

PUBLIC HEALTH REPORTS.

UNITED STATES.

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

Pathological conditions found in rats—Observations based upon examination of 50,000 rats in the laboratory of the Public Health and Marine-Hospital Service, San Francisco, Cal.^a

[By Passed Assistant Surgeon GEORGE W. MCCOY.]

In the systematic examination of rats for plague infection a number of interesting pathological conditions have been observed. Many of these have counterparts in human pathology and consequently they present no difficulty in diagnosis; others are conditions not comparable with any found in man.

Two of the animal parasites observed, *Trichinella spiralis* and *Hymenolepis diminuta*, are also parasitic for man, and the rat may be indirectly the source of human infection.

These notes are not a complete record of the conditions met with in rats here, but represent for the most part only lesions that are to be differentiated by the more or less cursory examination we have been able to make in the limited time available for this purpose. These observations are based upon the examination of about 50,000 rats that have been necropsied during the past four months.

ANIMAL PARASITES.

Trypanosomiasis.—In the examination of stained smear preparations for *Bacillus pestis*, trypanosomes have been occasionally observed. The infection is present in about 0.4 per cent of the rats examined. The parasite is probably *Trypanosoma lewisi*, the common trypanosome of rats. Passed Asst. Surg. B. J. Lloyd (California State Journal of Medicine, April, May, June, 1904) found this parasite in 25 per cent of a large number of rats examined during the previous plague campaign here. Only once has it appeared to cause lesions. This was in a *Mus norvegicus* found dead in our stock cage. All of the mesenteric glands were found to be much enlarged and markedly hemorrhagic. No explanation was to be found for this condition except the presence of a large number of trypanosomes in smears from these glands. Two white rats were inoculated intraperitoneally with an emulsion of the glands, but without success in the reproduction of the infection. Plague infection was definitely excluded in this case.

^a See Report on laboratory work in relation to the examination of rats for plague at San Francisco, Cal., Public Health Reports, July 24, 1908.

Trichinosis.—The parasite of this disease (*Trichinella spiralis*) is of very common occurrence in both *Mus norvegicus* and *Mus rattus*. We have encountered it here only in *Mus norvegicus*. An examination of the diaphragms of several hundred rats shows about 3 per cent to be infected with this parasite. We have depended on the naked-eye examination, aided by a hand lens, and when the muscle presented a suspicious appearance we have resorted to the microscope to determine the diagnosis. A number of diaphragms (about 70) were examined with the low power of the microscope in the absence of any macroscopic signs of infection, but the result did not justify the added labor. Very frequently the granular condition of the muscle is so well marked that the infection may be detected at a glance after one has become familiar with the appearance. It is quite likely that a higher percentage of infection would be found if every rat were subjected to a careful microscopical examination. Braun (Animal Parasites of Man, New York, 1906) states that in Boston 10 per cent of the rats have trichinosis, and that 8.3 per cent of a large number of rats collected in Saxony, Bavaria, Württemberg, and Austria were infected. No excessive percentage of infection was found in rats from the slaughterhouse district of the city.

The well-known bladder worm of rats, *Trichosomum crassicaudum*, is very common. Probably 20 per cent of the rats examined are infected with this parasite.

A round worm is not infrequently encountered in the stomach. The organ is usually packed with the parasites, which vary in length from 2 to 10 centimeters. This parasite has not yet been identified.

The only intestinal parasite identified is a tapeworm, *Hymenolepis diminuta*. According to Stiles (Bull. No. 25, Hygienic Laboratory, U. S. Public Health and Marine-Hospital Service, Washington, D. C.) this is "a rare and probably accidental parasite of man; easily expelled."

Hymenolepis nana, a tapeworm which is parasitic for both man and rats, has not been encountered though a somewhat careful search has been made for it on several occasions.

The parasite most frequently met with has been identified by Passed Assistant Surgeon Goldberger, Public Health and Marine-Hospital Service, as *Cysticercus fasciolaris*, the cysticercus stage of the cat tapeworm, *Taenia crassicollis*. The cysticercus is found in the rat's liver, from one to a hundred or even more being found in an infected animal. In a series of 1,500 rats examined to ascertain the frequency of this parasite 6.4 per cent were found to be infected. The parasite within the cyst membrane is often 15 or 20 cm. in length, and it strikingly resembles a mature tapeworm. The cyst wall surrounding this parasite is of three distinct types. The common type is a thin, tough, translucent membrane. Another form is one in which the membrane is developed into a tough, fibrous tumor mass, with walls sometimes 5 cm. or more in thickness. At least some of these fibrous capsules show evidence of malignancy. In the third form, which is very rare, the cyst wall is represented by a tough, leathery, opaque yellowish membrane. Calcareous plaques are often found embedded in this membrane. In this latter form the parasite is dead and appears to be mummified.

A very common lesion of the liver is one in which there is a fine, yellowish-white thread-like structure winding very tortuously through

the tissue of the organ. The differentiation from liver tissue is very distinct and clear. Microscopical examination shows the thread to be made up of an enormous number of oval objects that we are disposed to consider the ova of a parasite. These objects are quite uniform in size (0.03 mm. by 0.06 mm.) and shape. The shell is quite thick and is transversely striated. At each end is a translucent plug-like mass projecting a trifle above the general contour of the body and also extending a little into the cavity. The interior is quite filled, except for a small space at the ends, with a granular substance, which may be entire or which is more frequently divided into several masses (from 2 to 7).

Scabies.—A very common condition is a more or less extensive cauliflower-like excrescence on the ears of rats. This has been worked out by Acting Assistant Surgeon Wherry, Public Health and Marine-Hospital Service, as being due to the itch mite.

ORGANIC LESIONS.

The only lesion encountered connected with the circulatory apparatus was a case of extreme dilatation of the pericardium. The distended sac almost filled the entire cavity of the chest. The contents of the sac were a blood-stained fluid, and there was a large number of easily broken down adhesions connecting the visceral and parietal surfaces of the pericardium.

We have encountered only three conditions in the lung worthy of note. In the one, the lung contains well encapsulated masses of yellowish caseous material. These masses vary from the size of a pea to one replacing the whole lung. The condition is often bilateral.

The second condition is somewhat similar, but instead of being caseous, the contents of the capsule resemble the white of an egg with an admixture of purulent matter. This lesion has also been seen in our white rats. In the second condition the lesion is often multilocular. There are usually no pleural adhesions in either of the above conditions. It is astonishing how much of the lung may be replaced by these cystic formations. Rats have been seen in which certainly seven-eighths of the lung tissue had disappeared and its place been taken by these masses. No data as to the etiology of these conditions is at hand.

The third condition is much less frequent than either of the others. The lung presents areas of consolidation from mere points to those involving the half of a lung. No evidence of cavity formation has ever been seen. The appearance of this lesion strongly suggests the stage of gray hepatization of lobar pneumonia in man. The microscopical examination of one of these areas shows the air spaces of the lungs to be filled by an infiltration of mono-nuclear and poly-nuclear leucocytes. Even the smaller bronchi are entirely occluded.

Smears from each of the above conditions have been stained for tubercle bacilli, but always with a negative result. In view of the very filthy habits of the rat, one would expect to find tuberculosis very prevalent among them, but we have not seen a rat in which tubercular lesions could be demonstrated. The striking absence of any lesions that might be attributed to the tubercle bacillus led us to inoculate some rats with cultures of this organism. While it is not intended to discuss here this subject in detail, it may be said that of

the 14 rats (*Mus norvegicus*) inoculated (7 with a bovine strain and 7 with a human strain) all were killed on the thirty-first day and only one presented at autopsy any lesion that could be regarded as probably due to the inoculation. In this case there was an abscess located between the liver and the diaphragm. It contained a thick, yellowish pus, and a moderate number of acid-fast bacilli were demonstrated in the contents; most of the bacilli, however, were larger than the average *Bacillus tuberculosis*.

The following lesions have been noted in connection with the digestive tract:

Hob-nail liver.—A lesion is occasionally found in which there is an accurate duplication of the gross and microscopic appearances of atrophic cirrhosis of the liver in man. The capsule of the organ is very much thickened and there is an enormous increase in the connective tissue surrounding the portal vein. The comparison to be complete should show ascites, but it has not been encountered in these cases. An enormous ascites is seen very rarely, but the cause has not been determined.

During this campaign against the rat much poisoning has been done with phosphorus and it is not surprising that many livers have been seen showing the macroscopic and microscopic signs of fatty degeneration. A few livers have been seen in which the fatty change was so far advanced as to cause the organ to float in water. The great majority of the cells have the protoplasm replaced almost entirely by fatty granules. In this connection it may be stated that the few cases of experimental phosphorus poisoning in rats that have been seen have not shown fatty degeneration. The rats have died within thirty-six hours from the time of eating the poison and have shown only a mild grade of gastro-intestinal inflammation. The tissues in these cases have not been submitted to microscopical examination.

A somewhat common lesion is one in which the liver is yellowish and granular, strongly resembling the appearance of the organ in plague infection. The spleen is enlarged and has many granules about the size of a mustard seed. This is the appearance we have seen in the organs of animals that have been fed for test purposes with the various biological products ("Ratin," "Ratite," etc.) designed to destroy rodents. It is probable that the similar condition seen in wild rats is due to the use of these agents.

A very rare condition of the liver is one in which the liver is studded with grayish, semigelatinous granules. These granules may be as small as the head of a pin or as large as a pea or even larger. The infiltration of the organ may be extreme, so that very little liver tissue may remain. Two cases have been carefully observed. One of these presented lesions in the spleen similar to those in the liver. Sections have shown an almost entire replacement of the liver tissue by an infiltration of large and small round cells and poly-nuclear cells. The appearance of the sections indicates that at least nine-tenths of the liver structure has been replaced by this new tissue.

Several cases of intestinal hernia have been seen. In each case the bowel has been reducible. The capacity of the sac was about 5 cc. in each instance. One hernia of the spleen has been observed. The organ was surrounded by a purulent exudate and lay directly beneath the skin. The opening through the abdominal muscles was about

1 cm. in diameter and was situated about 2 cm. below the costal margin, and the same distance in front of the midaxillary line. Stout adhesions, which prevented any access of purulent matter to the abdominal cavity, were found at the neck of the sac. The spleen itself appeared to be normal.

The following lesions of the genito-urinary tract have been observed:

Nephritis.—It was a matter of considerable surprise to note that a number of wild rats are the victims of marked, parenchymatous nephritis. The normal kidney of the rat is reddish brown and varies in size with the size of the rat. In the cases of nephritis the lesion is very apparent to the naked eye. The kidneys are larger than the size of the rat would lead one to expect, usually yellowish brown or slate colored, and are very friable, breaking down readily when pressure is made upon them. Cysts as large as a pea, or even much larger, are not rare, and small cysts up to about 1 mm. in diameter are very common in these cases of nephritis. The capsule usually strips readily.

This condition is found in about 60 per cent of the rats suffering from the leprosy-like disease to which reference is made below, but it is by no means rare in rats in general.

Microscopical examination shows the epithelium of the tubules to be largely desquamated. The nuclei of the cells are lost, or take the stain poorly. A few small cysts are seen scattered through the organ, and they may be quite numerous directly beneath the capsule. The process does not appear to affect the large collecting tubules, and the glomeruli are generally but little altered. In some areas there may be marked increase in connective tissue. It is a matter of surprise that an animal should live long enough for such an extreme disorganization as we have sometimes seen to take place. One might have been in doubt as to the origin of the tissue under examination but for the presence of fairly well-formed glomeruli.

In this connection, mention may be made of a rat that at first sight appeared to possess but one kidney, an organ that was normal in every respect. Close examination showed that the missing kidney was represented by a small, flattened mass of tissue which, upon microscopical examination, was found to present the following appearance: The glomeruli were about half the diameter of those in the normal organ. A few small cysts were seen. An occasional cell-grouping suggestive of tubuli was found and the remainder of the organ, which was by far the greater bulk, was made up of fibrous tissue. The capsule was much thickened. The ureter was reduced to a fine fibrous cord.

Vesical calculi.—Concretions in the bladder are not at all rare. The commonest form consists of small, dirty white, irregular, friable masses. Upon two occasions well-developed calculi were encountered. In one case 21 smooth, round stones, weighing a total of 3.8 grams, were found. The most remarkable case was that of a full-grown female *Mus norvegicus*, in which the bladder contained 6 stones weighing 7.8 grams, the largest one weighing 5 grams. In both of these cases a high degree of cystitis was evident to the naked eye.

Abscesses of the genital organs are occasionally encountered. In males they appear to spring from the seminal vesicles; in females they originate in the uterus or a higher part of the genital tract. In one case, just above its bifurcation, one division of the uterus was

occluded by a caseous mass about the size of a pea. Above this point that division of the uterus was about 10 cm. long and uniformly dilated, the diameter being over 1 cm. This sac was filled with a thin, watery pus. Microscopical examination of the caseous mass and the contents of the sac threw no light upon the cause of the condition. The other division of the uterus contained 6 fetuses.

Tumors.—New growths are frequently encountered. Lipomata, fibromata, adenomata, sarcomata, and carcinomata are the types that have been identified. Four of the more interesting cases will be mentioned. Three were in full grown female rats; one in an adult male rat. The largest tumor we have seen was one situated in the groin. The shape was that of a flattened sphere, 6 cm. in its greatest diameter by 4 cm. in the shorter diameter. It was firm and tough, and in one part it contained a small purulent focus. The total weight of rat and tumor was 335 grams, of which the tumor represented 72 grams. The tumor was shown by microscopical examination to be a carcinoma.

The second case was one of the few uterine tumors encountered. Springing from the left branch of the uterus, just above the bifurcation, was a large spherical mass about 3 cm. in diameter. The mass was deep red in color, very friable, and was traversed by heavy bands of tissue. The diagnosis of sarcoma was made microscopically.

