 1-30	1		
Graham County	Apr. 1-May 31	6		
Greenwood County	Apr. 1-June 30	56		
Harper County	May 1-June 30	3		
Harvey County	Apr. 1-June 30	22		
Jewell County	May 1-June 30	21		
Kearny County	Apr. 1-May 31	5		
Kingman County	Apr. 1-June 30	4		
Labette County— Parsons	Apr. 1-June 30	11		
Lane County	May 1-31	2		
Leavenworth County Leavenworth	Apr. 1-May 31	8		
	May 1-June 30	2		
Lyon County	June 1-30	11		
McPherson County	May 1-June 30	14		
Miami County	Apr. 1-May 31	2		
Montgomery County Coffeyville	Apr. 1-June 30	61	2	
	Apr. 1-June 30	12		
Neosho County	May 1-June 30	27		
Norton County	Apr. 1-June 30	50		
Ossage County	Apr. 1-May 31	6		
Osborne County	Apr. 1-June 30	33		
Pawnee County	Apr. 1-30	3		
Phillips County	May 1-31	6		
Pratt County	June 1-30	1		
Rawlins County	June 1-30	1		
Reno County	Apr. 1-June 30	23	3	
Riley County	Apr. 1-May 31	5		
Rush County	Apr. 1-30	3		
Saline County	Apr. 1-June 30	21		
Scott County	Apr. 1-May 31	5		
Sedgwick County	Apr. 1-May 31	7		
Wichita	Apr. 1-June 30	49		
Seward County	May 1-31	2		
Shawnee County	June 1-30	1		
Sheridan County	Apr. 1-30	1		
Sherman County	May 1-31	1		
Stafford County	June 1-30	2		
Sumner County	May 1-31	4		
Thomas County	Apr. 1-May 31	2	1	
Trego County	June 1-30	1		
Wallace County	June 1-30	1		
Wyandotte County	Apr. 1-30	4		
Kansas City	Apr. 1-June 30	57		
Total for State		699	7	

## SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from June 25 to August 19, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Kentucky:</b>				
Covington.....	June 26-July 2....	1		
Total for State.....		1		
<b>Louisiana:</b>				
Avoyelles Parish.....	June 1-30.....	12		
Calcasieu Parish.....	June 1-30.....	2		
Iberia Parish.....	June 1-30.....	19		
Orleans Parish.....	June 1-30.....			
New Orleans.....	June 12-Aug. 6....	71		
St. John Parish.....	June 1-30.....	10		
St. Tammany Parish.....	June 1-30.....	2		
Tangipahoa Parish.....	June 1-30.....	25		
Vermilion Parish.....	June 1-30.....	30		
Total for State.....		171		
<b>Maine:</b>				
Biddeford.....	May 1-31.....	1		
Total for State.....		1		
<b>Maryland:</b>				
Allegany County—				
Cumberland.....	May 1-July 31....	2		
Total for State.....		2		
<b>Massachusetts:</b>				
Middlesex County.....	July 1-31.....	1		
Suffolk County.....	June 1-July 31....	8		
Total for State.....		9		
<b>Michigan:</b>				
Alcona County.....	June 1-30.....	1		
Arenac County.....	June 1-30.....	2		
Bay County.....	June 1-July 31....	7	2	
Berrien County.....	July 1-31.....	1		
Cheboygan County.....	June 1-July 31....	27		
Clare County.....	June 1-July 31....	12		
Easton County.....	June 1-30.....	7		
Genesee County.....	June 1-July 31....	32		
Grand Traverse County	July 1-31.....	2		
Gratiot County.....	June 1-July 31....	7		
Houghton County.....	June 1-30.....	3		
Huron County.....	June 1-July 31....	12		
Ingham County.....	June 1-July 31....	8		
Ionia County.....	June 1-July 31....	6		
Isabella County.....	June 1-July 31....	4		
Kalamazoo County.....	June 1-July 31....	8		
Kent County.....	June 1-30.....	17		
Keweenaw County.....	July 1-31.....	1		
Lapeere County.....	June 1-July 31....	16		
Livingston County.....	June 1-30.....	17		
Manistee County.....	June 1-30.....	9	1	
Marquette County.....	June 1-30.....	1		
Mason County.....	June 1-July 31....	10		
Mecosta County.....	June 1-30.....	6		
Midland County.....	June 1-July 31....	11		
Missaukee County.....	June 1-July 31....	12		
Monroe County.....	June 1-30.....	2		
Montcalm County.....	July 1-31.....	1		
Muskegon County.....	June 1-30.....	2		
Newaygo County.....	June 1-30.....	2		
Osceola County.....	June 1-30.....	1		
Ottawa County.....	June 1-30.....	1		
Roscommon County.....	June 1-30.....	4		
Saginaw County.....	June 1-July 31....	32		
St. Clair County.....	June 1-July 31....	45		
Sanilac County.....	June 1-July 31....	3		
Shiawassee County.....	June 1-July 31....	53		
Tuscola County.....	June 1-July 31....	14		
Wayne County.....	June 1-July 31....	17		
Total for State.....		416	3	

## SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from June 25 to August 19, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Minnesota:</b>				
Pope County.....	Apr. 1-30.....		1	
St. Louis County.....	June 1-30.....		1	
Rice County.....	Mar. 1-31.....		1	
Beltrami County.....	May 26-June 5.....	4		
Blue County.....	June 6-12.....	1		
Carver County.....	June 13-19.....	1		
Faribault County.....	May 26-June 5.....	1		
Hennepin County.....	May 26-June 26.....	52		
Kittson County.....	June 6-19.....	2		
Koochikong County.....	May 26-June 5.....	6		
Lesueur County.....	June 13-19.....	32		
Meeker County.....	June 6-12.....	1		
Ramsey County.....	June 13-26.....	14		
Renville County.....	June 6-12.....	1		
Rice County.....	May 26-June 5.....	1		
St. Louis County.....	May 26-June 5.....	10		
Stearns County.....	June 20-26.....	1		
Steele County.....	June 6-19.....	2		
Wabasha County.....	June 13-26.....	2		
Total for State.....		131	3	
<b>Mississippi:</b>				
Natchez.....	July 24-30.....	5		
Total for State.....		5		
<b>Missouri:</b>				
Kansas City.....	May 15-June 30.....	32		
St. Louis.....	June 12-July 16.....	9		
Savannah.....	June 26-July 2.....	5		
Total for State.....		46		
<b>Montana:</b>				
Custer County.....	Apr. 1-30.....		1	
Beaverhead County.....	June 1-30.....	1		
Cascade County.....	June 1-30.....	1		
Dawson County.....	June 1-30.....	4		
Fergus County.....	June 1-30.....	2		
Flathead County.....	June 1-30.....	1		
Meagher County.....	June 1-30.....	1		
Park County.....	June 1-30.....	2		
Rosebud County.....	June 1-30.....	2		
Silver Bow County.....	June 1-30.....	9		
Butte County.....	June 1-30.....	27		
Yellowstone County.....	June 1-30.....	2		
Total for State.....		52	1	
<b>Nebraska:</b>				
Lincoln.....	Apr. 1-June 30.....	30		
South Omaha.....	June 1-30.....	3		
Total for State.....		33		
<b>New Jersey:</b>				
Cumberland County.....	June 1-July 31.....	4		
Total for State.....		4		
<b>New York: Empire State.....</b>				
June 1-30.....		44	2	
<b>Eric County—</b>				
Buffalo.....	May 1-31.....	1		
Tonawanda Township.....	May 1-31.....	2		
<b>Niagara County—</b>				
Niagara Falls.....	May 1-31.....	1		
North Tonawanda.....	May 1-31.....	1		
St. Lawrence County.....	May 1-31.....	19		
Schenectady County.....	May 1-31.....	2		
Total for State.....		70	2	
<b>North Carolina:</b>				
Forsyth County.....	Feb. 1-28.....		1	
Rowan County.....	Feb. 1-28.....		1	
Alamance County.....	Mar. 1-May 31.....	36		
Alexander County.....	Mar. 1-May 31.....	48		
Anson County.....	Apr. 1-May 31.....	2		
Ashe County.....	Mar. 1-31.....	12		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from June 25 to August 19, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
<b>North Carolina—Continued.</b>				
Beaufort County.....	Mar. 1-31.....	4		
Bladen County.....	Apr. 1-May 31.....	16		
Cabarrus County.....	Mar. 1-May 31.....	12		
Caldwell County.....	Mar. 1-May 31.....	9	1	
Catawba County.....	Mar. 1-May 31.....	38		
Chatham County.....	Mar. 1-Apr. 30.....	3		
Chowan County.....	Mar. 1-31.....	3		
Columbus County.....	Apr. 1-May 31.....	23		
Craven County.....	Mar. 1-31.....	1		
Currituck County.....	Mar. 1-May 31.....	17		
Davidson County.....	Mar. 1-31.....	2		
Davidson County.....	Mar. 1-31.....	8		
Durham County.....	Mar. 1-May 31.....	18		
Forsyth County.....	Mar. 1-May 31.....	17		
Franklin County.....	Mar. 1-31.....	5		
Gaston County.....	Mar. 1-May 31.....	12	2	
Graham County.....	Mar. 1-Apr. 30.....	8		
Greene County.....	Mar. 1-Apr. 30.....	19		
Guilford County.....	Mar. 1-May 31.....	44		
Halifax County.....	Mar. 1-31.....	40		
Henderson County.....	May 1-31.....	4		
Hertford County.....	Mar. 1-31.....	1		
Iredell County.....	May 1-31.....			Several.
Johnson County.....	Apr. 1-May 31.....	4		Several in March.
Jones County.....	Mar. 1-31.....	1		
Lee County.....	Mar. 1-31.....	5		
Lenoir County.....	Mar. 1-May 31.....	11		
Lincoln County.....	Mar. 1-May 31.....	2		
Madison County.....	Apr. 1-30.....	5		
Martin County.....	Apr. 1-May 31.....	4		
Mecklenburg County.....	Mar. 1-May 31.....	15		
Montgomery County.....	Mar. 1-May 31.....	47		
Nash County.....	Mar. 1-May 31.....	50		
New Hanover County.....	Mar. 1-May 31.....	12		
Onslow County.....	Mar. 1-May 31.....	5		
Orange County.....	Mar. 1-May 31.....	32		
Pamlico County.....	Mar. 1-31.....	2		
Perquimans County.....	May 1-31.....	1		
Persons County.....	May 1-31.....	1		
Pitt County.....	Mar. 1-May 31.....	23		
Polk County.....	Mar. 1-31.....	7		
Richmond County.....	Apr. 1-30.....	2		
Robeson County.....	Apr. 1-May 31.....	3		
Rockingham County.....	Mar. 1-31.....	48		
Rowan County.....	Mar. 1-May 31.....	32	1	
Sampson County.....	May 1-31.....	2		
Scotland County.....	May 1-31.....	5		
Stanly County.....	Apr. 1-May 31.....	20		
Stokes County.....	Mar. 1-31.....	64		
Surry County.....	Mar. 1-31.....	4		
Union County.....	Mar. 1-May 31.....	25		
Vance County.....	Apr. 1-30.....	4		
Wake County.....	Apr. 1-May 31.....	22		
Warren County.....	Apr. 1-30.....	20		
Washington County.....	Mar. 1-Apr. 30.....	4		
Watauga County.....	Apr. 1-May 31.....	20		
Wayne County.....	Apr. 1-May 31.....	6		
Wilkes County.....	Mar. 1-May 31.....	35		
Wilson County.....	Mar. 1-May 31.....	24	1	
Yancey County.....	Mar. 1-31.....	26		
Total for State.....		995	7	
<b>North Dakota:</b>				
Cass County.....	June 1-July 31.....	3		
Cavalier County.....	June 1-30.....	1		
Grand Forks County.....	June 1-10.....	4		
Logan County.....	June 1-30.....	1		
McKenzie County.....	June 1-30.....	1		
Morton County.....	July 1-31.....	4		
Pierce County.....	June 1-30.....	1		
Stark County.....	July 1-31.....	1		
Trall County.....	June 1-30.....	6		
Ward County.....	June 1-30.....	4		
Total for State.....		26		

## SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from June 25 to August 19, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.	
Oklahoma, general.....	Jan. 1-31.....		1	Reported out of date.	
Canadian County.....	Apr. 1-30.....		1		
Comanche County.....	Apr. 1-30.....		3		
Oklahoma County.....	Apr. 1-30.....		4		
Pottawatomie County.....	Apr. 1-30.....		2		
Atoka County.....	May 1-31.....	20			
Beckham County.....	May 1-31.....	2			
Blaine County.....	May 1-31.....	8			
Caddo County.....	May 1-31.....	1			
Canadian County.....	May 1-31.....	17			
Choctaw County.....	May 1-31.....	1			
Coal County.....	May 1-31.....	5			
Comanche County.....	May 1-31.....	4	1		
Custer County.....	May 1-31.....	9			
Garvin County.....	May 1-31.....	1			
Grady County.....	Apr. 1-30.....		1		
Grady County.....	May 1-31.....	6	6		
Haskell County.....	May 1-31.....	7			
Hughes County.....	May 1-31.....	42			
Jefferson County.....	May 1-31.....	3			
Kiowa County.....	May 1-31.....	1			
Lincoln County.....	May 1-31.....	4			
McLain County.....	May 1-31.....	9			
McIntosh County.....	May 1-31.....	11			
Murray County.....	May 1-31.....	1			
Muskogee County.....	May 1-31.....	5			
Noble County.....	May 1-31.....	8			
Nowata County.....	May 1-31.....	3			
Oklfuskee County.....	May 1-31.....	1			
Oklahoma County.....	May 1-31.....	1	1		
Okmulgee County.....	May 1-31.....	2			
Pawnee County.....	May 1-31.....	4			
Payne County.....	May 1-31.....	10			
Pittsburg County.....	May 1-31.....	6	1		
Pontotoc County.....	May 1-31.....	12			
Seminole County.....	May 1-31.....	2			
Texas County.....	May 1-31.....	4			
Tillman County.....	May 1-31.....	2			
Tulsa County.....	May 1-31.....	1	1		
Washita County.....	May 1-31.....	1			
Total for State.....		214	22		
Ohio:					
Allen County.....	June 1-30.....	3			
Athens County.....	July 1-31.....	1			
Butler County.....	June 1-July 31.....	4			
Clarke County.....	July 1-31.....	3			
Clinton County.....	June 1-30.....	10			
Columbiana County.....	June 1-July 31.....	6			
Cuyahoga County.....	June 1-July 31.....	16	1		
Fairfield County.....	June 1-30.....	1			
Franklin County.....	June 1-July 31.....	9			
Hamilton County.....	June 1-30.....	1			
Hancock County.....	July 1-31.....	4			
Hocking County.....	June 1-July 31.....	26			
Jefferson County.....	July 1-31.....	1			
Lucas County.....	June 1-July 31.....	5			
Mahoning County.....	July 1-31.....	1			
Marion County.....	July 1-31.....	1			
Perry County.....	June 1-30.....	1			
Pickaway County.....	June 1-30.....	1			
Portage County.....	June 1-30.....	7			
Ross County.....	June 1-July 31.....	72			
Seneca County.....	July 1-31.....	1			
Scioto County.....	June 1-30.....	2			
Stark County.....	June 1-July 31.....	20			
Summit County.....	July 1-31.....	5			
Wayne County.....	June 1-30.....	2			
Wood County.....	June 1-30.....	2			
Total for State.....		214	1		
Pennsylvania, general.....	Apr. 1-30.....		2		
	May 1-June 30.....	29	3		
Total for State.....		29	5		
South Carolina:					
Charleston.....	June 1-July 31.....	28			
Total for State.....		28			