The most interesting tumor case encountered was one in which several large, hard tumors were found in the liver, with smaller nodules scattered throughout the belly cavity. The striking feature of the case was marked jaundice, visible even through the hair, but seen to be a most intense lemon yellow when the skin was reflected. A considerable mass of tumor tissue surrounded the common bile duct, thus accounting for the jaundice. Unfortunately, the tissue for microscopical examination was lost.

The fourth was a case in which one testicle was about four times the normal size. The organ was deep red in color, very friable, and upon section much blood escaped. Microscopical examination showed the tissue to be an angio-sarcoma.

Miscellaneous conditions.—A peculiar change in color of the hair has been observed in rats confined for several months in our stock cages. Large patches of the hair begin to grow light in color and close examination shows that many of the hairs have become quite white; others are whitened at the tip only.

A microscopical examination of these whitened hairs showed a triophyton-like structure to be present. A similar structure was present in control preparations made from the hair of healthy rats. The cause of the condition is therefore as yet undetermined.

Subcutaneous abscesses in general and purulent conditions of the peripheral lymph glands are common. We were at one time inclined to regard the latter as possibly representing lesions of chronic plague, as described by the Indian Commission (*Journal of Hygiene*, vol. 7, No. 3). A considerable number have been submitted to the inoculation test, but always, thus far, with negative results.

Probably the most interesting lesion is the leprosy-like disease that has been described in Russia, Germany, Australia, and recently in San Francisco, where it was first observed by Acting Assistant Surgeon Wherry, Public Health and Marine-Hospital Service (*Journal*

American Medical Association, June 6, 1908). A special report on this disease has been submitted to the Surgeon-General (Public Health Reports, July 10, 1908, Vol. XXIII, No. 28).

I am indebted to Passed Asst. Surgs. Carroll Fox and Richard Creel for assistance in the histological work reported in these notes.

Identification of Fleas at San Francisco, Cal.

[By Passed Assistant Surgeon CARROLL FOX.]

In connection with plague suppressive measures in San Francisco, a routine examination has been made of fleas in the Federal laboratory since April 7, 1907. This work has been carried on in order to determine the different species of fleas and the predominant species infesting rats in San Francisco. Since July 1, 1908, an effort has been made to determine the species in relation to the number on individual rats. District officers have been ordered to bring the rats trapped alive to the district headquarters, where they are chloroformed, and an immediate search is made for siphonaptera. The fleas from each rat are then put in 70 per cent alcohol in separate bottles and forwarded to the laboratory properly labeled with the date, host, and district.

In all, 7,022 specimens have been examined to July 31, 1908, including 1,271 fleas from man. The figures given in detail below show that the *Ceratophyllus fasciatus* is the common rat flea in this locality, while the *Pulex cheopis* follows, not a very close second, the proportion being about three to one. Most of the *Pulex cheopis* have come from districts 4, 6, and 12. Districts 4 and 6 are inside districts, while district 12 is on the water front. From districts 4 and 6 a *Mus rattus* is very rarely caught, showing that there is no relation between the Indian rat and the Indian rat flea. The number of fleas per rat varies greatly; many rats seem not to be infested at all, while from one rat 157 fleas were obtained. Not including the rat with 157 fleas, the average number of fleas per rat is 4.5.

It will be noticed that of the 1,271 fleas taken from man, not one was a *cheopis* and only 4 were *Ceratophyllus fasciatus*, the common rat flea here. The finding of these might be accounted for by the fact that they were taken by the rat catchers from their own persons.

Host.	C. fasciatus.		P. cheopis.		P. irritans.		Cten. mus-culi.		C. canis.		Total.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
<i>Mus norvegicus</i>	1,343	2,510	485	837	31	76	78	211	16	31	5,618
<i>Mus rattus</i>	23	43	3	3	0	0	17	16	1	0	106
<i>Mus musculus</i>	4	10	1	0	0	0	2	10	0	0	27
<i>Homo sapiens</i>	0	4	0	0	500	764	0	0	2	1	1,271
Total fleas examined to July 31, 1908											7,022

These figures do not include several hundred specimens obtained from other hosts, such as *C. acutus* and *Hoplopsyllus anomalus* from *Cetellus Beecheyi*; *C. ignotus* from *Thomomys Botte*, and several other species not yet identified.

Report from San Francisco, Cal.—Plague-prevention work.

Passed Assistant Surgeon Blue reports:

SAN FRANCISCO, CAL.

Week ended September 12.

Date of last case.....	Sickened, January 30, 1908
Sick inspected.....	11
Dead inspected.....	89
Premises inspected.....	12, 486
Houses disinfected.....	97
Buildings condemned.....	9
Houses destroyed.....	2
Nuisances abated.....	1, 480
<hr/>	
Rats found dead.....	311
Rats trapped.....	3, 428
<hr/>	
Total rats taken.....	3, 739
<hr/>	
Rats identified:	
Mus norvegicus.....	2, 729
Mus rattus.....	82
Mus musculus.....	739
<hr/>	
Total.....	3, 550
<hr/>	
Rats examined bacteriologically.....	1, 975
Poisons placed.....	89, 833

Outgoing quarantine transactions.

Passed Assistant Surgeon Hobdy reports:

Week ended September 5.

Vessels fumigated and certified.....	20
Vessels certified.....	69

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

Passed Assistant Surgeon Glover reports:

Week ended September 12.

Date of finding of last plague rat, July 9, 1908.	
Rats received.....	1, 075
Rats necropsied.....	949
Plague-infected rats to date.....	20
Vessels inspected.....	8
Vessels fumigated.....	6

Report from Miami, Fla.—Dengue fever present.

Acting Assistant Surgeon Jackson reports, September 12:

During the past week I have seen in Miami 4 cases of dengue fever. The cases presented all typical symptoms and had both primary and secondary rashes. Two of the number were in persons immune to yellow fever.

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

CALIFORNIA—*San Diego*.—Month of August, 1908. Estimated population, 40,000. Total number of deaths, 47, including measles 1, and 5 from tuberculosis. Cases: Measles 2, smallpox 1, and scarlet fever 1.

CONNECTICUT—*Bridgeport*.—Month of August, 1908. Estimated population, 100,000. Total number of deaths, 111, including enteric fever 2, and 11 from tuberculosis. Cases: Diphtheria 3, enteric fever 11, scarlet fever 1, and phthisis pulmonalis 5.

KANSAS.—Month of July, 1908. Reports to the State board of health show as follows: Diphtheria, 22 cases, 4 deaths; enteric fever, 137 cases, 22 deaths; measles, 9 cases, 1 death; scarlet fever, 30 cases, 2 deaths; smallpox, 61 cases, no deaths; tuberculosis, 56 cases, 48 deaths.

MINNESOTA—*St. Paul*.—Month of June, 1908. Estimated population, 220,000. Total number of deaths reported to the department of health, 127, including diphtheria 3, measles 2, whooping cough 2, and 12 from tuberculosis. Cases: Diphtheria 35, measles 15, scarlet fever 35, and smallpox 74.

Month of July, 1908. Total number of deaths reported to the department of health, 146, including diphtheria 1, scarlet fever 3, whooping cough 1, and 22 from tuberculosis. Cases: Diphtheria 22, measles 4, scarlet fever 18, and smallpox 44.

NEBRASKA—*Lincoln*.—Month of August, 1908. Estimated population, 60,000. Total number of deaths, 38, including enteric fever 1 and 3 from tuberculosis. Cases: Diphtheria 1 and scarlet fever 1.

NEW HAMPSHIRE—*Franklin*.—Month of August, 1908. Estimated population, 6,000. Total number of deaths, 5. Case: Tuberculosis 1.

NEW YORK—*Rome*.—Month of July,^a 1908. Estimated population, 18,500. Total number of deaths, 28, including 3 from tuberculosis. Cases: Tuberculosis 1, diphtheria 1, enteric fever 4, and scarlet fever 1.

NORTH CAROLINA.—Month of July, 1908. Estimated population, 1,893,810. Reports of State board of health from 76 counties show as follows: Measles in 11 counties, whooping cough in 30 counties, scarlet fever in 16 counties, diphtheria in 33 counties, enteric fever in 66 counties, malarial fever in 16 counties, pernicious malarial fever in 5 counties, hemorrhagic malarial fever in 4 counties, and smallpox in 4 counties, viz: Bladen, 1; Camden, 5; Cleveland, 2; and Pasquotank, several.

Reports for the month from 24 towns having an aggregate population of 251,100—white, 154,550; colored, 96,550—show a total of 361

^a Received out of regular order.

deaths—white, 157; colored, 204—including diphtheria 1, enteric fever 29, whooping cough 4, scarlet fever 1, measles 1, and 58 from phthisis pulmonalis.

OREGON—*Portland*.—Month of July, 1908. Estimated population, 225,000. Total number of deaths, 125, including diphtheria 1, enteric fever 2, whooping cough 1, and 12 from tuberculosis. Cases: Diphtheria 21, enteric fever 6, measles 6, scarlet fever 3, whooping cough 1, and smallpox 35.

PENNSYLVANIA—*Homestead*.—Month of August, 1908. Estimated population, 17,000. Total number of deaths, 25, including 1 from tuberculosis. Cases: Enteric fever 2, tuberculosis 1, and measles 4.

UTAH—*Salt Lake City*.—Month of August, 1908. Estimated population, 85,000. Total number of deaths from all causes, 75, including enteric fever 4, diphtheria 1, whooping cough 1, and 8 from tuberculosis. Cases: Diphtheria 14, whooping cough 35, measles 1, scarlet fever 3, tuberculosis 1, smallpox 3, and enteric fever 28.

VIRGINIA—*Newport News*.—Month of August, 1908. Estimated population, 28,749. Total number of deaths reported, 33, including enteric fever 4, whooping cough 1, and 2 from tuberculosis. Case: Scarlet fever 1.

Smallpox in the United States as reported to the Surgeon-General, Public Health and Marine-Hospital Service, June 27 to September 25, 1908.

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

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

Place.	Date.	Cases.	Deaths.	Remarks.
Alabama:				
Huntsville	Jan. 6-June 18	95	.....	And vicinity.
Mobile.....	June 7-Aug. 29.....	10	.....
Total for State.....		95	.....
Arkansas:				
Texarkana	Dec. 1-June 15 .....	.....	.....	Present.
California:				
Angel Island Quarantine Station.	Jan. 1-May 18 .....	.....	.....	5 additional cases. Report received out of date. July 13, 1 case on schr. Alumna. Report for June not received.
Los Angeles	June 7-July 4.....	6	.....
Oakland	Apr. 1-July 31	16	.....
Sacramento	May 1-July 31	4	.....
San Bernardino	Dec. 11-July 11	54	.....	Reported out of date. June 1-13, mainly on Pala Indian Reservation.
San Diego County	June 1-Aug. 3	98	.....
Escondido	June 1-Aug. 3	15	.....
San Diego	June 1-Aug. 31	25	.....
San Francisco	June 6-Sept. 12.....	51	.....
Stockton	July 1-31	1	.....
Total for State.....		270	1	
Delaware:				
Reedy Island Quarantine Station.	Aug. 9	1	.....	From steamship Haverford.
Total for State.....		1	.....
District of Columbia:				
Washington	June 14-27	8	.....
Total for District.....		8	.....

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Idaho:				
Carey.....	May 21-Aug. 4....	21	.....
Total for State.....		21	.....
Illinois:				
Alexander County.....	May 1-31.....	3	.....
Carroll County.....	May 1-31.....	5	.....
Cass County.....	May 1-31.....	34	.....
Champaign County.....	May 1-31.....	4	.....
Christian County.....	May 1-31.....	3	.....
Clark County.....	May 1-31.....	11	.....
Cook County—				
Chicago.....	June 14-Aug. 1...	10	.....
Harvey.....	May 1-31.....	1	.....
Dupage County.....	May 1-31.....	1	.....
Effingham County.....	May 1-31.....	1	.....
Iroquois County.....	May 1-31.....	3	.....
Jo Daviess County.....	May 1-31.....	1	.....
Kane County.....	May 1-31.....	37	.....
Macon County.....	May 1-31.....	5	.....
Macoupin County.....	May 1-31.....	5	.....
Marshall County.....	May 1-31.....	9	.....
McLean County.....	May 1-31.....	5	.....
Mercer County.....	May 1-31.....	1	.....
Montgomery County.....	May 1-31.....	7	.....
Morgan County.....	May 1-31.....	20	.....
Jacksonville.....	June 1-30.....	10	.....
Peoria County.....	May 1-31.....	12	.....
Saline County.....	May 1-31.....	5	.....
Sangamon County—				
Springfield.....	June 19-July 23...	4	.....
Stevenson County.....	May 1-31.....	25	.....
Tazewell County.....	May 1-31.....	64	.....
Warren County.....	May 1-31.....	6	.....
Will County.....	May 1-31.....	1	.....
Joliet.....	May 1-31.....	19	.....
Total for State.....		312	.....
Indiana:				
Allen County.....	Apr. 1-June 30....	4	.....
Fort Wayne.....	June 21-Aug. 22....	6	.....
Bartholomew County.....	Apr. 1-30.....	1	.....
Boone County.....	Apr. 1-June 30....	4	.....
Carroll County.....	May 1-June 30....	67	1	
Clark County.....	Apr. 1-June 30....	34	.....
Jeffersonville.....	June 1-July 31....	25	1	
Dearborn County.....	Apr. 1-June 30....	5	.....
Dekalb County.....	Apr. 1-June 30....	15	.....
Delaware County.....	Apr. 1-June 30....	23	.....
Floyd County.....	June 1-30.....	1	.....
Fountain County.....	June 1-30.....	4	.....
Fulton County.....	Apr. 1-30.....	19	.....
Grant County.....	Apr. 1-June 30....	55	.....
Hendricks County.....	Apr. 1-30.....	1	.....
Howard County.....	Apr. 1-30.....	15	.....
Huntington County.....	Apr. 1-30.....	38	.....
Jackson County.....	Apr. 1-June 30....	4	.....
Jefferson County.....	June 1-30.....	6	.....
Johnson County.....	Apr. 1-30.....	9	.....
Knox County.....	Apr. 1-May 31....	31	.....
Laporte County.....	Apr. 1-30.....	2	.....
Lawrence County.....	Apr. 1-30.....	12	.....
Madison County.....	Apr. 1-30.....	4	.....
Marion County.....	Apr. 1-June 30....	41	.....
Indianapolis.....	June 8-Sept. 13...	58	1	
Marshall County.....	Apr. 1-30.....	1	.....
Miami County.....	Apr. 1-30.....	16	.....
Morgan County.....	Apr. 1-30.....	2	.....
Newton County.....	Apr. 1-30.....	2	.....
Noble County.....	Apr. 1-June 30....	15	.....
Orange County.....	Apr. 1-30.....	1	.....
Owen County.....	Apr. 1-30.....	4	.....
Park County.....	June 1-30.....	1	.....
Porter County.....	June 1-30.....	1	.....
St. Joseph County.....	June 1-30.....	6	.....
South Bend.....	June 29-Sept. 12...	12	.....
Scott County.....	June 1-30.....	2	.....
Shelby County.....	Apr. 1-30.....	35	1	
Steuben County.....	May 1-31.....	30	.....
Sullivan County.....	Apr. 1-30.....	9	.....

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Indiana—Continued.				
Tippecanoe County.....	Apr. 1–May 31.....	11		
Lafayette.....	June 21–Aug. 10.....	6		
Tipton County.....	Apr. 1–30.....	1		
Vanderburg County.....	June 1–30.....	1		
Wabash County.....	Apr. 1–30.....	14		
Warrick County.....	Apr. 1–30.....	1		
Wayne County.....	Apr. 1–30.....	15		
Wells County.....	Apr. 1–30.....	1		
Vigo County.....	May 1–June 30.....	12		
Total for State.....		682	4	
Iowa, general.				
Burlington.....	Jan. 1–June 30.....	2,092		
Cedar Rapids.....	July 15.....	1		
Davenport.....	June 1–July 1.....	4		
Keokuk.....	June 2–30.....	3		
Sioux City.....	June 1–30.....	1		
Sloux City.....	June 1–Aug. 31.....	8		
Total for State.....		2,109		
Kansas:				
Allen County.....	Apr. 1–June 30.....	27		
Anderson County.....	Apr. 1–30.....	6		
Atchison County.....	Apr. 1–July 31.....	70		
Atchison.....	Apr. 1–May 31.....	29		
Barber County.....	June 1–30.....	1		
Barton County.....	Apr. 1–30.....	6		
Bourbon County.....	Apr. 1–June 30.....	24		
Butler County.....	May 1–June 30.....	29		
Chase County.....	Apr. 1–June 30.....	9		
Cherokee County.....	Apr. 1–June 30.....	14		
Cheyenne County.....	Apr. 1–30.....	2		
Clay County.....	May 1–31.....	2		
Cloud County.....	May 1–June 30.....	2		
Crawford County.....	Apr. 1–June 30.....	6		
Pittsburg.....	Apr. 1–30.....	8		
Decatur County.....	June 1–30.....	4		
Dickinson County.....	July 1–31.....	2		
Doniphan County.....	Apr. 1–30.....	3		
Douglas County.....	Apr. 1–June 30.....	33		
Edwards County.....	Apr. 1–May 31.....	8		
Ford County.....	May 1–June 30.....	2		
Franklin County.....	Apr. 1–May 31.....	3		
Geary County.....	July 1–31.....	1		
Graham County.....	June 1–30.....	2		
Greenwood County.....	Apr. 1–June 30.....	11		
Hamilton County.....	Apr. 1–30.....	1		
Harper County.....	Apr. 1–June 30.....	9		
Harvey County.....	Apr. 1–30.....	14		
Hodgeman County.....	Apr. 1–30.....	2		
Jackson County.....	Apr. 1–June 30.....	39		
Jefferson County.....	Apr. 1–June 30.....	11		
Jewell County.....	May 1–31.....	8		
Kingman County.....	Apr. 1–July 31.....	26		
Labette County.....	Apr. 1–June 30.....	24		
Parsons.....	Apr. 1–July 31.....	47		
Leavenworth County.....	Apr. 1–June 30.....	62		
Leavenworth.....	May 1–31.....	3		
Lincoln County.....	Apr. 1–July 31.....	7		
Linn County.....	Apr. 1–June 30.....	21		
Lyon County.....	Apr. 1–July 31.....	32		
Marion County.....	June 1–July 31.....	3		
McPherson County.....	May 1–July 31.....	3		
Meade County.....	June 1–30.....	6		
Miami County.....	Apr. 1–30.....	5		
Montgomery County.....	Apr. 1–July 31.....	25		
Coffeyville.....	May 1–July 31.....	8		
Morris County.....	Apr. 1–30.....	14		
Nemaha County.....	Apr. 1–July 31.....	80		
Neosho County.....	Apr. 1–30.....	2		
Osage County.....	Apr. 1–May 31.....	2		
Pawnee County.....	May 1–June 30.....	6		
Pottawatomie County.....	Apr. 1–July 31.....	15		
Pratt County.....	May 1–July 31.....	13		
Reno County.....	Apr. 1–May 31.....	14		
Republic County.....	Apr. 1–July 31.....	17		
Rooks County.....	July 1–31.....	1		
Rush County.....	May 1–31.....	6		
Saline County.....	Apr. 1–30.....	11		
Sedgwick County.....	Apr. 1–June 30.....	28		
Wichita.....	July 12–Sept. 5.....	2		
Seward County.....	May 1–June 30.....	21		
Shawnee County.....	Apr. 1–July 31.....	34		
Topeka.....	June 7–Sept. 12.....	17		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Kansas—Continued.				
Smith County.....	Apr. 1-30.....	7	.....
Stevens County.....	Apr. 1-30.....	1	.....
Sumner County.....	Apr. 1-30.....	3	.....
Trego County.....	Apr. 1-30.....	22	.....
Washington County.....	Apr. 1-30.....	2	.....
Wilson County.....	June 1-30.....	15	.....
Wyandotte County.....	May 1-31.....	7	.....
Kansas City.....	June 8-Aug. 22.....	6	.....
Total for State.....		995		
Kentucky:				
Covington.....	June 21-Aug. 29..	5	.....
Lexington.....	July 12-18.....	3	.....
Total for State.....		8		
Louisiana:				
New Orleans.....	June 14-July 25..	20	1	
Total for State.....		20	1	
Maryland:				
Baltimore.....	July 5-11.....	1	.....
Total for State.....		1		
Massachusetts, general.....				
	May 1-31.....	1	.....
Total for State.....		1		
Michigan:				
Allegan County.....	May 1-31.....	18	.....
Bay County.....	May 1-31.....	10	.....
Benzie County.....	May 1-31.....	1	.....
Berrien County.....	May 1-31.....	1	.....
Branch County.....	May 1-31.....	2	.....
Calhoun County.....	May 1-June 30....	26	.....
Battle Creek.....	May 1-June 30....	20	.....
Cass County.....	May 1-31.....	17	.....
Chippewa County.....	June 1-30.....	2	.....
Sault de Saint Marie.....	May 1-June 30....	5	.....
Clare County.....	May 1-31.....	3	.....
Eaton County.....	June 1-30.....	4	1	
Emmet County.....	May 1-31.....	1	.....
Grand Traverse County.....	May 1-June 30....	12	.....
Gratiot County.....	June 1-30.....	2	.....
Hillsdale County.....	May 1-June 30....	3	.....
Houghton County.....	May 1-June 30....	31	.....
Huron County.....	May 1-June 30....	18	.....
Ionia County.....	May 1-June 30....	8	.....
Jackson County.....	May 1-June 30....	10	.....
Kalamazoo County.....	May 1-31.....	5	.....
Kent County.....	June 1-30.....	9	.....
Lake County.....	May 1-31.....	8	.....
Lapeer County.....	May 1-June 30....	2	.....
Manistee County, Manistee.....	May 1-31.....	1	.....
Mason County.....	May 1-June 30....	4	.....
Midland County.....	May 1-31.....	1	.....
Missaukee County.....	May 1-31.....	6	.....
Montcalm County.....	May 1-31.....	3	.....
Muskegon County.....	May 1-31.....	38	.....
Newaygo County.....	May 1-June 30....	7	.....
Oakland County.....	June 1-30.....	3	.....
Oceola County.....	June 1-30.....	1	.....
Otsego County.....	June 1-30.....	3	.....
Saginaw County.....	May 1-30.....	30	.....
Saginaw.....	June 21-Sept. 5..	7	.....
St. Clair County.....	May 1-June 30....	16	.....
Port Huron.....	May 1-31.....	9	1	
St. Joseph County.....	June 1-30.....	1	.....
Shiawassee County.....	May 1-31.....	1	.....
Wayne County, Detroit.....	July 4-Aug. 1.....	2	.....
Wexford County.....	May 1-June 30....	21	.....
Total for State.....		377	2	
Minnesota:				
Aitkin County.....	Apr. 1-June 15....	7	.....
Anoka County.....	Apr. 28-May 10....	5	.....

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Minnesota—Continued.				
Becker County	Apr. 28-June 15...	123	.....
Benton County	Apr. 28-June 15...	10	.....
Bigstone County	Apr. 7-May 17.....	1	.....
Blue Earth County	Apr. 21-June 15...	21	.....
Brown County	Mar. 31-May 17....	12	.....
Carver County	Apr. 28-June 8....	19	.....
Cass County	June 1-8.....	1	.....
Chippewa County	Apr. 21-June 1....	8	.....
Chisago County	Apr. 14-June 8....	2	.....
Clay County	Apr. 28-June 8....	18	.....
Crow Wing County	Apr. 28-June 15...	9	.....
Dakota County	Apr. 28-June 8....	8	.....
Douglas County	June 9-15.....	2	.....
Faribault County	May 4-June 8....	18	.....
Fillmore County	May 4-17.....	9	.....
Freeborn County	May 4-10.....	1	.....
Goodhue County	May 4-June 4....	15	.....
Hennepin County	Apr. 28-June 15...	29	.....
Minneapolis.....	June 1-July 31....	25	.....
Houston County	Apr. 28-June 15...	3	.....
Hubbard County	Apr. 28-June 15...	26	.....
Isanti County	Apr. 28-May 17....	5	.....
Itasca County	Apr. 7-June 15....	20	.....
Jackson County	Apr. 13-June 15...	14	.....
Kanabec County	May 4-10.....	5	.....
Kandiyohi County	May 4-15.....	16	.....
Kittson County	Apr. 14-June 1....	3	.....
Koochiching County	May 25-June 15...	6	.....
Lac qui Parle County	May 4-June 15....	6	.....
Lake County	May 27-June 15...	12	.....
Le Sueur County	Apr. 28-June 15...	13	.....
Lincoln County	June 4-10.....	1	.....
Lyon County	May 4-10.....	2	.....
McLeod County	May 24-June 8....	3	.....
Martin County	Apr. 28-June 15...	5	.....
Meeker County	Apr. 28-June 8....	24	.....
Millers County	Apr. 28-June 15...	4	.....
Morrison County	Apr. 28-June 15...	16	.....
Mower County	May 17-24.....	3	.....
Nicollet County	Apr. 28-June 1....	14	.....
Nobles County	Apr. 28-May 8....	1	.....
Norman County	May 10-June 15...	2	.....
Olmsted County	Apr. 28-June 15...	11	.....
Ottertail County	Apr. 28-June 15...	15	.....
Pine County	May 17-June 1....	8	.....
Pipestone County	June 1-8.....	1	.....
Polk County	Apr. 28-June 8....	12	.....
Pope County	Apr. 28-May 3....	1	.....
Ramsey County	Apr. 28-June 15...	11	.....
St. Paul.....	May 1-31.....	49	.....
Red Lake County	May 4-17.....	4	.....
Redwood County	Apr. 28-June 15...	13	.....
Renville County	May 10-15.....	4	.....
Rice County	Apr. 28-June 8....	3	.....
Rock County	Apr. 28-June 8....	3	.....
Roseau County	May 4-June 10....	2	.....
St. Louis County	Apr. 28-June 15...	9	.....
Duluth.....	Apr. 28-June 15...	126	.....
Scott County	Apr. 28-June 15...	147	.....
Sibley County	Apr. 27-June 8....	6	.....
Stearns County	Apr. 28-June 8....	43	.....
Steele County	Apr. 28-June 8....	13	.....
Stevens County	Apr. 28-May 24....	7	.....
Swift County	Apr. 28-June 8....	16	.....
Todd County	Apr. 28-June 15...	45	.....
Wabasha County	Apr. 28-May 10....	5	.....
Washington County	May 24-June 15...	6	.....
Wilkin County	Apr. 28-June 8....	5	.....
Winona County	May 4-June 15...	4	.....
Winona.....	June 21-July 18...	2	.....
Wright County	Apr. 29-June 15...	33	.....
Yellow Medicine County	May 4-June 15...	8	.....
Total for State.....		1,159	.....
Missouri:				
Conway	Apr. 20-June 19...	29	.....
Durham	May 1-July 1.....	.....	.....	Present and in vicinity.
Kansas City	June 14-Aug. 8....	6	.....
La Belle	May 1-July 1.....	7	.....	And vicinity.
Lewiston	May 1-July 1.....	18	.....	Do.
Monticello	May 1-July 1.....	1	.....