**SMALLPOX IN THE UNITED STATES—Continued.**

**Reports Received from June 25 to August 19, 1910.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Tennessee:</b>				
Benton County—				
Camden.....	July 1-7.....	2		
Davidson County—				
Nashville.....	June 12-July 9....	2		
Hamilton County—				
Chattanooga.....	June 12-July 16...	4		
Knox County—				
Knoxville.....	June 12-July 16...	8		
Shelby County.....	May 1-June 30....	39		
Memphis.....	June 12-July 19...	8		
<b>Total for State.....</b>		<b>63</b>		
<b>Texas, general.....</b>	<b>Apr. 1-May 31.....</b>	<b>593</b>	<b>13</b>	
<b>Total for State.....</b>		<b>593</b>	<b>13</b>	
<b>Utah, general.....</b>				
Boxelder County.....	Mar. 1-31.....	112		Report received out of data.
Cache County.....	May 1-31.....	1		
Davis County.....	May 1-June 30....	6		
Jaub County.....	June 1-30.....	34		
Salt Lake County.....	June 1-30.....	2		
Utah County.....	May 1-June 30....	28	1	
Weber County.....	May 1-June 30....	2		
Weber County.....	May 1-31.....	18		
<b>Total for State.....</b>		<b>203</b>	<b>1</b>	
<b>Virginia:</b>				
Lynchburg.....	June 12-18.....	1		
<b>Total for State.....</b>		<b>1</b>		
<b>Washington, general.....</b>	<b>Feb. 1-Mar. 31....</b>		<b>4</b>	
<b>Wisconsin:</b>				
Ashland County.....	June 1-July 31....	16		
Barron County.....	June 1-30.....	1		
Brown County.....	July 1-31.....	5		
Douglas County.....	June 1-July 31....	3		
Dunn County.....	July 1-31.....	1		
Eau Claire County.....	June 1-July 31....	4		
Florence County.....	June 1-30.....	4		
Fond du Lac County.....	July 1-31.....	1		
Kenosha County.....	July 1-31.....	1		
Lafayette County.....	June 1-30.....	1		
La Crosse County.....	June 1-30.....	2		
Milwaukee County.....	July 1-31.....	7		
Pierce County.....	July 1-31.....	1		
Polk County.....	July 1-31.....	5		
Rusk County.....	June 1-30.....	1		
St. Croix County.....	July 1-31.....	5		
Sawyer County.....	June 1-30.....	8		
Waupaca County.....	June 1-30.....	2		
Winnebago County.....	July 1-31.....	1		
<b>Total for State.....</b>		<b>69</b>		
<b>Grand total for the United States.....</b>		<b>4,544</b>	<b>76</b>	

**PLAGUE IN THE UNITED STATES.**

**Reports Received from June 25 to August 19, 1910.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>California:</b>				
San Benito County—				
Hollister.....	June 5-11.....	1	1	



MORBIDITY AND MORTALITY—Continued.

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

Cities.	Week ended—	Esti- mated popu- lation, 1910.	Total deaths from all causes.	Tuber- culosis.		Ty- phoid fever.		Scarlet fever.		Diph- theria.		Measles.		Whoop- ing cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Mansfield, Ohio.....	Aug. 13	12,796	2												
Medford, Mass.....	do.	21,123	3									1			
Melroe, Mass.....	do.	15,623	4												1
Memphis, Tenn.....	do.	140,145	56	3	3	12		2		1					
Milwaukee, Wis.....	do.	337,117	112	13	6	31	3	26	1	21		9	1	3	
Mobile, Ala.....	do.	56,335	20		1	3	1			1					
Moline, Ill.....	do.	23,576	8			1				1					
Montclair, N. J.....	do.	18,778	11	1	1			1							
Montgomery, Ala.....	do.	44,967	15	1	1	12	1								
Mount Vernon, N. Y.....	do.	28,632	8	1						1					
Muskegon, Mich.....	do.	21,050			1										
Nanticoke, Pa.....	do.	14,188	97						1	5					
Nashville, Tenn.....	do.	107,076	43	3	2	22	1	3							
Newark, N. J.....	do.	315,014	105	11	15	8	4	6	1	15			1		14
New Bedford, Mass.....	do.	86,232	32	8	3	10		2		1					
Newburyport, Mass.....	do.	14,872	1	46	12	12	3	4		2	1	5			
Newport, Ky.....	do.	31,306	7												
Newton, Mass.....	do.	40,067	6			4				1		2			
New York, N. Y.....	do.	4,563,604	1,399	498	145	106	12	83	5	210	25	143	13	40	10
Niagara Falls, N. Y.....	do.	33,407	18	3	1	3									
Norristown, Pa.....	do.	24,739	10			3				1				9	
North Adams, Mass.....	do.	20,100	8		1					1					
Northampton, Mass.....	do.	21,146	9	1	2							1			
Ottumwa, Iowa.....	do.	22,015	9		1										
Paducah, Ky.....	do.		7		11										
Palmer, Mass.....	do.		4												
Philadelphia, Pa.....	do.	1,540,430	84	42	42	1	15	4	45	3	34	6	44	16	
Plainfield, N. J.....	do.	21,567	5	1											
Plymouth, Pa.....	do.	17,954	1	1	1					1					
Pittsfield, Mass.....	do.	28,236	11	1	1									1	
Portland, Me.....	July 16	58,512	28		2	5	1				1	4			
Portsmouth, Va.....	do.	28,225	12					2							
Pottstown, Pa.....	do.	14,065	5			1						1			
Providence, R. I.....	do.	221,673	65	9	12	1	1	2		3					1
Racine, Wis.....	Aug. 16	15	15						1	1	2				
Reading, Pa.....	Aug. 15	99,261	31	19	1	8	1	1	1	2				14	
Rock Island, Ill.....	Aug. 13	25,352	2			3		2			1	2			
Sacramento, Cal.....	Aug. 6	32,178	14		1										
St. Louis, Mo.....	Aug. 13	698,706	173	20	10	26	1	11	1	18		6	1	28	3
Salt Lake, Utah.....	do.	65,464			14			7							
San Antonio, Tex.....	Aug. 6	68,969	19		12	6	7			1					
Do.....	Aug. 13		9	1	7	5	2								
San Francisco, Cal.....	Aug. 6		105	24	18	3	1	7		8	1	5		11	
Schenectady, N. Y.....	do.	76,744	30	4	1	1		5		2			1		1
Somerville, Mass.....	Aug. 13	76,901	17	2		2		1		1					
South Bend, Ind.....	do.	50,741	20		5	1		2							
South Bethlehem, Pa.....	do.	60,180	14	2		2									
Spokane, Wash.....	Aug. 6		27		1	20	1	4	1			1			
Springfield, Mass.....	Aug. 13	47,199	27	1	1	4		1		2		4		9	1
Steelton, Pa.....	do.	15,055	3	6		4		6		3				2	
Superior, Wis.....	do.	42,011	19				2			2					
Tacoma, Wash.....	Aug. 6	16,411	12		1	1				5	1			1	
Taunton, Mass.....	Aug. 13	30,898	15		1	1				1					
Terre Haute, Ind.....	do.	65,409	14		3	1	1	5							
Toledo, Ohio.....	do.	178,753	45	1	4	7	3	1				1			
Trenton, N. J.....	do.	95,053	4	5	4	3		2							
Waltham, Mass.....	do.	28,068	5												
Warren, Ohio.....	do.	11,424	3												
Washington, D. C.....	do.	237,044	111	27	17	28	4	2		4			1	16	
Wichita, Kans.....	do.	52,313	13									1			
Wilkes-Barre, Pa.....	do.	65,724	23	2		21		2		5					
Williamsport, Pa.....	do.	30,382	13												
Wilmington, Del.....	do.	90,260	30		1					1					
Worcester, Mass.....	Aug. 6	137,849	62	14	4	1		2		6	1	6	1	5	1
Woburn, Mass.....	Aug. 13	14,550	3							2					
Yonkers, N. Y.....	do.	74,897	15	2	3	1		2		2					1
Zanesville, Ohio.....	do.	26,042	4								1				



# FOREIGN AND INSULAR.

## QUARANTINE MEASURES.

*St. Thomas, Danish West Indies.*—Arrangements have been effected through the Department of State for the American consul at St. Thomas, Danish West Indies, to certify to the fumigation of vessels departing for United States ports, when such fumigation has been performed by a physician selected by the said consular officer.

### CUBA.

#### HABANA—Inspection of vessels—Morbidity.

Passed Assistant Surgeon de Valin reports:

*Inspection of vessels, week ended August 6.*

Bills of health issued.....	22
Vessels inspected and passed.....	15
Members of crews of outgoing vessels inspected.....	734
Passengers of outgoing vessels inspected.....	494
Vaccination certificates issued.....	12

### MORBIDITY.

The national sanitary department gives the following reports of transmissible diseases in the Republic:

	Cases.	Deaths.	Under treatment.
<b>LAST DECADE OF JUNE.</b>			
Tuberculosis.....	44	62	3,079
Leprosy.....	2	1	342
Malaria.....	37	7	121
Typhoid fever.....	31	7	79
Diphtheria.....	14	1	16
Scarlet fever.....	7	.....	14
Measles.....	41	2	102
Varicella.....	10	.....	83
Tetanus in the newborn.....	11	11	.....
Beriberi.....	.....	.....	1
Filariasis.....	.....	.....	1
Dengue.....	.....	.....	2
<b>FIRST DECADE OF JULY.</b>			
Tuberculosis.....	52	64	3,065
Leprosy.....	.....	1	340
Malaria.....	55	3	142
Typhoid fever.....	33	4	99
Diphtheria.....	14	2	13
Scarlet fever.....	5	.....	8
Measles.....	31	.....	76
Varicella.....	5	.....	78
Hydrophobia.....	1	1	.....
Tetanus in the newborn.....	3	3	.....
Beriberi.....	.....	.....	.....
Filariasis.....	.....	.....	1
Dengue.....	.....	.....	2

	Cases.	Deaths.	Under treatment.
SECOND DECADE OF JULY.			
Tuberculosis.....	43	71	3,037
Leprosy.....	4	2	341
Malaria.....	40	4	144
Typhoid fever.....	37	9	105
Diphtheria.....	18	3	17
Scarlet fever.....	2	.....	4
Measles.....	24	.....	68
Varicella.....	4	.....	79
Tetanus in the newborn.....	8	6	2
Filariasis.....	.....	.....	1
Dengue.....	.....	.....	2
Acute yellow atrophy.....	1	1	.....