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Missouri—Continued.				
St. Joseph.....	June 7-Aug. 29...	32		
St. Louis.....	June 14-20.....	1		
Total for State.....		94		
Montana:				
Beaverhead County.....	July 1-31.....	1		
Carbon County.....	July 1-31.....	3		
Cascade County.....	May 1-July 31.....	5		
Chouteau County.....	May 1-31.....	22		
Dawson County.....	June 1-30.....	2		
Deerlodge County.....	May 1-31.....	1		
Fergus County.....	May 1-July 31.....	9		
Flathead County.....	May 1-July 31.....	59		
Gallatin County.....	May 1-July 31.....	7		
Bozeman.....	June 1-July 31.....	80		
Lewis and Clark County.....	May 1-31.....	3		
Helena.....	May 1-June 30.....	5		
Meagher County.....	May 1-July 31.....	2		
Missoula County.....	May 1-July 31.....	7		
Missoula.....	May 1-June 30.....	3		
Park County.....	July 1-31.....	1		
Ravalli County.....	May 1-July 31.....	11		
Rosebud County.....	June 1-30.....	2		
Sanders County.....	July 1-31.....	1		
Silverbow County—				
Butte.....	June 1-Sept. 1.....	4		
Teton County.....	July 1-31.....	2		
Valley County.....	May 1-31.....	4		
Total for State.....		234		
Nebraska:				
Friend.....	Apr. 13-June 13.....	13		
Lincoln.....	Mar. 1-May 31.....	22		
South Omaha.....	June 7-13.....	1		
Total for State.....		36		
New Jersey:				
Fort Hancock.....	July 30.....	1		
Total for State.....		1		
New York, general				
New York.....	May 1-July 31.....	110		
Niagara Falls.....	June 14-Sept. 12.....	2		
Schenectady.....	June 14-20.....	1		
Schenectady.....	June 1-30.....	2		
Total for State.....		115		
North Carolina:				
Anson County.....	May 1-31.....	30		
Bladen County.....	July 1-31.....	1		
Cabarrus County.....	Apr. 1-May 31.....	38		
Camden County.....	Apr. 1-July 31.....	30		
Caswell County.....	June 1-30.....	2		
Chatham County.....	Apr. 1-30.....	2		
Chowan County.....	Apr. 1-May 31.....	18		
Cleveland County.....	Apr. 1-July 31.....	10		
Davie County.....	Apr. 1-30.....	4		
Forsyth County.....	Apr. 1-30.....	1		
Gates County.....	Apr. 1-30.....	3		
Guilford County.....	Apr. 1-30.....	6		
Greensboro.....	Aug. 12-22.....	1		
Johnston County.....	Apr. 1-June 30.....	47		
Mecklenburg County—				
Charlotte.....	June 14-Aug. 15.....	4		
New Hanover County.....	Apr. 1-May 31.....	6		
Orange County.....	Apr. 1-May 31.....	3		
Pasquotank.....	July 1-31.....	2		
Richmond County.....	May 1-June 30.....	2		
Rowan County.....	Apr. 1-May 31.....	26		
Rutherford County.....	Apr. 1-30.....	12		
Wayne County.....	Apr. 1-30.....	5		
Yadkin County.....	Apr. 1-30.....	2		
Total for State.....		246		
Ohio, general				
Canton.....	Apr. 25-June 13.....	200		
Cincinnati.....	June 7-13.....	1		
Cincinnati.....	June 20-Sept. 11.....	9		
Dayton.....	June 14-Sept. 12.....	17		

Present.

Do.

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Ohio—Continued.				
Springfield	July 12-18.....	1		
Toledo	June 14-Aug. 16	12		
Troy	Apr. 15-July 3	28		
Zanesville	Aug. 1-31	1		
Total for State.....		269		
Oregon:				
Portland	Aug. 1-31	181		Report for June not received.
Total for State.....		181		
Pennsylvania:				
Philadelphia	Aug. 30-Sept. 4	1		
Total for State.....		1		
Rhode Island:				
Pawtucket	June 12-29	1		
Total for State.....		1		
South Carolina:				
General	Jan. 1-June 30....	170	1	
Total for State.....		170	1	
Tennessee:				
Knoxville	June 21-July 25....	2		
Livingston	June 13-Apr. 11....	9	1	
Nashville.....	June 14-20	1		
Total for State.....		12	1	
Texas:				
Fort Worth.....	May 1-31.....	9		
San Antonio.....	June 14-Sept. 5	10		
Total for State.....		19		
Utah:				
Cache County	May 1-31.....	2		
Carbon County	June 1-30.....	1		
Davis County.....	May 1-July 31....	3		
Salt Lake County—				
Salt Lake City.....	May 1-Aug. 31....	32		
Unitah County	July 1-31.....	1	1	
Utah County	May 1-July 31....	14		
Weber County.....	May 1-June 30....	21		
Total for State.....		74	1	
Vermont:				
Whiting	May 5	1		
Total for State.....		1		
Virginia:				
Alexandria.....	June 25-27.....	13		
Waynesboro.....	June 1-July 31....	20		
Total for State.....		33		
Washington:				
Seattle	May 1-July 31....	36		
Spokane	June 7-Aug. 29	66		
Tacoma	June 8-Aug. 2	4		
Total for State.....		106		
West Virginia:				
Charleston	Aug. 1-31.....	2		
Moundsville.....	June 17-July 2....	1		
Total for State.....		3		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Wisconsin:				
Adams County	Apr. 1-June 30....	1		
Ashland County	Apr. 1-June 30....	8		
Barron County	Apr. 1-June 30....	10		
Bayfield County	Apr. 1-June 30....	8		
Brown County	Apr. 1-June 30....	1		
Buffalo County	Apr. 1-June 30....	6		
Calumet County	Apr. 1-June 30....	5		
Chippewa County	Apr. 1-June 30....	50		
Clark County	Apr. 1-June 30....	7		
Crawford County	Apr. 1-June 30....	7		
Dane County	Apr. 1-June 30....	3		
Dodge County	Apr. 1-June 30....	37		
Door County	Apr. 1-June 30....	17		
Douglas County	Apr. 1-June 30....	82		
Dunn County	Apr. 1-June 30....	11		
Fond du Lac County	Apr. 1-June 30....	3		
Green County	Apr. 1-June 30....	8		
Jackson County	Apr. 1-June 30....	10		
Jefferson County	Apr. 1-June 30....	8		
Juneau County	Apr. 1-June 30....	6		
Kewaunee County	Apr. 1-June 30....	10		
La Crosse County—				
La Crosse	June 16-Sept. 5....	71		
Manitowoc County	Apr. 1-June 30....	27		
Manitowoc	Aug. 2-8	1		
Marathon County	Apr. 1-June 30....	10		
Marinette County	Apr. 1-June 30....	23		
Milwaukee County	Apr. 1-June 30....	9		
Milwaukee	June 14-Sept. 12..	26	1	
Monroe County	Apr. 1-June 30....	4		
Oconto County	Apr. 1-June 30....	5		
Outagamie County	Apr. 1-June 30....	6		
Ozaukee County	Apr. 1-June 30....	28		
Pepin County	Apr. 1-June 30....	1		
Pierce County	Apr. 1-June 30....	18		
Polk County	Apr. 1-June 30....	5		
Portage County	Apr. 1-June 30....	1		
Rock County	Apr. 1-June 30....	6	1	
Rusk County	Apr. 1-June 30....	3		
St. Croix County	Apr. 1-June 30....	8		
Sauk County	Apr. 1-June 30....	2		
Sheboygan County	Apr. 1-June 30....	28		
Taylor County	Apr. 1-June 30....	10		
Trempealeau County	Apr. 1-June 30....	1		
Vernon County	Apr. 1-June 30....	3		
Vilas County	Apr. 1-June 30....	1		
Walworth County	Apr. 1-June 30....	3		
Washburn County	Apr. 1-June 30....	4		
Waukesha County	Apr. 1-June 30....	11		
Waupaca County	Apr. 1-June 30....	3		
Winnebago County	Apr. 1-June 30....	6		
Wood County	Apr. 1-June 30....	44		
Total for State		666	2	
Grand total, United States		8,321	13	

Plague in the United States as reported to the Surgeon-General, Public Health and Marine-Hospital Service, July 15–September 25, 1908.

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

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

[For smallpox and plague, see special tables.]

Cities.	Week ended—	Population, United States census, 1900.	Total deaths from all causes	Tuberculosis.		Enteric fever.		Scarlet fever.		Diphtheria.		Measles.		Whooping cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Altoona, Pa.	Sept. 12	38,973	13	1	1	6	2	2	2	2					
Ann Arbor, Mich.	Aug. 29	14,509	8			1	1								
Do.	Sept. 5	14,509	6												
Baltimore, Md.	Sept. 12	508,967	190	15	21	116	11	7	1	22		2	1	1	1
Beaver Falls, N. Y.	do.	10,054										2			
Biddeford, Me.	do.	16,145	9												
Binghamton, N. Y.	do.	38,647	12		2										
Boston, Mass.	do.	560,892	223	63	21	31	3	26		47	6	19	3	8	2
Bradford, Pa.	do.	15,029	2		1										
Brockton, Mass.	do.	40,068	11	2	1	2						2			
Cambridge, Mass.	do.	91,886	27	4	2	2		11		6		2		2	1
Camden, N. J.	do.	75,935	29			5		5		3					
Camden, S. C.	do.	2,441	0	1		1									
Carbondale, Pa.	do.	13,536	4			1									
Charlotte, N. C.	do.	18,091	10			7									2
Chelsea, Mass.	do.	34,072	4			1									
Chicago, Ill.	do.	1,698,575	556	28	66	39	5	70	10	54	12	6		16	4
Chicopee, Mass.	do.	19,167	6			1	2	2		1					
Cincinnati, Ohio	Sept. 11	325,902	103	9	9	7		2		6	1	1		2	
Cleveland, Ohio	do.	381,786	129	26	11	15	1	12		6		7	1	18	
Clinton, Mass.	Sept. 12	13,667	8		1										
Columbus, Ga.	do.	17,614	2		1										
Covington, Ky.	do.	42,938	18		1		1			1				3	
Danville, Ill.	do.	16,354	7		2					3					
Dayton, Ohio	do.	86,393	24		1	2		1						1	
Detroit, Mich.	do.	285,704	132					5	1	12	1				
Dunkirk, N. Y.	do.	11,616	5			2	1	1						10	
Elmira, N. Y.	do.	35,672	21			2	1	1		2	1	1		1	
Erie, Pa.	Sept. 5	52,733	18	1	1	4		5							
Do.	Sept. 12	52,733	8		1	1	1	1		2				1	
Evansville, Ind.	Aug. 22	59,007	14	4		5	1	1							
Do.	Sept. 5	59,007	18	2		5	1	2							
Do.	Sept. 12	59,007	12			3	1	1							
Everett, Mass.	do.	24,336	7	1	1	4						1			
Findlay, Ohio	do.	17,613	3			2		2	1						
Fort Wayne, Ind.	Sept. 8	50,947	12		3	2									
Galesburg, Ill.	Sept. 12	18,607	3					1		1					
Galveston, Tex.	Sept. 11	37,789	10	2		2	2								
Glens Falls, N. Y.	Sept. 12	12,613	2			2									
Gloucester, Mass.	do.	26,121	8												
Gr. Rapids, Mich.	Sept. 5	87,565	26		2	5		3		2		1		1	
Do.	Sept. 12	87,565	24		2	8		2		3	1	1			
Harrison, N. J.	do.	10,596	3												
Haverhill, Mass.	do.	37,175	14	4	3	1									
Hoboken, N. J.	do.	59,364				1		1		2				2	
Hyde Park, Mass.	do.	13,244	1	2											
Indianapolis, Ind.	Sept. 13	169,164	49		10	17	1	4		15	3	1			
Jacksonville, Fla.	Sept. 12	23,429	21		5		1								
Jersey City, N. J.	Sept. 6	206,433	98			1	3	5	1	3	1	5		1	
Johnstown, Pa.	Sept. 12	35,936	15	4		4	3			7					
Kalamazoo, Mich.	Sept. 5	24,404	14			1									1
Kansas City, Kans.	Sept. 12	51,418	14	1	2	3		1		2		1			
Kansas City, Mo.	do.	163,752	46		6	1	2	1		4	1				
Kearny, N. J.	do.	10,896	3												
Kingston, N. Y.	Sept. 5	24,535	10		2		2								
Do.	Sept. 12	24,535	10		1										
La Crosse, Wis.	do.	28,895	5	12		2				1					
La Fayette, Ind.	Sept. 14	18,116	9												
Lawrence, Mass.	Sept. 12	62,560	19		1	4				2					
Lebanon, Pa.	do.	17,628	8	5		1									
Lexington, Ky.	do.	26,369	14			1				1					
Los Angeles, Cal.	Sept. 5	102,479	59	4	9	2		5		11	3	1			
Lowell, Mass.	Sept. 12	94,969	43	2	3	3	1			3					
Lynn, Mass.	do.	68,513	14	1	1	3		3		6					
Malden, Mass.	do.	33,664	10	1		6		1	1	2					
Manchester, N. H.	do.	56,987	25	3	3	6		1		4					
Manitowoc, Wis.	do.	11,786	8	1	2										
Marlboro, Mass.	Sept. 5	13,609	2												
Do.	Sept. 12	13,609	1												
Massillon, Ohio.	do.	11,944	1												
Medford, Mass.	do.	18,244	3	1	1	3		1							
Melrose, Mass.	do.	12,962	2					4		3					
Mobile, Ala.	Sept. 5	38,469	17			1	1	1		1				1	1
Moline, Ill.	Sept. 13	17,248	2												
Montclair, N. J.	Sept. 12	18,962	3			1		1							

a Intervening week previously reported.

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

Cities.	Week ended—	Population, United States census, 1900.	Total deaths from all causes.	Tuberculosis.		Enteric fever.		Scarlet fever.		Diphtheria.		Measles.		Whooping cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Montgomery, Ala.	Sept. 11	30,346	13	...	...	...	...	...	...	...	...	...	...	...	...
Mt. Vernon, N. Y.	Sept. 12	21,228	7	...	...	...	...	1	...	...	...	1	...	...	...
Nanticoke, Pa.	Sept. 14	12,616	9	1	1	1	...	...	...	5	1	...	...	...	...
Nashville, Tenn.	Sept. 12	80,865	34	...	3	18	1	6	...	1	...	...	...	...	...
Newark, N. J.	do	246,070	...	...	15	10	...	...	...	16	3	...	...	...	1
New Bedford, Mass.	do	63,442	...	...	...	3	1	8	1	...	...	...	...	...	2
Newburyport, Mass.	do	14,478	10	...	...	...	...	3	...	...	...	...	...	...	...
New Orleans, La.	Sept. 5	278,104	124	13	21	6	...	10	...	11	...	...	...	...	...
Newport, R. I.	Sept. 12	22,441	1	...	2	1	...	...	...	4	...	...	...	...	...
Newton, Mass.	do	33,587	6	...	...	...	...	3	...	2	...	...	...	...	...
New York, N. Y.	do	3,437,202	1,219	423	153	182	17	91	3	189	19	65	1	5	3
Niagara Falls, N. Y.	do	19,457	8	...	...	2	1	...	...	3	2	...	...	...	...
Norristown, Pa.	do	22,265	7	3	...	3	...	...	...	...	...	...	...	...	...
North Adams, Mass.	do	24,200	4	...	...	5	...	...	...	...	...	...	...	...	...
Northampton, Mass.	do	18,643	7	1	...	...	...	...	...	...	...	...	...	...	...
Orange, N. J.	do	24,141	6	...	...	1	...	4	...	1	1	...	...	...	...
Ottumwa, Iowa.	do	18,197	5	1	...	1	1	...	...	...	...	...	...	...	...
Palmer, Mass.	do	7,801	3	...	...	2	1	...	...	...	...	...	...	...	...
Philadelphia, Pa.	Aug. 29	1,298,697	389	83	46	102	5	16	...	47	6	10	2	15	4
Do	Sept. 5	1,298,697	392	111	58	107	10	17	2	49	7	5	1	12	1
Plainfield, N. J.	do	15,369	6	...	...	7	1	...	...	...	...	...	...	...	...
Do	Sept. 12	17,427	10	...	...	2	...	...	...	1	1	...	...	...	...
Portsmouth, Va.	Sept. 15	17,597	2	...	...	...	...	...	...	...	...	...	...	...	...
Providence, R. I.	Sept. 12	175,597	16	6	7	...	...	2	...	13	2	...	...	...	...
Racine, Wis.	do	28,102	8	7	...	...	...	2	...	1	...	...	...	...	...
Reading, Pa.	Sept. 14	78,961	18	...	1	18	3	2	...	...	...	...	...	...	...
Richmond, Va.	Sept. 12	85,050	33	5	2	15	3	1	...	3	...	...	...	2	1
Rock Island, Ill.	Sept. 5	19,493	5	...	1	2	...	...	...	...	...	...	...	...	...
Do	Sept. 12	19,493	2	...	...	2	...	3	...	...	...	...	...	...	...
Saginaw, Mich.	Sept. 5	42,345	10	...	...	2	1	...	...	1	...	...	...	...	...
St. Joseph, Mo.	Sept. 12	102,979	20	...	1	...	...	...	...	...	...	...	...	...	...
St. Louis, Mo.	Sept. 5	575,238	163	39	20	35	4	2	...	23	2	2	...	8	...
San Antonio, Tex.	do	58,321	...	...	...	...	...	...	...	...	...	...	...	...	...
Do	Sept. 12	58,321	105	...	...	3	1	...	...	2	...	...	...	1	2
San Francisco, Cal.	Sept. 5	242,782	14	10	10	...	...	4	...	5	...	4	...	...	...
Scranton, Pa.	Sept. 12	102,026	35	...	...	12	1	5	2	5	...	...	...	...	...
Somerville, Mass.	do	61,643	20	...	3	4	...	1	...	2	...	1	...	...	...
South Bend, Ind.	do	38,999	14	1	1	...	...	...	...	...	...	...	...	...	...
Spokane, Wash.	Sept. 5	38,848	22	1	3	16	1	...	...	8	2	1	...	...	...
Springfield, Ill.	Sept. 10	34,159	11	...	...	...	...	2	...	...	...	...	...	...	...
Springfield, Mass.	Sept. 12	62,059	21	1	2	10	2	2	...	3	...	...	...	2	...
Springfield, Ohio	do	38,253	9	6	2	6	...	...	...	3	...	...	...	...	...
Steelton, Pa.	do	12,068	5	...	...	...	...	...	...	...	...	...	...	...	...
Tacoma, Wash.	Sept. 6	37,714	12	...	1	...	...	1	...	...	1	...	...	...	...
Taunton, Mass.	Sept. 12	31,036	17	1	1	...	...	...	...	...	...	...	...	...	...
Titusville, Pa.	do	8,244	3	...	...	...	...	2	...	...	...	...	...	...	...
Toledo, Ohio	Aug. 29	131,822	44	...	1	4	1	1	1	6	...	...	...	...	...
Do	Sept. 5	131,822	30	...	2	...	2	1	2	3	...	...	...	...	...
Topeka, Kans.	do	33,608	12	1	1	3	...	1	...	...	...	...	...	...	...
Do	Sept. 12	33,608	15	...	1	...	...	...	...	...	...	...	...	...	1
Trenton, N. J.	Aug. 29	73,307	...	1	...	1	...	...	...	...	...	...	...	...	...
Do	Sept. 12	73,307	...	...	2	...	...	2	...	1	...	...	...	...	...
Waltham, Mass.	Sept. 12	23,481	9	...	1	2	...	3	...	...	...	...	...	...	...
Warren, Ohio	do	8,529	2	...	...	...	...	...	...	...	...	...	...	...	...
Washington, D. C.	Aug. 22	278,718	76	...	9	44	3	1	...	4	1	3	...	15	1
Do	Aug. 29	278,718	96	...	8	44	6	1	...	5	2	5	...	12	1
Do	Sept. 5	278,718	106	...	8	36	5	3	...	8	...	3	...	11	...
Do	Sept. 12	278,718	104	80	13	39	5	1	...	4	...	1	...	2	...
Wheeling, W. Va.	do	38,878	10	...	1	...	...	5	...	8	...	...	...	...	...
Wichita, Kans.	Sept. 5	24,671	...	...	...	...	...	1	...	...	...	...	...	...	...
Wilkinsburg, Pa.	Sept. 14	11,886	5	...	...	5	...	...	...	2	...	...	...	...	...
Williamsport, Pa.	Sept. 12	28,757	10	...	...	2	1	4	...	...	...	...	...	...	...
Wilmington, Del.	Aug. 29	76,508	25	...	3	...	2	...	...	...	...	...	...	...	1
Do	Sept. 12	76,508	27	...	1	...	1	...	...	...	...	...	...	...	...
Winona, Minn.	Sept. 5	19,714	4	...	1	...	...	...	...	2	...	...	...	...	...
Woburn, Mass.	Sept. 12	14,254	3	1	...	2	...	...	...	...	...	...	...	...	...
Worcester, Mass.	do	118,421	47	5	3	1	1	1	1	12	1	1	...	1	...

a Intervening week previously reported.

FOREIGN AND INSULAR.

CURRENT QUARANTINE MEASURES.

[From the Veröffentlichungen des Kaiserlichen Gesundheitsamtes, Berlin, September 2, 1908.]

CHOLERA.

Belgium.—August 13. Vessels arriving from Russian ports of the Baltic Sea required to carry bills of health.

Bulgaria.—August 13 and 14. The Province of the Don, the Kherghis Steppe, the city of Nachitschewan, and the city and government of Charkow declared cholera infected. August 18. The cities of Nischni-Novgorod, Baku, and Tula declared cholera infected.

Egypt.—August 19. Cholera regulations in force against arrivals from Taganrog.

Persia.—August 19. Travelers from Russia subject to five days' quarantine. Vessels from Russian ports subject to detention of five days at Astara.

Roumania.—August 18. Measures of observation and inspection of arrivals from certain parts of Russia are extended to include the governments of Kasan and Pensa.

Russia.—August 9 and 15. The cities of Rostov and Nischni-Novgorod declared cholera infected. The cities of Hankau and Hankyang, in China, declared cholera infected.

PLAGUE.

Austria-Hungary.—Arrivals from Port of Spain and the Island of Trinidad subject to requirements of quarantine circular August 12, 1904, at Trieste.

Belgium.—August 13. Measures against the Island of Terceira extended to include all ports of the Azores.

British East Indies.—Bombay Presidency, July 23. Pilgrim vessels allowed to take on pilgrims only at Bombay. Every pilgrim required to undergo medical inspection. The government of Bombay will hereafter maintain a station at Perim during every pilgrim season, at which pilgrim vessels may be quarantined if necessary.

Roumania.—August 24. Travelers from the Khirghis Steppe of the Russian government of Astrachan are admitted only at Costanza and Sulina, and by land routes at Ungheni and Prutuli, and are subject to medical oversight. The admission of groups of pilgrims, laborers, and tramps is forbidden; also the admission of fresh food products.

Sweden.—August 14. The ports of Canton, Swatow, and Amoy, in China, and the city of Valparaiso are declared plague infected. San Francisco is declared free of plague.

Turkey.—August 18. Arrivals from all Russian ports of the Black Sea between Batoom and Sulina, inclusive, shall be subject at the lazaretto of Sinope or that of Kavak to medical inspection with disinfection of effects of passengers of the third class and crew.

Arrivals from Rostov, Taganrog, Noworssynsk, and Batoom subject to 5 days' quarantine with disinfection at the lazaretto of Sinope. Travelers from those ports shall be subject to 5 days' observation at their places of destination.

Food products and articles of clothing or merchandise which are susceptible to infection are forbidden importation into Turkey from Russia.

Russian vessels from the Black Sea carrying a large number of passengers shall be subject at the lazaretto of Sinope to 5 days' quarantine with disinfection and measures of rat destruction. This quarantine shall begin with the time of transshipment of the passengers and crew and the disinfection of their effects.

Pilgrim ships and others from Russian ports of the Black Sea which carry more than one pilgrim to every 100 tons registered shall be subject to the same measures; when the period of quarantine is concluded said vessels shall pass the Straits of the Dardanelles or the Bosphorus in contumacy and repair direct to the lazaretto of Abou-Saad (Jiddah) or to that of Sinope, Kavak, or the lazarettoes of Smyrna and Beirut, there to take on coal and water and pilgrims.

ALGERIA.

Deratization in ports.

The following is taken from the *Bulletin Sanitaire Bimensuelle*, Algiers, August 16:

Algiers.—July 1 to 15, 1908: Rodents taken by the maritime sanitary service, 710; examined by the laboratory of health, 77; result negative. Classification of rats: *Mus norvegicus*, 548; *rattus*, 146; *alexandrinus*, 7; *musculus*, 9.

Bône.—July 17–30, 1908: Rodents taken, 633; examined, 68; result negative.

Oran.—Month of July, 1908: Rodents examined, 143.

Philippeville.—Month of July, 1908: Rodents taken, 27; examined, 7; result negative.

AUSTRIA.

Plague at Trieste.

The following is received from the Department of State, under date of September 21:

Consul at Trieste, Austria, cables as follows: "Plague, 1 dead, 1 sick."

BARBADOS.

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

Acting Assistant Surgeon Urquhart reports:

Week ended September 5. Bills of health issued to 11 vessels; fumigated, 3; total number of passengers, 228; members of crews, 519.

The *Orinoco* to New York via the Spanish Main, and the *Justin*, *Norse Prince*, and *Boniface* were fumigated.

Sanitary conditions remain good, no quarantinable diseases being reported for the week for the port or island.

BRITISH HONDURAS.

Report from Belize, fruit port.

Acting Assistant Surgeon Mengis reports:

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

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
Sept. 4	Belize	Mobile	19	4	3
4	Preston	New Orleans	37	17	22
5	Frutera	New York via Central American ports.	26	0	0
8	Fred W. Homans	Tampa, Fla.	5	0	0
8	Hermia	New York	22	1	0

CHINA.

Report from Hankau—Status of cholera.

Vice-Consul-General Pontius reports, August 5:

No new cases of cholera have appeared among the foreign population of this port during the last 10 days. In all there were 10 cases and 7 deaths among foreigners, two of whom were Japanese.

The total deaths in Wuchang, Hanyang, and Hankau amount to more than 1,500, and cholera is still epidemic in those districts. The military encampment at Wuchang has suffered severely from the epidemic, 100 cases having been reported.

COLOMBIA.

Report from Barranquilla—Sanitary conditions.

Consul Eberhardt reports, August 25:

The declared death rate at Barranquilla for the years 1906 and 1907 was, respectively, 27+ and 22+ per thousand. The population of Barranquilla is estimated at from 40,000 to 50,000. An adequate sewer system is lacking throughout the city. No systematic attempt whatever is made for proper drainage, the sewage from the homes of the better classes being diverted usually into underground cesspools, a very short distance from the houses, while the poorer classes make no attempt at disposing of such filth further than to have it conveyed by small drains to the nearest street or possibly into the back yard. No provision is made for draining this deposit from the streets. Rains are infrequent during the greater part of the year. The streets are

unpaved and usually ankle deep with sand, which absorbs much of the moisture. The extreme heat causes quick evaporation. Standing water or sewage is rarely seen on the streets for any length of time. The hordes of mongrel dogs and buzzards, which constitute a very practical and helpful scavenger force, also do much to help bring about this condition.

I am informed that water-closets, cesspools, etc., are by law required to be disinfected at frequent intervals, but so far as I can learn there is no system of ascertaining whether or not these requirements are observed. The dumping ground at the edge of the city, where all refuse, dead animals, etc., are supposed to be burned, is not always made use of.

Mosquitoes exist in great numbers, but they are much less in evidence in the homes situated in the upper part of the city than in those of the low-lying districts adjacent to the river.

Rains, while not of frequent occurrence even during what is known as the rainy season, are apt to be more or less like a cloudburst when they do occur. At such times the cross streets become streams of from 1 to 3 feet in depth in many places, sand being washed over the walks and tracks. The Magdalena River receives all this water, and at the same time furnishes the water supply for Barranquilla, the water being pumped into a large reservoir, from which it is piped to all parts of the city into the homes of the better classes, while the poorer classes procure their supply from stations at street corners in various parts of the city.