During the second decade of July, 1910, the mosquito brigade of Habana effected the following operations; 21,248 houses inspected and petrolized; 15,473 water receptacles petrolized or suppressed, in which 14 samples of mosquito larvæ were found, none of which were of *Stegomyia calopus*; and 50 square meters of land cleared of vegetation.

**MATANZAS—Inspection of Vessels—Morbidity.**

Acting Assistant Surgeon Nunez reports:

During the month of July, 1910, 20 bills of health were issued to vessels clearing for the United States, carrying an aggregate number of 560 members of crews and 16 passengers in transit for Cuban ports; 4 certificates of vaccination granted to passengers going to Key West by way of Habana; of these passengers, 2 were vaccinated and 1 was revaccinated at this office. There were no transactions for the Canal Zone or the Republic of Panama during the month.

The prevailing epidemic of measles appears to have become extinct during the month, as no new cases have been reported for the last fortnight.

No quarantinable disease was reported during the month of July.

The total number of deaths from all causes during the month was 91, which corresponds to an annual average mortality rate of 30.32 per thousand.

**GUATEMALA.**

**PUERTO BARRIOS, Fruit Port—Inspection of Vessels.**

Acting Assistant Surgeon Ames reports:

During the week ended August 6 the prevailing diseases were malaria and dysentery.

Bills of health issued as follows:

WEEK ENDED AUGUST 6.

Date.	Vessel.	Destination.	Crew.	Passengers from this port.	Passengers in transit.
1910.					
July 31	Captain Bennett.....	Mobile.....	21	.....	.....
Aug. 1	Parismina.....	New Orleans via Belize.....	78	13	7
3	Barrister.....	Galveston via Belize.....	33	.....	.....
5	Fjell.....	New Orleans via Belize.....	21	.....	.....

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

**HAWAII.**

Last case of human plague at Honolulu occurred July 12, 1910. The last plague-infected rat was found at Aiea, 9 miles from Honolulu, April 12, 1910.

At Hilo the last case of human plague occurred March 23, 1910. The last plague-infected rat was found at Piihuona, 4 miles from Hilo, April 9, 1910.

Passed Assistant Surgeon Ramus reports, August 1:

**HONOLULU—Plague-prevention Work.**

*Week ended July 30, 1910.*

Total rats and mongoose taken.....	678
Trapped.....	624
Found dead.....	2
Killed by sulphur dioxide.....	52
Examined bacteriologically.....	594
Showing plague infection.....	0
Classification of animals trapped:	
Mus alexandrinus.....	54
Mus musculus.....	260
Mus norvegicus.....	65
Mus rattus.....	236
Mongoose.....	9

**HONDURAS.**

**CEIBA, Fruit Port—Inspection of Vessels.**

Acting Assistant Surgeon Layton reports that bills of health were issued as follows:

WEEK ENDED AUGUST 11.

Date.	Vessel.	Destination.	Crew.	Passengers from this port.	Passengers in transit.
1910.					
Aug. 6	John Wilson.....	New Orleans, La.....	16		
8	Colombia.....	Mobile, Ala.....	18		
8	Grib.....	New Orleans, La.....	20		
8	Bluefields.....	do.....	24	2	
10	Utstein.....	Mobile, Ala.....	15		
11	Corinto.....	New Orleans, La.....	22		

**INDIA.**

**BOMBAY—Increased Morbidity.**

Consul Dennison makes the following report under date of July 22: The unusually long period of dry, rainless weather which has succeeded the heavy rainfall of June has resulted in an exceptionally unhealthy state of affairs in Bombay.

The mortality figures for the week ended on Tuesday, July 19, show that the total deaths numbered 700, compared with 651 in the previous week, 530 in the corresponding week of last year, and a five-yearly mean of 603.

Till the end of June last the mortality returns were fairly normal, the last week of the month registering 536 deaths from all causes, against 594 in 1908 and 531 in 1907. With the beginning of July the mortality began to rise. Till now July has this year been practically rainless, and a high summer temperature following heavy rain has resulted in an increase in the mortality among children, especially from diarrheal diseases, which have notably increased.

Of the 700 total deaths during the week under review 294, or 41.8 per cent, were registered among children under 5 years of age; the percentage of the first and second weeks of the month being 40.9 and 38.5 respectively.

Comparing the mortality of the three weeks of July with the mean of the corresponding weeks in the preceding five years we find an excess of 170 in the first week, 92 in the second, and 100 in the third being contributed by plague, fevers, and diarrheal diseases.

The present comparatively higher incidence of plague is due to its recrudescence as in 1908. Plague fell in the last week of June to 45 attacks and 44 deaths. The number of attacks then rose to 56 in the first week of July, the number of deaths keeping constant; in the second week the attacks and deaths rose to 63 and 58, respectively. In the week just ended they were 63 and 50. The total plague mortality to July 19 is 1,501 deaths less than on the same date last year.

Plague deaths in the week just ended (50) are exactly double the figures of the corresponding week in 1909 (25), but only 16 more than in 1908; in the first two weeks of the month 21 and 32 more than in 1909, and 20 and 19 more than in 1908.

As to fevers and diarrhea and dysentery, these are diseases peculiar to the season, and their higher incidence is to be attributed largely to seasonal variations and abnormal atmospheric conditions prevailing.

The malarial mortality is higher than in the two preceding years; it was 14 in the week just ended, against nil and 5 in the corresponding weeks of 1909 and 1908; in the preceding weeks it was four times that of 1909.

Mortality from diarrhea and dysentery in the second and third weeks of July is found to be 83 and 39 per cent more than in 1908, and 119 and 84 per cent more than in 1909; and 60 and 62 per cent more than the five years' average.

#### CALCUTTA—Cholera and Plague—Inspection of Vessels.

Acting Assistant Surgeon Allan reports, July 21:

During the week ended July 2, in Calcutta there were reported 29 deaths from cholera and 31 from plague; in all Bengal 45 cases of plagues with 11 deaths; in all India 936 cases of plague with 801 deaths.

During the week ended July 16, 1910, bill of health was issued to the steamship *Lichtenfels*, bound for Boston and New York, with a total crew of 70. The usual precautions were taken, holds fumigated, rat guards placed on wharf lines, and Asiatics effects disinfected.

#### ITALY.

##### Cholera.

Surgeon Geddings reports from Naples, under date of August 20, 1910:

It is reported that there are eight foci of infection, the most important being in Trani, in the Province of Puglia. There are about 70 cases, with 60 deaths to-day. The situation, however, is improved, the sanitary authorities being active. The representative of the Public Health and Marine-Hospital Service at Naples has been detaining emigrants from the infected districts under observation and disinfecting their baggage since the 17th of the month, and the Neapolitan authorities are rendering their hearty cooperation.

## NAPLES—Examination of Emigrants—Smallpox.

## Surgeon Geddings reports, August 1:

*Vessels inspected at Naples and Palermo week ended July 30.*

## NAPLES.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of baggage inspected and passed.	Pieces of baggage disinfected.
July 24	Venezia.....	New York.....	554	60	580
29	Königin Luise.....	do.....	318	35	420
	Total.....		872	95	1,000

## PALERMO.

July 30	Königin Luise.....	New York.....	158	250	100
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*Rejections recommended.*

## NAPLES.

Date.	Name of ship.	Trachoma.	Favus.	Suspected trachoma.	Other causes.	Total.
July 24	Venezia.....	11	.....	12	5	28
29	Königin Luise.....	6	.....	2	10	18

## PALERMO.

July 30	Königin Luise.....	15	.....	.....	.....	15
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*Smallpox in Naples.*—During the week ended July 31, 1910, 19 cases of smallpox were reported at the health office of the city of Naples.