The average temperature, in the shade, during the year is 85° F., and, as is the case in most tropical countries, a great amount of all kinds of native fruits is eaten by the inhabitants, the poorer classes being largely dependent upon such articles as a means of existence. The common diseases are malarial, tropical, and intestinal fevers, dysentery, and diarrhea. The death rate among infants is appalling, nearly 53 per cent of the deaths of a recent week, taken as an example, having been among infants of less than 1 year of age.

Of the quarantinable diseases I am informed that typhus fever is very rarely encountered. Cases of leprosy are not infrequent, but they are always immediately taken in charge and the patients sent to Caño de Loro, a leper colony near Cartagena. Yellow fever has not appeared in epidemic form since 1905. Only two known cases appeared in Barranquilla during 1907, and in each case the patient was immediately isolated and recovered. The older inhabitants tell of experiences and fix dates "from the time of the cholera," but that was many years ago and no cases have appeared since then. Bubonic plague has never been known here, and not only the health authorities, but the greater number of the citizens, realizing fully the grave danger and menace its entrance and existence would constitute for the public health and business interests of Barranquilla, are determined to spare no efforts to prevent such a condition being brought about.

The very strictest quarantine is being enforced between this port, Trinidad, and La Guaira, and no vessels from either of the ports named have been received for months, though recently a number that had merely taken on mail at those ports attempted to enter here and were refused admittance.

COSTA RICA.

Report from Limon, fruit port.

Acting Assistant Surgeon Goodman reports:

Week ended September 5. Estimated population, 6,000. General sanitary condition of this port and the surrounding country during the week, good.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
Aug. 30	San Jose	Boston	45	12	0
31	Prinz Aug. Wilhelm.....	New York	131	106	11
Sept. 2	Birchton	Port Inglis	25	0	0
2	Cartago.....	New Orleans	86	4	61
4	Reventazon	New York	55	5	0

One bill of health for Panaman port viséed, and certificates issued to 37 passengers bound for Colon.

CUBA.

Report from Cienfuegos—Inspection and fumigation of vessels.

Acting Assistant Surgeon Villoldo reports, September 7:

Week ended September 5.

Bills of health issued	4
Vessels inspected prior to departure.....	1
Vessels not inspected prior to departure.....	3
Members of crews inspected.....	28
Members of crews not inspected.....	97

The Norwegian steamship *Ole Bull*, bound for a port in the United States via Habana, which arrived at this port with cattle from Cartagena, Colombia, was fumigated by the Cuban authorities.

No quarantinable diseases have been reported during the week and the general health conditions are satisfactory.

Report from Habana—Inspection and fumigation of vessels—History of yellow fever cases previously reported—Measures to prevent spread—Increase of Stegomyia mosquitoes.

Passed Assistant Surgeon Amessee reports, September 14:

Week ended September 12.

Vessels inspected.....	10
Bills of health issued.....	14
Members of crews of outgoing vessels inspected.....	794
Passengers of outgoing vessels inspected.....	585
Certificates of immunity to yellow fever issued.....	20
Certificates issued to passengers bound for New York.....	284
Certificates issued to passengers bound for southern ports.....	280
Vessels fumigated prior to sailing.....	3

Two new foci of yellow fever have appeared in Cuba during this period, the first, reported on September 8, at Antilla, on Nipe Bay, north coast of Oriente Province, and the second at Habana, discovered September 11, confirmed September 14.

The history of the Antilla case shows that a Spanish nonimmune left Habana August 16, proceeding directly to Antilla, where he fell ill on August 27. In the first three days of his sickness, constituting the danger period, he visited the neighboring towns of Felton and Mayari, continuing on to Santiago de Cuba, where he arrived in a serious condition on August 29, and was immediately taken to the civil hospital.

Death ensued on September 6, the autopsy disclosing characteristic lesions of the disease. A feature of great interest to sanitarians was noted in the study of this case, there appearing, among the usual phenomena, a number of white stools after the sixth day. The incidence of fatty stools in a suspicious case of fever has so often been considered a sign of sufficient importance to warrant a negative diagnosis that grave errors have doubtless frequently been made.

Investigations were made at Antilla as soon as possible and two recent suspicious deaths were discovered. A force of 200 men was detailed to carry out the usual antimosquito work, and the town was declared in quarantine, both land and marine.

The case in this city developed in the person of a Spanish non-immune, age 22, two years in Cuba, and for the past month an employee in a canteen on San Pedro street, opposite the Machina, a district of Habana badly infested with *Stegomyia* and populated almost entirely by Spaniards, most of whom are not immune.

The boy was taken sick September 6, removing September 7 or 8 to a hotel, next door to the café. Here he remained, unattended, until September 11, when some friends called an ambulance and he was conveyed to Mercedes hospital.

The resident surgeon immediately directed he be sent to Las Animas, where he is now under treatment.

The case presents all the features of a severe attack of yellow fever, including the mucous hemorrhages and the black vomit. As in the Antilla case, diligent search has failed to reveal the original focus. For this reason, and also in view of the fact that the patient unquestionably infected numerous *Stegomyia* along the water front, rigid prophylactic measures have been instituted, including a census of the infected district and the determination of temperature twice daily of all nonimmunes employed there.

Unemployed laborers, of whom there are many, will be segregated to-day at Tricornia, where they will remain under observation five days. In the meantime the work of sulphur fumigation will be carried on vigorously.

To protect the troops at Camp Columbia, orders have been issued forbidding soldiers visiting Habana after 6 p. m.

Mosquitoes of the genus *Stegomyia* have increased in numbers enormously in the lower section of Habana during the past month. Among other breeding places found about the office of the Service was the bore of an old cannon partly buried in the pavement of the custom-house yard, a rowboat containing half a barrel of rain water, and the boxes of a number of new wagons recently landed from a steamship at the wharf.

Further relative to yellow fever case at Habana.

Doctor Amesse further reports:

September 21. Case taken sick morning September 7, spent first two days wandering about in immediate neighborhood, next two days in Four Nations hotel; taken to Mercedes hospital September 11; transferred at once to Las Animas (hospital), where he arrived at 4 in the afternoon September 11. Fumigation of district began September 12 and was completed the second time on September 20, neighboring blocks being disinfected this week as precautionary measure; prophylactic work has been carried out with great care and thoroughness.

Report from Matanzas—Inspection and fumigation of vessels.

Acting Assistant Surgeon Nuñez reports, September 14:

Week ended September 12. During this period bills of health were issued to 4 vessels clearing for United States ports. One was fumigated. One health and acclimation certificate and 2 certificates of nonexposure to yellow fever infection were granted to passengers bound for New York via Habana.

No quarantinable diseases have been reported in this district.

Reports from Santiago—Inspection of vessels—Fumigation of vessels to destroy mosquitoes—History of yellow fever case previously reported.

Acting Assistant Surgeon Wilson reports, September 8:

Week ended September 5. Bills of health issued to 6 vessels bound for the United States and its dependencies. Two vessels fumigated before departure to kill mosquitoes.

No quarantinable disease reported in this city during the week.

The mosquito work for the week is as follows: Houses inspected, 6,483; houses in which larvæ were found, 16.

The following is a report of the case of yellow fever that died September 6. [See Public Health Reports, September 11, 1908, page 1310]:

Spaniard; age 20; arrived August 23 at Antilla from Habana; left Antilla August 26 for Felton, where he was taken sick August 27; he left Felton August 29 and went to Mayari; late the same night he arrived at Santiago by train and was admitted to the hospital; he died September 6. The autopsy was made the next morning and confirmed the diagnosis.

At Daiquiri and Firmesa all the sanitary force has been withdrawn except 2 inspectors and a small number of men for mosquito work.

GERMANY.

Report from Berlin—Cholera in Galicia.

The following is received from Consul-General Thackara, under date of September 8:

According to a dispatch dated September 8, cholera has spread from Russian Poland to Galicia, a province of Austria-Hungary. In

Ostrowo, up to the present date there have been registered 76 cases of cholera with 39 deaths.

GUATEMALA.

Report from Puerto Barrios, fruit port.

Acting Assistant Surgeon Wailes reports:

Week ended September 8. Present officially estimated population, 250. General sanitary condition of this port and the surrounding country during the week, good. The railroad company has commenced sanitary work.

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.
Sept. 3	Belize	18	3	.....	.....
5	Ravelston	25	1	.....	.....
6	Frutera	26	2	.....	.....
9	Ellis	39	30	.....	.....

HAWAII.

Report from Honolulu—Examination of rats for plague infection.

Passed Assistant Surgeon Currie reports, August 29, through Chief Quarantine Officer Cofer:

Week ended August 29.

Rats trapped in Honolulu.....	838
Rats found dead in Honolulu.....	3
Rats shot from trees in Honolulu.....	118
Total number of rats taken.....	959
Rats examined bacteriologically.....	802
Rats showing plague infection.....	0

CLASSIFICATION OF RATS TAKEN.

<i>Mus rattus</i>	220
<i>Mus norvegicus</i>	81
<i>Mus alexandrinus</i>	145
<i>Mus musculus</i>	494
Total rats classified.....	940

Of those shot from trees (rats having arboreal habits) 22 per cent were *Mus rattus* and 78 per cent *Mus alexandrinus*.

HONDURAS.

Report from Ceiba, fruit port—Stegomyia calopus numerous—Yellow fever.

Acting Assistant Surgeon Jumel reports:

Week ended September 8. Present officially estimated population, 6,500. General sanitary condition of this port and the surrounding

country during the week, good. Local sanitary conditions improved. *Stegomyia calopus* numerous.

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.
Sept. 4	Orleanian.....	31	2	0	0
4	Joseph Vaccaro.....	34	8	2	0
6	Habil.....	14	0	0	0
7	Colombia.....	19	0	0	0

Doctor Jumel further reports, September 24, the appearance of yellow fever at Ceiba.

Report from Puerto Cortez, fruit port—Stegomyia calopus present.

Acting Assistant Surgeon Ames reports:

Week ended September 5. Present officially estimated population, about 2,400. General sanitary condition of this port and the surrounding country, very good. *Stegomyia calopus* present.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
Aug. 30	Alabama.....	Mobile.....	18	5	0
Sept. 2	Mercator.....	New Orleans.....	17	6	0
3	Preston.....	do.....	37	7	0
5	Helen.....	Mobile.....	18	5	0

Report from Tela, fruit port.

Acting Assistant Surgeon Roe reports:

Week ended September 5. Present officially estimated population, about 1,250. General sanitary condition of this port and the surrounding country during the week, good.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
Aug. 30	Viator.....	New Orleans.....	17	0	0
Sept. 5	Colombia.....	Mobile.....	19	0	0
8	Orleanian.....	New Orleans.....	31	0	0
5	Habil.....	do.....	14	0	0

INDIA.

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

Acting Assistant Surgeon Eakins reports, August 30:

Week ended August 15. A bill of health was issued to the steamship *Ardmount*, bound for Galveston, with a total crew of 25. The

usual precautions were taken, holds fumigated, rat guards placed on wharf lines, and the Asiatics' effects disinfected.

Week ended August 8. There were 8 deaths from cholera, 12 from plague and 3 from smallpox in Calcutta.

In Bengal there were 15 cases of plague with 13 deaths.

In India there were 907 cases of plague with 626 deaths.

Plague in Burma in July, 1908—Death rate of cities in Bengal in 1907.

Doctor Eakins further reports:

There was an increased number of plague cases in Burma during the month of July. There are reported 746 new cases and 699 deaths during the month as compared with 587 cases and 542 deaths for the month of June. In Rangoon itself there were 182 cases and 174 deaths as opposed to 172 and 162 for June. In the Bhamo district (upper Burma) there were 30 cases and 22 deaths, while in June there were but 4 and 4. Four districts of upper Burma exclusive of Rangoon, and 10 districts of lower Burma are infected.

According to the report of the sanitary commissioner of Bengal for 1907, there were 25 towns which recorded a death rate of over 44 per thousand. Chatra heads the list with a mortality of 95.95. Roserha and Gya give 81.89 and 81.50, respectively. Twelve towns had a death rate of over 50 per thousand, the rural areas being even in excess of this, more than 130 of them having had over 44 per thousand, with Sujaganj recording a mortality of 118.14. Cholera was responsible for 205,702 deaths, the average for the 5 years 1902-1906 being 138,999; plague, 83,602; dysentery, 51,670, and smallpox, 29,066.

ITALY.

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

Assistant Surgeon Wollenberg reports, August 31 and September 7:

Vessels inspected at Naples week ended August 29.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of baggage inspected and passed.	Pieces of baggage disinfected.
Aug. 28 29	Luisiana.....	New York.....	432	100	580
	Cretic.....	do.....	374	95	520
	Total.....		806	195	1,100

Rejections recommended.

Date.	Name of ship.	Trachoma.	Favus.	Suspected trachoma.	Suspected favus.	Other causes.	Total.
Aug. 28 29	Luisiana.....	20		10			30
	Cretic.....	6		3	1		10
	Total.....	26		13	1		40

Vessels inspected at Naples and Palermo, week ended September 5.

NAPLES.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of baggage inspected and passed.	Pieces of baggage disinfected.
Sept. 2	Slavonia	New York			
2	Principe di Piemonte.	do	226	80	420
3	Madonna	do	133	40	290
3	Nord America	do	287	60	350
4	Königin Luise	do	145	35	320
5	Taormina	Philadelphia	351	90	480
	Total		1,142	305	1,860

PALERMO.

Sept. 3	Principe di Piemonte.	New York	57	72	16
4	Nord America	do	44	70	35
	Total		101	142	51

Rejections recommended.

NAPLES.

Date.	Name of ship.	Tra-choma.	Favus.	Sus-pected tra-choma.	Sus-pected favus.	Other causes.	Total.
Sept. 2	Slavonia						
2	Principe di Piemonte	6		1		1	8
3	Madonna	12		2			14
3	Nord America	14		6		1	21
4	Königin Luise	4		3		2	9
5	Taormina	13		7		1	21
	Total	49		19		5	73

PALERMO.