## JAPAN.

## KOBE—Inspection of Vessels.

Acting Assistant Surgeon Moore reports for the week ended July 16, 1910, that supplemental bills of health were issued to 3 vessels and an original bill of health to 1.

There were inspected 507 members of crews and 625 steerage passengers, and there were bathed and had their effects disinfected by steam, 75 members of crews and 82 steerage passengers. The number of pieces of baggage steamed was 391 and bedding 164. Manifests were viséed for 43,011 pieces of freight, amounting to 4,579 tons. During the week 33 cases of human hair, 22 cases of household goods, and 13 bales of feathers were disinfected with formalin.

Emigrants were inspected and passed as follows:

Steamship *Mongolia*, for Honolulu 37, for San Francisco 8; steamship *Sado Maru*, for Seattle 23.

The emigrants passed, together with 13 intending passengers to Victoria by the steamship *Sado Maru*, were inspected and bathed, and had their effects disinfected before embarkation. All the emigrants were seven days in Ono quarantine detention station.

The official returns of infectious diseases for the week show that there were reported in Kobe, enteric fever, 5 cases and 1 death; diphtheria, 3 cases and no deaths. Total deaths 138.

MEXICO.

COATZACOALCOS—Inspection of Vessels.

Acting Assistant Surgeon Thompson reports:

During the week ended August 3 vessels were inspected as follows:

On July 28, the British steamer *Cayo Domingo*, with 27 in the crew, for a port in the United States via Vera Cruz and Tampico; on July 30, the American steamer *Hawaiian*, with 45 in the crew, for Delaware Breakwater; on August 3, the German steamer *Caledonia*, with 37 in the crew, for a port in the United States via Mexican ports, and the American steamer *Kentuckian*, with 40 in the crew, for Delaware Breakwater.

Vessels inspected and fumigated: On July 28, the British steamer *Shahristan*, with 32 in the crew, for Newport News, and the French steamer *Texas*, with 44 in the crew, for New Orleans; on July 30, the Mexican steamer *San Cristobal*, with 35 in the crew, for Port Arthur, and on August 1, the Norwegian steamer *Hanseat*, with 28 in the crew, for a port in the United States via Cuban ports.

The weather was dry and hot; mosquitoes were numerous; malarial disorders prevailed.

Week ended August 10. On August 4, the British steamer *Senator*, with 40 persons in the crew, bound for a port in the United States via Vera Cruz and Tampico, was inspected.

On August 9, the German steamer *Constantia*, with 33 persons in the crew, bound for Galveston via Tampico, was inspected and disinfected.

On August 9, the American steamer *Oregonian*, with 45 persons in the crew, bound for New York, was inspected.

NETHERLANDS.

ROTTERDAM—Cholera on Vessel.

Acting Assistant Surgeon De Forest reports under date of July 30, 1910, that there was a case of cholera at Rotterdam from a vessel coming from St. Petersburg, Russia.

PANAMA.

BOCAS DEL TORO, Fruit Port—Inspection of Vessels.

Acting Assistant Surgeon Osterhout reports:  
Bills of health issued as follows:

WEEK ENDED AUGUST 10.

Date.	Vessel.	Destination.	Crew.	Passengers from this port.	Passengers in transit.
Aug. 4	Mount Vernon.....	Mobile.....	20	.....	.....
4	Heredia.....	New Orleans via Limon, Barrios, and Belize.	80	10	21
5	Sibiria.....	New York via way ports.....	85	.....	86
7	Rosina.....	New Orleans.....	32	.....	.....
10	Turrialba.....	New Orleans via Colon.....	85	16	4

**PORTUGAL.****LISBON—Smallpox.**

The following information is received from the American consul at Lisbon through the Department of State:

For the last three months there has been a considerable increase in the number of cases of smallpox in this city. For the first three months of this year the number of cases reported weekly averaged 18. During the month of April the number of cases reported reached the average of 34 weekly, the number of deaths during the month being 23. During the six weeks ended June 11 the weekly average was 39, and the number of deaths in that period was 43. During the last six weeks the weekly average has risen to 45, the number of cases for the week ending July 16 being 56 and for the week ending July 23, 65. Deaths during this period have not yet been reported. The great increase in the number of cases reported in the last two weeks is due to the energetic measures lately taken by the health authorities to hunt out all cases. The disease is practically confined to two centers close to each other in the older, poorer, and most crowded part of the city. When cases occur the families of the patients endeavor to hide the fact and usually succeed until, as now, the trouble assumes such proportions as to attract the notice of the health authorities. Vigorous methods are being used to combat the disease by quarantine, isolation, or removal to special hospitals.

**RUSSIA.****LIBAU—Inspection of Vessels—Smallpox.**

Acting Assistant Surgeon De Forest reports that 921 emigrants to the United States were examined for the steamship *Lituania*, sailing from Libau on August 2; 9 emigrants were rejected, of which 2 had smallpox.

During the week ended July 17 there were reported in Libau 6 cases of smallpox and 1 death.

**RIGA—Typhus Fever—Smallpox—Cholera.**

Acting Assistant Surgeon De Forest reports that during the week ended July 23 there were reported in Riga 18 cases of typhus fever, 58 cases of smallpox, and 23 cases of dysentery, and that during the week ended July 29 cases of cholera appeared.

**ST. PETERSBURG—Cholera—Plague.**

Acting Assistant Surgeon De Forest reports that during the week ended July 29 there were reported in St. Petersburg 343 cases of cholera, with 102 deaths, and that in the suburbs 31 cases, with 2 deaths, were reported. Cases of suspected cholera are as numerous as those positively diagnosed and reported as such, and the case mortality rate is about the same. It is impossible to say how many of the suspected cases are actually cholera.

The American consul at St. Petersburg reports that during the week ended May 7, 1910, there were 2 deaths from plague in that city, and that during the week ended May 28 another death occurred. The 3 cases are reported to have been in workmen who came to the city with the disease. Their clothing and effects were burned and the places where they lived disinfected. It is not known where they came from. It is stated that they were engaged in sorting wool.

**TUNIS.****TUNIS—Plague.**

Information is received from Doctor Druetti at Rome that 5 cases of plague, with 3 or 4 deaths, occurred in Tunis during the latter part of June, 1910, and that the Italian consul reports that several laborers engaged in packing cereals found dead rats under the floor of the storehouse. The men seized the rats with bare hands and threw them into a neighboring sewer. A few days later the laborers sickened with plague.

**URUGUAY.****MONTEVIDEO—Smallpox.**

The information is received through the Department of State that the consul at Montevideo reports July 7 that smallpox has nearly disappeared from that city, but 1 or 2 new cases appearing daily; also that the disease has made its appearance in the city of San Jose, where many cases have occurred.

**VENEZUELA.****CARACAS—Plague.**

The information is received through the Department of State that the American minister at Caracas reported August 16 that a death from plague at Caracas on August 13 had been officially announced.

**LA GUAIRA.**

Acting Assistant Surgeon Kellogg reports:

During the two weeks ended August 6 no quarantinable diseases were reported or are known to have been present in La Guaira or vicinity.

The new prefect of La Guaira has appointed a sanitary commission and instituted a general cleaning up, and it is the intention to offer a reward for rats and to take measures to exterminate the mosquitoes.

The mortuary report for the two weeks ending July 31 shows 20 deaths, including 2 from typhoid fever, 1 from tuberculosis, and 1 from dysentery.

**ZANZIBAR.****Rat Examination—Smallpox.**

The American consul at Zanzibar, Zanzibar, reports:

Week ended June 30. Rats collected and examined for plague infection, 1,734. No plague-infected rat found.

There were 6 deaths from smallpox and 1,150 persons were vaccinated.

Week ended July 7. Rats collected and examined for plague infection, 1,126. No plague-infected rat found.

There were 3 deaths from smallpox and 1,268 persons were vaccinated.

Week ended July 14. Rats collected and examined for plague infection, 1,013. No plague-infected rat found.

There were 2 deaths from smallpox and 1,587 persons were vaccinated.



## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.

**Reports Received During Week Ended August 26, 1910.**

[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.]

### CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Austria:</b>				
Galicia—				
Padwoloczyzka .....	June 20 .....	1	1	From Russia.
<b>Colombo:</b>				
Ceylon .....	July 3-9 .....	1		
<b>India:</b>				
Bombay .....	July 13-19 .....		8	
Calcutta .....	June 26-July 2 .....		29	
Negapatam .....	June 12-18 .....		4	
<b>Italy:</b>				
Fuglia, province .....	Aug. 20 .....	70	60	In 8 localities, mainly at Trani. Imported from Russia.
<b>Netherlands:</b>				
Rotterdam .....	July 23-29 .....	1		From a vessel from Russia.
<b>Persia:</b>				
Ardabil .....	July 1-6 .....	20	6	
<b>Russia, general.</b>	July 23-29 .....	7,999	3,384	
Odessa .....	July 24-30 .....	120	49	
Moscow .....	July 17-23 .....	3	2	

### YELLOW FEVER.

<b>Brazil:</b>				
Manaos .....	July 17-23 .....	5	5	
Para .....	July 24-30 .....	7	4	

### PLAGUE.

<b>Brazil:</b>				
Bahia .....	July 9-15 .....	1	1	
Rio de Janeiro .....	June 5 .....	1		
<b>Chile:</b>				
Mejillones .....	Apr. 27 .....			Present.
<b>China:</b>				
Amoy .....	July 10-16 .....		4	
Hongkong .....	July 3-9 .....	1	1	
<b>India:</b>				
Bombay .....	July 13-19 .....		50	
Calcutta .....	June 26-July 2 .....		31	
Kurrachi .....	July 10-16 .....	7	6	
Rangoon .....	July 3-9 .....		31	
<b>Russia:</b>				
Odessa .....	July 23-Aug. 7 .....	6	3	Including 5 cases previously reported.
St. Petersburg .....	May 6-28 .....	3	3	
<b>Tunis:</b>				
Tunis .....	June 30 .....	5	3	

### SMALLPOX.

<b>Argentina:</b>				
Rosario .....	June 1-30 .....	1	1	
<b>Barbados:</b>	Aug. 16 .....	1		From steamship Byron.
<b>Canada:</b>				
Halifax .....	Aug. 1-13 .....	3		
Toronto .....	July 11-Aug. 6 .....	9		
<b>Chile:</b>				
Valparaiso .....	July 19-23 .....	60		Deaths not reported.
<b>Egypt, general.</b>	June 3-17 .....	124	25	
<b>Italy, general.</b>	July 24-31 .....	7		
Naples .....	July 24-31 .....	19		
<b>India:</b>				
Bombay .....	July 13-19 .....		3	
Kurrachee .....	July 12-16 .....	2		

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.**

**Reports Received During Week Ended August 26, 1910.**

**SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Japan:</b>				
Formosa.....	July 10-16.....	1	1	
<b>France:</b>				
Paris.....	July 24-30.....	1		
Germany, general.....	July 24-30.....	1		
<b>Korea:</b>				
Seoul.....	June 5-July 2.....	1	3	
Malta.....	July 9-23.....	12	1	
<b>Mexico:</b>				
Aguascalientes.....	July 31-Aug. 6.....		1	
Mexico.....	July 10-23.....		3	
San Louis Potosi.....	July 24-30.....	1	1	
<b>Persia:</b>				
Teheran.....	May 1-31.....		28	Among pilgrims.
<b>Portugal:</b>				
Lisbon.....	July 24-30.....	56		
<b>Russia:</b>				
Libau.....	July 11-17.....	6	1	
Moscow.....	July 19-23.....	5	4	
Odessa.....	July 9-16.....	1	2	
Riga.....	July 24-30.....	22		
St. Petersburg.....	July 3-16.....	81	13	
Warsaw.....	May 15-21.....		10	
<b>Spain:</b>				
Barcelona.....	July 25-Aug. 1.....		1	
Seville.....	July 25-31.....		2	
Vigo.....	July 24-30.....		1	
<b>Uruguay:</b>				
San Jose.....	July 7.....			Present.
<b>Zanzibar:</b>				
Zanzibar.....	July 1-14.....		11	

**Reports Received from June 25 to August 19, 1910.**

[For reports received from January 1, 1910, to June 24, 1910, see PUBLIC HEALTH REPORTS for June 24, 1910. In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.]

**CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>China:</b>				
Amoy.....	Aug. 8.....			Present.
Swatow.....	May 10-June 6.....		254	In vicinity from 3,000 to 4,000 deaths.
<b>Germany:</b>				
Ruhleben (near Berlin).....	June 23-27.....	2	2	Among Russian emigrants.
<b>India:</b>				
Bombay.....	June 8-July 12.....		6	
Calcutta.....	May 1-June 25.....		351	
Madras.....	May 21-June 2.....		2	
Moulmein.....	May 1-7.....	1		
Negatapam.....	Apr. 16-May 20.....		63	
Rangoon.....	May 8-July 2.....		12	
<b>Java:</b>				
Batavia.....	May 8-July 2.....	165	125	June 18, present in extreme eastern part. July 2, present in the interior.
Samarang.....	May 8-June 4.....	187	152	Mainly among natives.
Soerabaya.....	May 8-21.....	27	11	July 2, disappearing. Do.
<b>Persia:</b>				
Ardabil.....	July 2.....			Present.
<b>Philippine Islands:</b>				
Manila.....	May 22-July 2.....	37	27	
<b>Provinces—</b>				
Batangas.....	May 1-7.....	1		
Bulacan.....	May 1-July 2.....	225	151	
Cavite.....	June 12-18.....	1		
Mountain Province.....	June 26-July 2.....	1		
Nueva Ecija.....	June 26-July 2.....	13	6	
Pampanga.....	Apr. 24-July 2.....	86	84	
Pangasinan.....	Apr. 24-July 2.....	1,759	1,299	
Rizal.....	June 12-25.....	5	3	
Tarlac.....	May 8-June 18.....	45	30	
Union.....	May 1-28.....	2	1	

## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from June 25 to August 19, 1910.

## CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Russia, general.....				June 25, present in districts of Igoumen, Mazir, Pinsk, Retchitsk, and Sloutsk, May 28-July 9, cases 13,582, deaths 5,708.
Astrakhan, government.....	July 3-9.....	3	3	
Astrakhan.....	June 26-July 2.....	1	1	
Baku, government.....	May 29-July 9.....	106	56	
Baku.....	July 3-9.....	3	4	
Bessarabia.....	June 5-July 9.....	18	6	
Black Sea, province.....	July 3-9.....	25	11	
Don, territory.....	May 29-July 9.....	2,900	1,156	
Rostov on the Don.....	June 19-July 9.....	1,418	449	
Kharkov, government.....	May 29-June 25.....	238	123	
Kharkov, government.....	June 26-July 3.....	320	168	
Khazan.....	June 26-July 9.....	9	3	
Kherson, government.....	May 29-July 3.....	651	193	
Odessa.....	May 29-July 9.....	60	29	June 18-20—Fatal case on steamship Colenzo. July 10-23, cases 132, deaths 69.
Kief, government.....	May 29-July 9.....	503	206	
Kuban, government.....	May 29-July 9.....	1,994	1,005	
Kursk, government.....	June 26-July 9.....	11	5	
Minsk, government.....	May 29-June 25.....	61	16	
Mohilev, government.....	May 15-June 18.....	15	9	
Moscow, government— Moscow.....				July 12-15, 2 cases.
Nizhningorod, govern- ment.....	July 3-9.....	4	3	
Orel, government.....	May 30-June 18.....	2	1	
Orlov.....	July 3-9.....	22	8	
Padolien, government.....	July 3-9.....	3	1	
Poltava, government.....	May 29-July 9.....	722	258	
Rjasan, government.....	July 3-9.....	15	10	
St. Petersburg, govern- ment— St. Petersburg.....	June 19-July 9.....	10	5	July 9, 1 case. July 10-16, 58 cases, 20 deaths.
Samara, government.....	June 19-July 9.....	80	35	
Saratov, government.....	June 19-July 9.....	153	62	
Simbirsk, government.....	June 19-July 9.....	5	2	
Stavropol, government.....	June 26-July 9.....	78	31	
Tambov, government.....	June 19-July 9.....	20	16	
Taurida, government.....	May 29-July 9.....	562	273	
Kertsch.....	May 29-July 9.....	69	31	
Sebastopol.....	June 19-July 9.....	10	4	
Theodosia.....	June 19-25.....			Present.
Terek, territory.....	June 19-July 9.....	76	28	
Tiflis, government— Tiflis.....	June 19-July 9.....	11	5	
Tschernigov.....	May 29-July 9.....	419	167	
Vitebsk, government.....	May 29-July 9.....	13		
Veronesch, government.....	May 29-July 9.....	19	13	
Volhynien, government.....	July 3-9.....	1		
Yekaterinislav, govern- ment.....	May 29-July 9.....	2,641	1,178	
Transcaspien, territory.....	July 3-9.....	5	4	
Transcaucasia— Tschernomorsk, dis- trict— Novorossysk.....	June 19-July 3.....	7	6	
Siam: Bangkok.....	May 4-June 18.....	506	589	
Straits Settlements: Singapore.....	May 8-July 2.....	53	59	

## YELLOW FEVER.

Brazil: Bahia.....	Apr. 30-June 3.....	2	2	
Manaos.....	May 30-July 16.....		12	
Para.....	May 30-July 16.....	42	29	
Costa Rica: Limon.....	July 9-14.....	1	1	
San Jose.....	May 28-July 9.....	3	2	Fatal case May 28 from Barranquilla; case June 29 from Squires; fatal case July 9 from Tivives.
Squires.....	July 31.....	1	1	

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.**

**Reports Received from June 25 to August 19, 1910.**

**YELLOW FEVER—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Ecuador:</b>				
Guayaquil.....	May 16-July 15....	45	21	
<b>Gold Coast:</b>				
Sekondi.....	May 1-27.....	8	8	Present.
<b>Sierra Leone:</b>				
Freetown.....	Aug. 1.....			
Sherboro.....	May 1-June 8....	4	4	Do.
<b>Venezuela:</b>				
La Guaira.....	June 16-30.....		1	

**PLAGUE.**

<b>Argentina:</b>				
Rosario.....	Feb. 1-28.....	1	1	
<b>Brazil:</b>				
Bahia.....	Apr. 30-July 17...	4	4	
Fernambuco.....	Apr. 1-15.....		1	
<b>Chile:</b>				
Iquique.....	May 8-July 2....	31	11	
Pisagua.....	Apr. 1-May 31....	14	4	
Taital.....	Apr. 1-27.....	12		
<b>China:</b>				
Amoy.....	July 3-9.....			Epidemic in the port. May 8- June 11, 8 to 12 deaths daily.
Kulangsu, interna- tional city.	June 5-11.....		1	
Chao Yang district.....	May 5-19.....		3,000	Mainly at Ho Peng. Present also at Chellin, Feng-chow-so, Taipushien, and Tsal-tang-shi.
Chang-pu district.....	June 11.....			Epidemic.
Ching-chew district.....	June 11.....			Do.
Hankow.....	May 15-28.....	5	3	
Hongkong.....	May 8-July 2....	8	8	
Swatow.....	June 1-July 11..			Present in vicinity.
<b>Ecuador:</b>				
Guayaquil.....	May 16-July 15..	12	3	
<b>Egypt:</b>				
Alexandria.....	May 24-July 8....	11	6	
Ishmallia.....	June 19.....	1	1	
Port Said.....	June 14.....	2		
<b>Provinces—</b>				
Assiout.....	May 26-June 16..	11	7	
Assouan.....	Apr. 30-June 8....	2	1	
Beni Souef.....	May 27-June 29..	8	5	
Galloobeeh.....	May 21-July 3....	6		
Garbieh.....	May 14-July 4....	21	8	
Fayoum.....	May 28-July 11..	20	14	
Kena.....	May 27-June 18..	24	22	
Menouf.....	May 24-June 13..	83	13	
Minieh.....	May 31-July 2....	32	7	
<b>Hawaii:</b>				
Honolulu.....	July 5-12.....	2	2	
<b>India:</b>				
Bombay.....	May 18-July 12..		613	
Calcutta.....	May 1-June 25....		391	
Kurrachee.....	May 15-July 9....	246	238	
Madras.....	June 25-July 1....		1	
Rangoon.....	May 8-July 2....		238	
Bombay Presidency and Sind.	May 1-June 11..	2,000	1,790	
Madras Presidency.....	May 1-June 11....	97	61	
Bengal.....	May 1-June 11....	1,030	915	
United provinces.....	May 1-June 11....	5,922	5,446	
Punjab.....	May 1-June 11....	40,642	35,226	
Burma.....	May 1-June 11....	810	785	
Central provinces, including Berar.	May 1-June 11....	162	107	
Mysore State.....	May 1-June 11....	81	59	
Hyderabad State.....	May 1-June 11....	95	68	
Central India.....	May 1-June 11....	27	22	
Rajputana and Ajmer-Mer- wara.	May 1-June 11....	7,437	6,584	
Kashmir.....	May 1-June 11....	58	49	
<b>Grand total.....</b>		<b>58,361</b>	<b>51,112</b>	

## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from June 25 to August 19, 1910.

## PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Japan:				
Formosa.....	May 8-June 18.....	16	12	
Osaka.....	May 1-June 25.....	9	9	
Malta:				
Valletta.....	July 16.....	1		In quarantine station on Comino Island, from s. s. North Wales.
Mauritius.....	Apr. 1-June 2.....	10	7	
New Zealand:				
Auckland.....	May 23.....	1		
Persia:				
Bouchhr.....	Apr. 29-June 25.....	51	46	
Peru:				
Arequipa Department.....	Mar. 1-31.....	16	8	
Mollendo.....	May 12-19.....	2		May 16-June 19, 1 case, 1 death.
Callao Department.....	Mar. 1-31.....	2		
Callao.....	May 12-19.....	2		Case May 12 from s. s. Victoria; case May 19 from s. s. Nicarie.
Lambayeque Department.....	Mar. 1-31.....	25	10	
Libertad Department.....	Mar. 1-31.....	32	20	
Lima Department.....	Mar. 1-31.....	15	9	
Piura Department.....	Mar. 1-31.....	6	3	
Rhodes:				
Aplakia.....	May 22-28.....			Present.
Russia:				
Odessa.....	July 30.....	5		
Siam:				
Bangkok.....	Apr. 25-June 18.....	7	7	
Straits Settlements:				
Singapore.....	May 8-28.....	3	3	
Trinidad:				
Port of Spain.....	May 15-July 14.....	2	2	
Turkey in Asia:				
Basra.....	June 12-18.....	1	1	
Lobelia.....	May 1-24.....	25	27	And vicinity.
Venezuela:				
Caracas.....	July 30.....	1	1	

## SMALLPOX.

Abyssinia:				
Adis Ababa.....	May 16-July 16.....			Present.
Argentina:				
Buenos Aires.....	Feb. 1-Apr. 30.....		224	
Rosario.....	Feb. 1-May 31.....	3	3	Report for February received out of date.
Algeria:				
Bona.....	May 1-31.....	1	1	
Australia:				
Victoria, general.....	Apr. 3-19.....	1	1	
Austria:				
Bukowina.....	July 10-16.....	1		
Galicia.....	May 29-July 23.....	5		
Brazil:				
Bahia.....	Apr. 30-June 24.....	187	141	
Para.....	May 29-July 23.....	33	13	
Pernambuco.....	Mar. 16-May 15.....		203	
Rio de Janeiro.....	Apr. 18-24.....	1		
Santos.....	May 22-June 18.....		8	
Sao Paulo.....	June 12-18.....		2	
Canada:				
British Columbia—				
Fernie.....	June 12-25.....	4		
Vancouver.....	May 1-31.....	2		
Manitoba—				
Winnipeg.....	June 19-25.....	1		
Nova Scotia—				
Halifax.....	June 14-July 2.....	8		
Pictou.....	June 12-July 23.....	9	1	
Sydney.....	July 3-16.....	20		
Ontario—				
Toronto.....	June 5-July 2.....	2		
Ceylon:				
Colombo.....	June 26-July 2.....	1		

## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from June 25 to August 19, 1910.

## SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Chile:</b>				
Antofagasta.....	July 3-9.....	4		
Chilean.....	May 14.....			Epidemic.
Santiago.....	June 19-25.....			Present.
Valparaiso.....	May 19-June 16.....	25		
Victoria.....	May 14.....			Do.
<b>China:</b>				
Canton.....	May 8-28.....	9		
Chefoo.....	June 18-July 2.....	1	1	June 5—Present. July 2—One case from a vessel.
Hongkong.....	May 8-July 25.....	5	2	
Nanking.....	May 7-July 16.....			Present.
Shanghai.....	May 22-July 17.....	4	37	Cases among foreigners, deaths among natives. June 9—Three cases from U. S. cruiser New Orleans from Nanking.
Swatow.....	June 6-July 17.....			Present.
Tsingtau.....	June 12-18.....	2		
<b>Egypt, general.</b>				
Alexandria.....	Apr. 30-June 3.....	291	60	
Cairo.....	May 1-June 30.....	4	10	
Cairo.....	May 21-July 8.....	9	5	
Suez.....	May 21-27.....	1		
<b>France:</b>				
Paris.....	May 29-July 23.....	24		
<b>Germany, general.</b>				
Hamburg.....	May 29-July 16.....	15		
Hamburg.....	June 5-11.....	1		
Gibraltar.....	June 20-July 17.....	4	1	
<b>Great Britain:</b>				
Liverpool.....	July 17-23.....	1		
London.....	June 19-July 2.....	4		
South Shields.....	May 22-June 4.....	4	1	
<b>India:</b>				
Bombay.....	May 18-July 12.....		103	
Kurrachee.....	May 15-July 2.....	10	3	
Madras.....	May 14-July 8.....		9	
Rangoon.....	May 8-July 2.....		34	
<b>Italy, general.</b>				
Genoa.....	May 30-July 17.....	57		
Genoa.....	June 16-30.....	1		
Naples.....	May 30-July 24.....	65	17	June 26—One case from s. s. San Giovanni. One case, July 3, on s. s. Pannonia.
<b>Japan:</b>				
Formosa.....	May 22-July 2.....	2	3	
<b>Java:</b>				
Batavia.....	May 22-28.....	1		
<b>Korea:</b>				
Fusan.....	May 1-7.....	1		
Seoul.....	May 26-June 4.....	2	1	
Malta.....	May 22-July 16.....	5		
<b>Mexico:</b>				
Aguaascalientes.....	June 5-July 23.....		25	
Guadalajara.....	June 11-July 2.....		6	
Mexico.....	May 15-July 9.....		16	
San Luis Potosi.....	May 29-July 16.....	8	4	
Vera Cruz.....	July 3-9.....	1		
<b>Persta:</b>				
Kerman.....	July 2.....			Present.
<b>Portugal:</b>				
Lisbon.....	May 29-July 23.....	334		
<b>Russia:</b>				
Libau.....	May 30-July 10.....	126	7	
Moscow.....	May 22-July 16.....	129	49	
Odessa.....	May 22-July 8.....	48	10	
Riga.....	May 29-July 23.....	233		May 1-31, deaths 26.
St. Petersburg.....	May 8-July 2.....	304	108	
Warsaw.....	Mar. 6-May 14.....		113	
<b>Siam:</b>				
Bangkok.....	Apr. 25-June 18.....	3	3	
<b>Siberia:</b>				
Vladivostok.....	Apr. 22-May 28.....	2		
<b>Spain:</b>				
Almeria.....	June 1-30.....		1	
Barcelona.....	May 31-July 11.....		8	
Cadiz.....	May 1-31.....		1	
Madrid.....	May 1-31.....		3	
Seville.....	May 1-31.....		2	
Valencia.....	June 19-July 23.....	6		
Vigo.....	June 12-July 23.....		3	

## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from June 25 to August 19, 1910.

## SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Straits Settlements:</b>				
Singapore.....	May 2-July 2.....	71	22	
Penang.....	May 29-June 4.....	1		
<b>Switzerland:</b>				
Thurgau, Canton.....	July 10-16.....	1		
Zurich, Canton.....	June 19-July 16.....	7		
<b>Tripoli:</b>				
Tripoli.....	June 12-18.....	1		
<b>Turkey in Asia:</b>				
Basra.....	June 5-11.....			Present.
<b>Uruguay:</b>				
Montevideo.....	Apr. 1-May 31.....	438	168	
<b>Zanzibar:</b>				
Zanzibar.....	June 1-21.....		4	

## 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.	Typhoid fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.	
Aguascalientes.....	Aug. 6	40,000	79	2				1	1						4
Amoy.....	July 16	400,000	8		4										
Amsterdam.....	July 20	570,669	117	13								2	2		1
Asuncion.....	June 25	72,000	14	1						1					
Athens.....	July 23	210,010	78	11					3						
Barcelona.....	Aug. 1	591,272	285	20				1		8		1	2	4	
Barmen.....	July 30	164,500	34	3								1	1		1
Barranquilla.....	July 20	40,000	27							8					
Batavia.....	July 19	217,630				48			1						
Bombay.....	do.	977,822	700		50	8		3		1				1	
Bordeaux.....	July 16	253,000	74	10		8								1	
Do.....	July 24		67	4										1	
Do.....	July 30		103	15								1	2		
Brussels.....	do.	562,895	181	17											
Cairo.....	July 15	677,663	627	23					10	3				20	
Do.....	July 22		672	31					8	9		3	7	23	
Calcutta.....	July 2	847,796	343		31	29									
Caracas.....	July 30	72,429			1										
Chemnitz.....	do.	284,012	94	7						2	1				
Chihuahua.....	Aug. 7	37,000	65	2						2				6	1
Do.....	do.		64	3										3	
Colon.....	July 30	16,000	22	2						1					
Constantinople.....	July 24	1,000,000	221	28						4	2	1	2		
Do.....	July 31		230	25						4	2			1	
Dresden.....	July 30	552,300	146	20									3		1
Edinburgh.....	do.	360,276	78	6								1			1
Glasgow.....	Aug. 5	872,021	236							3	1	3	3		9
Gothenberg.....	July 30	164,000	33	6						2					
Hamburg.....	do.	895,804	224	29						2	1	8			
Hongkong.....	July 9	336,455			1										
Hull.....	July 30	280,006	56									2	2		
Kobe.....	July 24	387,915	166							3					
Konigsberg.....	July 30	244,200	103	8						1	1		2	2	
Kurrachee.....	July 16	130,000	63		6										
Leipzig.....	July 30	590,329	153	16						1			1	2	
Lyon.....	July 16	500,000	173	40								4	1	2	1
Do.....	July 23		159	33							1	4	1		
Do.....	July 30		152	34						8	8	9	1		1
Magdeburg.....	July 23	278,563	79	8								1	1		
Macao.....	do.	50,000	45	6			5			1					
Mannheim.....	do.	195,781	40	5											

MORTALITY—Continued.

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.	Typhoid fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Mexico.....	July 16	500,000	444	25				1	12		2		9	2
Do.....	July 23		530	19				2	12			1	7	2
Montreal.....	Aug. 6	450,000	199	17						4		1	2	4
Do.....	Aug. 13		199	20							3			5
Moscow.....	July 23	1,500,000	888	60		2		4	4	7	20	17	21	
Munich.....	July 30	576,000	151	17									1	1
Nagoya.....	July 4	389,761	137							2				
Do.....	July 9		150							1				
Newcastle-on-Tyne.....	July 30	285,891	78	9									3	2
Nuremberg.....	June 25	323,500	114	25									5	4
Do.....	July 2		95	14									1	7
Do.....	July 9		97	19									4	1
Do.....	July 16		70	14									1	1
Odessa.....	July 16	546,000	243	18				2		3	7	4	6	
Do.....	July 23		301	26					1	4	9	4	3	2
Para.....	July 30	185,000	62	7			4							1
Paris.....	do.....	2,776,394	184	10						5	1	9	10	11
Prague.....	July 23	233,344	56	10						1				
Do.....	July 30		56	8						2			2	
Quebec.....	Aug. 13	85,000										1		
Rangoon.....	July 9	252,155	197		31									
St. Johns, N. F.....	Aug. 6	31,000											1	
St. Petersburg.....	July 9	1,678,000	844	101		2		4		15	23	17	46	6
Do.....	July 16		816	88		20		9	1	32	16	12	39	8
San Luis Potosi.....	July 30	82,479	93	4				1	2	1				
Santa Cruz de Teneriffe.....	July 23	46,000	8	1						1	1	2		
Do.....	July 30		9	5								2		
Seoul.....	June 11	38,884						1	1					
Do.....	June 18							1	3					
Do.....	July 2							1	2					
Southampton.....	Aug. 6	127,157	27	5									1	
Talcahuana.....	July 9	28,000		2							1		1	
Do.....	July 16												2	1
Trieste.....	July 30	221,124	79							1				2
Turin.....	July 28	391,988	128	24						1		1		3
Venice.....	July 23	183,224	82	6							13	1		2
Do.....	July 30		64	5						17				
Vienna.....	do.....	2,107,981	530	93						3	3	3	9	3
Vigo.....	do.....	40,000	7	1				1		2				
Warsaw.....	May 21	764,054	295	32				10		1	10	1	2	2
West Hartlepool.....	July 30	66,750	17							1				
Yokohama.....	July 25	407,432								3				
Zanzibar.....	June 30	75,000	38	6				6						
Do.....	July 7		33	5				3						
Do.....	July 14		30	2				2						

By authority of the Secretary of the Treasury:

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