Sept. 3	Principe di Piemonte	5		2			7
4	Nord America	3		3		1	7
	Total	8		5		1	14

SMALLPOX IN NAPLES.

During the week ended August 30, 3 cases of smallpox with no deaths were reported at the health office of the municipality of Naples. From the date of the introduction of the disease, June 13, 1908, to the present time the total number of cases has been 84, with 7 deaths.

During the week ended September 6, 5 cases of smallpox with 1 death were reported at the health office of the municipality of Naples. From the date of the introduction of the disease, June 13, 1908, to the present time the total number of cases has been 89 with 8 deaths.

SMALLPOX IN ITALY.

Week ended August 30:

Cases: Castel d'Arzile (Bologna) 1, Foggia 1, Montoro Superiore (Avellino) 1, Naples 4, Procida 1, Casoria (Naples) 1, Pietrapertosa 1, Tricarico 1, Montemilone (Potenza) 1, Cinquefrondi 4, Giffone (Reggio Calabria) 42.

JAPAN.

Report from Yokohama—Summary of cholera, plague, and smallpox in Japan during the year 1907.

Passed Assistant Surgeon Cumming reports, August 24:

During the year 1907 cholera, plague, and smallpox were reported in Japan, exclusive of Formosa, as follows:

Cholera, 3,631 cases, 2,525 deaths; plague, 645 cases, 574 deaths; smallpox, 1,034 cases, 437 deaths.

MEXICO.

Report from City of Mexico—Yellow fever at Merida.

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

September 12. Four new cases of yellow fever were registered in the city of Merida September 11.

September 15. A new case of yellow fever occurred September 14 in Merida.

September 17. One new case of yellow fever at Merida September 16.

Report from Progreso—Inspection of vessels—Yellow fever at Merida.

Acting Assistant Surgeon Harrison reports, September 5:

Period from August 29 to September 5. The general sanitary conditions remained unchanged here and in Merida, but in Merida August 31 there appeared another case of yellow fever in addition to that which appeared August 23. The latter case died in the lazaretto August 25. Both cases originated in the central part of Merida and within a very short distance of each other, and both had been residents for some time in the city.

Bills of health were issued to 4 steamships, with 196 persons in the crews and with 56 passengers, from this port.

Report from Tampico—Inspection of vessels—Sanitary conditions.

Acting Assistant Surgeon Stowe reports, September 8:

Week ended September 8.

Vessels inspected and passed.....	1
Bills of health issued.....	1
Members of crews of outgoing vessels inspected.....	23

Sanitary condition of this port, good.

Report from Veracruz—New cases of yellow fever.

Acting Assistant Surgeon Jacobs reports:

September 19. One new case yellow fever reported to-day.

September 24. One new case yellow fever reported to-day.

PANAMA.

Report from Bocas del Toro, fruit port.

Acting Assistant Surgeon Osterhout reports:

Two weeks ended September 8. Present officially estimated population, 4,954. 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.	Pieces of baggage disinfected
Sept. 3	Fort Gaines	Mobile	22	1	0	
3	Hispania	New Orleans.....	20	0	0	0
6	Appomattox .....	.....do.....	46	5	0	0

PERU.

Report from Callao—Inspection and fumigation of vessels—Status of plague in Peru—Smallpox in Lima and Paita—Plague in Chilean ports.

Acting Assistant Surgeon Gutierrez reports, August 25:

Week ended August 15. Bills of health issued to 3 steamships and an American schooner with an aggregate personnel of 209 in the crews, 77 cabin and 44 steerage passengers. The 4 vessels were fumigated.

Week ended August 22. Bills of health issued to 2 vessels with an aggregate personnel of 108 in the crews, 90 cabin and 87 steerage passengers; both were fumigated.

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

Locality.	Cases August 4.	New.	Recovered.	Died.	Remaining August 17.
Lima (city)	8	6	5	3	14
Lima (country)		8			
Callao	2	1		1	2
Santa Eulalia	1				1
Trujillo (city)	28	18	7	5	37
Trujillo (country)		13			
Chiclayo		8		6	2
Chepen	8		2	1	5
Ferreñafe	1				1
La Huaca (Payta)		5		1	4
Guadalupe		1		1	

Since my last report 3 cases of plague have occurred in Callao. One died. The two others were removed to the lazaretto.

Plague is increasing in Lima and places in the vicinity. In Lima rats have been found dead on several streets. In Chorrillos, a bathing place near Lima, several cases of plague have occurred. The municipalities of Lima and Chorrillos are adopting measures against the increase of plague.

During the past month no new case of plague has occurred in Salaverry, but in Trujillo and the Chicama Valley plague is on the increase.

There are at present 2 cases of smallpox in the lazaretto at Lima.

There are many cases of smallpox in the districts near Paíta, and in the port of Paíta several cases have occurred.

Bills of health report plague in Chile as follows: Antofagasta, August 12, 3 cases; Iquique, August 17, 4 cases, with 3 deaths, and 9 cases in the lazaretto; Arica, August 12, no cases reported.

PHILIPPINE ISLANDS.

Report from Manila—Cholera and smallpox—Statement of cholera in the provinces—Inspection of vessels.

Chief Quarantine Officer McClintic reports, August 14:

Week ended August 8. Thirteen cases of cholera with 13 deaths, and 4 cases of smallpox with 1 death, were reported for the city of Manila.

The following is an official list of the cases and deaths reported as occurring in the provinces during the week under report:

Province.	Cases.	Deaths.
Rizal.....	11	9
Benguet.....	1	1
Bulacan.....	13	11
Ilocos Sur.....	294	198
Misamis.....	154	45
Nueva Ecija.....	21	18
Pampanga.....	14	9
Pangasinan.....	90	59
Tarlac.....	29	22
Union.....	90	80
Iloilo.....	176	105
Total.....	893	557

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

August 6, the British steamship *Taiyuan*, with 70 in the crew and with 70 passengers, en route from Hongkong to Zamboanga, was granted a supplemental bill of health.

August 6, the British steamship *Kaifong*, with 63 in the crew and with 5 passengers, en route from Hongkong and Haihow to Cebu and Iloilo, was granted a supplemental bill of health. The members of the crew were bathed, and their effects disinfected at Mariveles Quarantine Station.

PORTO RICO.

Report from Ponce—Transactions of service, month of August, 1908.

Acting Assistant Surgeon Ferrer-Torres reports, September 1, through Chief Quarantine Officer Foster:

Summary of transaction of service, month of August, 1908.

Vessels inspected.....	16
Vessels in quarantine.....	3
Passengers inspected:	
Incoming.....	61
In transit.....	427
Passengers in quarantine.....	2
Immigrants inspected.....	14
Members of crews inspected.....	648
Bills of health issued.....	19
Pieces of baggage disinfected.....	3

RUSSIA.

Reports from St. Petersburg—Statement of cholera in Russia.

The following is received from the American embassy under date of August 29:

The ministry for foreign affairs reports that during the period from August 8 to 17 there were 1,145 cases of cholera in Russia, of which 517 were fatal. The distribution was as follows:

	Cases.	Deaths.
Government of Astrakhan.....	329	148
Government of Saratov.....	239	138
Government of Samara.....	64	41
Government of Nijni-Novgorod.....	173	62
Government of Kazan.....	5	3
Government of Kostroma.....	1	.....
Government of Tula.....	2	1
Territory of the Don.....	176	58
Territory of the Kouban.....	3	2
Prefecture of Rostov-on-Don.....	142	62
Prefecture of Baku.....	6	3
City of Perm.....	2	2
City of Penza.....	1	.....
City of Ekaterinoslav.....	1	1
City of Tiflis.....	1	1

The report further states that the Government of Astrakhan and the city of Taganrog are declared infected with cholera.

CHOLERA IN ST. PETERSBURG.

The following is received from the Department of State under date of September 11:

A cablegram from the American consul at St. Petersburg, Russia, dated September 10, reads as follows:

“Fifteen cases cholera yesterday.”

ST. LUCIA ISLAND.

Reports from Castries—Sanitary conditions—Yellow fever at Fort de France, Martinique.

Acting Assistant Surgeon Maylie reports, August 31 and September 5:

Week ended August 29. The sanitary condition of this port and vicinity is good. No quarantinable diseases exist.

Week ended September 5. Sanitary condition of this port and vicinity, good; no quarantinable diseases exist.

A British bill of health from Fort de France, Martinique, dated September 5, and signed by the British consul, reports "Seven cases of yellow fever during the past week; no deaths."

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

BORNEO—*Sandakan*.—Month of June, 1908. Estimated population, 10,495. Total number of deaths, 43, including beri-beri 13, tuberculosis 4, and 3 from smallpox. .

CANADA—*British Columbia—Vancouver*.—Month of August, 1908. Estimated population, 52,000. Total number of deaths, 60, including enteric fever 1 and 6 from tuberculosis.

DUTCH GUIANA—*Parimaribo*.—Month of August, 1908. Estimated population, 34,870. Total number of deaths, 105. No contagious diseases reported.

FRANCE—*Cherbourg*.—Month of August, 1908. Estimated population, 43,948. Total number of deaths, 64, including enteric fever 4, and 11 from tuberculosis.

GREAT BRITAIN—*England and Wales*.—The deaths registered in 76 great towns in England and Wales during the week ended August 29, 1908, correspond to an annual rate of 15.6 per 1,000 population, which is estimated at 16,234,952.

London.—One thousand three hundred and twenty-seven deaths were registered during the week, including measles 14, scarlet fever 13, diphtheria 10, enteric fever 5, whooping cough 10, tuberculosis 166, and 272 from diarrhea. The deaths from all causes correspond to an annual rate of 14.4 per 1,000. In Greater London 1,903 deaths were registered. In the "outer ring" the deaths included 3 from measles, 2 from scarlet fever, 4 from diphtheria, and 3 from whooping cough.

Salford.—Two weeks ended August 29, 1908. Estimated population, 239,294. Total number of deaths 184, including whooping cough 3, diphtheria 4, scarlet fever 1, and 12 from phthisis pulmonalis.

Ireland.—The average annual death rate represented by the deaths registered during the week ended August 29, 1908, in the 21 principal town districts of Ireland was 20.6 per 1,000 of the population, which is estimated at 1,131,959. The lowest rate was recorded in Limerick, viz, 13.7, and the highest in Tralee, viz, 31.7 per 1,000.

Scotland.—The deaths registered in 8 principal towns during the week ended August 29, 1908, correspond to an annual rate of 15.4 per

1,000 of the population, which is estimated at 1,839,038. The highest rate of mortality was recorded in Dundee, viz, 21.7, and the lowest in Leith, viz, 9.9 per 1,000. The aggregate number of deaths registered from all causes was 544, including measles 3, enteric fever 4, diphtheria 5, scarlet fever 1, and 17 from whooping cough.

GREECE—Patras.—Month of August, 1908. Estimated population, 42,500. Total number of deaths, 25, including enteric fever 1, diphtheria 1, and 12 from tuberculosis.

HUNGARY—Fiume.—Two weeks ended August 31, 1908. Estimated population, 49,500. Total number of deaths, 52, including 15 from tuberculosis.

JAPAN—Formosa.—Three weeks ended August 8, 1908. Estimated population, 3,050,004. Total number of deaths not reported. Thirteen deaths from enteric fever, 1 from diphtheria, and 1 from plague reported.

MALTA.—Three weeks ended August 22, 1908. Estimated population, 206,690. Total number of deaths, 282, including enteric fever 5, and 7 from tuberculosis.

NEW ZEALAND—Auckland.—Month of June, 1908. Census population, 69,149. Total number of deaths, 52, including enteric fever 1, and 8 from tuberculosis.

Christchurch.—Month of June, 1908. Census population, 55,263. Total number of deaths, 49, including 2 from tuberculosis.

Dunedin.—Month of June, 1908. Census population, 58,036. Total number of deaths, 52, including diphtheria 1, and 5 from tuberculosis.

Wellington.—Month of June, 1908. Census population, 63,807. Total number of deaths, 58, including diphtheria 1, scarlet fever 2, and 7 from tuberculosis.

SPAIN—Barcelona.—Month of August, 1908. Estimated population, 600,000. Total number of deaths, 1,037, including diphtheria 10, enteric fever 37, smallpox 6, measles 6, scarlet fever 1, whooping cough 13, and 86 from tuberculosis.

Malaga.—Month of July, 1908. Estimated population, 135,000. Total number of deaths, 255, including diphtheria 1, and 22 from tuberculosis.

SWITZERLAND.—Week ended August 22, 1908. Reports from 18 cities, having an aggregate population of 876,946, show as follows: Total number of deaths, 235, including diphtheria 3, whooping cough 1, enteric fever 2, and 44 from tuberculosis.

WEST INDIES—Curaçao.—Two weeks ended September 4, 1908. Estimated population, 30,400. Total number of deaths, 16.

Cholera, yellow fever, plague, and smallpox, from June 27 to September 25, 1908.

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

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

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

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria:				
Ostrowo	Sept. 8.....	76	39	
Ceylon, general	May 17-23.....	1	1	
Colombo	June 7-July 18.....	32	22	20 cases in the asylum for the insane.
China:				
Amoy	July 26-Aug. 8.....	5	2	Aug. 11, still present.
Canton	June 21-27.....	1	1	Present.
Hankau	July 19-25.....	10	7	July 27-Aug. 8, epidemic in Hankau, Hanyang, and Wuchang among natives. Deaths 1500.
Hongkong.....	June 14-Aug. 1.....	25	18	
Shanghai	Aug. 17-23.....	1	1	Present, and in vicinity.
Wuchang	Aug. 5.....	100	1	In military encampment.
India:				
Bombay	May 20-Aug. 18.....	1	22	
Calcutta	May 10-Aug. 8.....	1	256	On S. S. Annie, en route May 23-June 1, 2 deaths.
Madras	May 16-Aug. 14.....	1	290	
Rangoon	May 17-Aug. 8.....	1	57	
Indo-China:				
Bien Hoa	June 21-27.....	60	59	
Cholen	May 10-Aug. 1.....	156	152	
Saigon	May 10-Aug. 8.....	94	65	Reports May 23 and June 6 include Cholen.
Japan:				
Kawasaki	Aug. 23.....	1	1	
Kure	Aug. 15.....	1	1	Present on steamer from Calcutta.
Moji	Aug. 8.....	2	1	1 case from Yamaguchi Ken.
Tokyo	Aug. 22.....	1	1	Present in vicinity.
Tokushima	Aug. 2-8.....	1	1	
Yokohama	Aug. 17-23.....	5	1	On British steamer in quarantine.
Persia:				
Teheran	July 3.....	1	1	
Philippine Islands:				
Manila	June 7-Aug. 8.....	31	27	3 cases to June 23 on railroad from Pangasinan Province. First quarter calendar year 1908, 203 cases, 167 deaths.
Provinces, general	July 12-18.....	3	2	First quarter calendar year 1908, 806 cases, 628 deaths. Provinces north of Manila, June 28-July 4, 614 cases, 331 deaths.
Ascurrago	July 26-Aug. 1.....	20	20	
Bataan	Jan. 1-Mar. 31.....	20	18	
Benguet	July 26-Aug. 8.....	6	3	
Bulacan	Jan. 1-Aug. 8.....	133	100	
Capiz	Jan. 1-Aug. 1.....	328	251	
Cavite	Jan. 1-Mar. 31.....	22	20	
Ilocos Sur	July 12-Aug. 8.....	820	622	
Jaro	July 26-Aug. 1.....	17	10	
La Laguna	Jan. 1-Mar. 31.....	3	2	
Mindoro	Jan. 1-Mar. 31.....	32	20	
Misamis	July 12-Aug. 8.....	726	348	
Nueva Ecija	July 4-Aug. 1.....	345	271	
Nueva Vizcaya	July 12-Aug. 8.....	27	24	
Pampanga	Jan. 1-Aug. 8.....	194	157	
Pangasinan	Jan. 1-Aug. 8.....	1,964	1,156	
Rizal	Jan. 1-Aug. 8.....	154	125	
Santa Barbara	July 26-Aug. 1.....	15	9	
Tarlac	Jan. 1-Aug. 8.....	201	48	
Union	Jan. 1-Aug. 8.....	255	201	
Zambales	Feb. 2-Mar. 31.....	62	48	Including Balingasang and Cagayan.

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

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Russia, general	July 21-Aug. 21....	2,043	959	
Astrakhan govt. district.....	July 19-Aug. 14....	522	152	
Baku.....	Aug. 7-17.....	6	3	
Batoom.....	Aug. 10.....	1	1	Present in vicinity.
Don, territory of.....	July 19-Aug. 17....	176	58	
Ekaterinislar.....	Aug. 8-17.....	1	1	
Kazan.....	Aug. 8-17.....	5	3	
Kostroma.....	Aug. 8-17.....	1	1	
Kooban.....	Aug. 7-17.....	3	2	
Moscow district.....	Aug. 29.....	1	1	Aug. 10, present.
Nakhchivan.....	Aug. 7-14.....	19	6	
Nijni Novgorod.....	Aug. 7-17.....	173	62	
Oofa.....	Aug. 7-14.....	1	1	
Panza.....	Aug. 8-17.....	1	1	
Perm.....	Aug. 8-17.....	2	2	
Rostov.....	July 26-Aug. 14....	87	37	
Samara govt. district.....	July 19-Aug. 17....	64	41	
Saratov.....	July 19-Aug. 14....	302	177	July 19, present, also, on vessels.
Simbirsk govt. district.....	Aug. 7-14.....	1	1	July 31, present.
St. Petersburg govt. dist.....	Sept. 9.....	15	1	
Toganrog.....	Aug. 29.....	1	1	Present.
Tambov govt. district.....	July 31.....	1	1	Do.
Tiflis.....	Aug. 8-17.....	1	1	
Tula.....	Aug. 7-14.....	2	1	
Zaritzyn.....	July 24-Aug. 6....	96	55	July 19, present, also, on vessels.
Siam:				Aug. 29, 250 cases daily.
Bassein.....	May 10-16.....	1	1	Present.
Straits Settlements:				
Singapore.....	May 10-16.....	1	1	

YELLOW FEVER.

Brazil:				
Bahia.....	July 22.....	3	1	From Italian bark <i>Sacro Cuore</i> de Jeso.
Manaos.....	May 26-Aug. 15....	28	27	
Para.....	May 31-Aug. 29....	30	28	
Pernambuco.....	June 15-Aug. 15....	3	3	
Rio de Janeiro.....	June 1-Aug. 15....	3	3	
Cuba:				
Habana Province—				
Habana.....	Sept. 13-16.....	1	1	
Santiago Province—				
Antilla.....	Sept. 8.....	1	1	Case removed to Santiago Aug. 29.
Daiquiri.....	June 27-Aug. 15....	20	4	
Firmeza.....	Aug. 22.....	1	1	
Santiago.....	Aug. 29-Sept. 6....	1	1	From Antilla and Mayari.
Curaçao.....	June 28-Aug. 1....	1	1	Imported.
Ecuador:				
Guayaquil.....	May 31-Aug. 22....	1	14	
Honduras:				
Ceiba.....	Sept. 24.....	1	1	Present.
Martinique:				
Fort de France.....	June 27-Sept. 5....	22	7	
Mexico:				
Acapulco.....	Sept. 12.....	1	1	On Mexican S. S. <i>Manuel Her-</i>
Frontera.....	July 12.....	1	1	reras.
Laguna del Carmen.....	Aug. 29.....	2	2	
Laguna de Terminos.....	June 9-July 12....	8	2	From May 18, 4 cases additional
Merida.....	Aug. 23-Sept. 16....	8	1	from S. S. <i>Lembit</i> .
Tierra Blanca.....	July 27.....	1	1	
Veracruz.....	July 7-Sept. 24....	13	8	
Porto Rico:				
San Juan.....	July 5.....	1	1	1 case on S. S. <i>Julia</i> .
Venezuela:				
June 26.....	30	40		Estimated. In Upata, Guasi-
				patl, and Callao.

PLAGUE.

Australia:				
Brisbane.....	June 6-Aug. 8.....	3	1	Case, June 6-11, at Clifton.
Syd. ey.....	Feb. 25-June 24....	4	1	
Austria:				
Trieste.....	Sept. 21.....	2	1	
Azores:				
Fayal.....	Aug. 10.....	7	2	
Terceira.....	July 1-Aug. 11....	29	15	

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

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Bahia	July 29	1	.....
Pernambuco	June 1-15 .....	.....	1	
Rio de Janeiro	May 11-Aug. 9	9	1	
Sao Paulo	May 18-31 .....	.....	2	
British East Africa:				
Port Florence	June 11-July 11	27	22	
British Gold Coast:				
Akkra	May 20-June 7	5	5	Aug. 8, present.
Chile:				
Antofagasta	May 18-Aug. 12	64	6	
Arica	July 15-22	2	.....	From Jan. 1-Apr. 30, 179 cases and 47 deaths.
Iquique	May 20-Aug. 17	25	10	
China:				
Amoy	Apr. 26-July 11 .....	.....	.....	Present in native city and up-country districts. July 21-Aug. 1, epidemic.
Canton	May 1-June 9	10	.....	Mainly imported. June 27 still present.
Foochoo	Apr. 6-July 18 .....	.....	.....	Present.
Hongkong	May 10-Aug. 1	865	709	
Hsing-Sua	June 2-8 .....	.....	.....	Do.
Swatow	July 4-Aug. 14 .....	.....	.....	Do.
Ecuador:				
Guayaquil	May 31-Aug. 1 .....	.....	21	
Egypt:				
Alexandria	May 27-Aug. 18	54	28	Case, July 9, from ss. Perseo.
Port Said	July 3-Aug. 18	8	6	July 5, 1 case on S. S. Orenoque.
Provinces—				
Assiout	May 27-July 5	6	3	
Minieh	May 15-July 31	6	2	
Dakahlieh	June 27	1	.....
Garbieh	May 16-Aug. 17	23	3	
Fayoum	May 28-Aug. 4	81	45	
Beni Souef	May 29-Aug. 8	42	13	
Kena	May 28-July 25	44	44	
Galyoobeeyeh	May 21-July 20	26	17	
Menouf	May 26-Aug. 19	67	12	
India:				
Bombay Presidency and Sind	Apr. 26-Aug. 8	5,475	4,450	
Madras Presidency	Apr. 26-Aug. 8	832	532	
Bengal	Apr. 26-Aug. 8	956	895	
United Provinces	Apr. 26-Aug. 8	1,502	1,360	
Punjab	Apr. 26-Aug. 8	13,483	10,105	
Burma	Apr. 26-Aug. 8	1,981	1,941	
Central provinces, including Berar	Apr. 26-Aug. 8	41	31	
Coorg	May 24-June 27	8	5	
Mysore State	Apr. 26-July 18	1,246	916	
Hyderabad State	July 19-Aug. 8	102	69	
Central India	Apr. 26-May 16	12	8	
Rajputana	Apr. 26-June 27	624	469	
Kashmir	Apr. 26-June 27	21	13	
Northwest frontier province	Apr. 26-July 18	456	404	
Grand total		26,759	22,198	
Indo-China:				
Cholen	May 10-Aug. 1	72	68	
Saigon	May 10-Aug. 8	89	70	Cholen included, July 6 and 13.
Japan:				
Formosa	May 10-Aug. 15	620	506	From May 15 epidemic at Taiwan; 25 cases reported daily.
Kobe	May 24-July 25	5	4	
Nara	June 14-20	14	.....
Osaka	May 10-June 27	19	18	
Mauritius	May 31-July 9	7	4	
Peru:				
Callao	May 20-Aug. 17	26	10	
Chepen (Pacasmayo)	July 8-Aug. 17	27	15	And vicinity.
Chiclayo	May 20-Aug. 17	18	14	
Chorrillos	Aug. 25 .....	.....	.....	Present.
Ferrenafe	July 21-Aug. 3	1	.....
Guadalupe	Aug. 5-18	1	1	
Lima	May 20-Aug. 17	57	39	And vicinity.
Mollendo	June 2-22	2	1	
Monsefu	June 2-8	1	.....
Niepos (Hualgayoc)	June 2-8	2	.....
Paíta (La Huaca)	July 21-Aug. 17	6	2	

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

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Peru—Continued.				
Salaverry	May 2-July 19	17	.....
Santa Eulalia (Huarochiri)	July 21-Aug. 3	1	.....
San Jose (Lambayeque)	July 21-Aug. 3	4	4	
Trujillo	May 20-Aug. 17	168	74	Do.
Siam:				
Bangkok	May 3-June 20	18	12	
Puket	May 9	.....	.....	Present.
Tongkah	May 4	.....	.....	Do.
Straits Settlements:				
Singapore	May 17-30	.....	2	
Trinidad:				
Port of Spain	June 4-July 28	15	11	
Turkey in Asia:				
Adalia	July 27	2	.....
Bagdad	June 7-Aug. 29	75	50	
Uruguay:				
Montevideo	Apr. 1-May 31	.....	5	
Venezuela:				
Caracas	June 10-Aug. 21	51	11	
La Guaira	June 16-30	5	2	Aug. 5, present.
Maiquetia	June 28	1	.....	Suburb of La Guaira.

SMALLPOX.

Algeria:				
Algiers	June 29-Aug. 31	.....	16	
Arabia:				
Aden	May 28-Aug. 24	.....	53	
Argentina:				
Buenos Aires	Mar. 1-May 31	.....	4	
Austria:				
Bukowina	July 12-Aug. 22	3	.....
Galicja	May 24-June 28	4	.....
Silesia	July 19-25	4	.....
Borneo:				
Sandakan	Apr. 16-June 30	43	16	
Brazil:				
Bahia	May 1-July 31	409	31	
Campinas	June 29-July 5	.....	2	
Para	June 28-July 4	2	2	
Pernambuco	May 1-Aug. 15	.....	206	
Rio de Janeiro	May 11-Aug. 16	4,583	2,431	July 8-16 one case and 1 death on S. S. Peruviana in voyage to Castries and Baltimore.
Santos	May 18-Aug. 9	.....	24	1 case July 10 from S. S. Spartan Prince.
British South Africa:				
East London	July 12-Aug. 15	10	.....
Canada:				
Nova Scotia—				
Halifax	June 14-Sept. 12	36	.....
Ontario—				
Hamilton	June 1-30	3	.....
Ceylon, general	Apr. 1-30	.....	2	
Colombo	June 29-Aug. 8	40	9	
China:				
Amoy (Kulangsu)	Apr. 5-Aug. 1	.....	1	
Foochoo	Apr. 26-June 27	.....	.....	Present.
Hongkong	May 10-July 18	30	18	
Nanking	June 11	.....	.....	Epidemic.
Shanghai	May 18-July 19	2	12	
Ecuador:				
Guayaquil	May 31-Aug. 22	.....	45	
Egypt, general	May 14-Aug. 12	571	148	
Cairo	May 31-Aug. 26	49	21	
Suez	June 18-July 1	5	.....
France:				
Marseille	July 1-31	.....	1	
Paris	May 31-Aug. 8	12	.....
Toulon	May 1-July 31	3	.....
Germany, general	May 24-Aug. 19	49	.....
Bremen	May 24-June 6	3	.....
Chemnitz	Aug. 2-19	2	.....
Konigsberg	Aug. 2-8	1	.....
Wurtemberg	Aug. 23-29	1	.....
Great Britain:				
Liverpool	Apr. 30-Aug. 29	5	.....

a Cases among foreigners; deaths among natives.

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

SMALLPOX—Continued

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Bombay	May 20-Aug. 18.....		206	
Calcutta	May 10-Aug. 8.....		128	
Madras	May 23-Aug. 14.....		2	
Indo-China:				
Cholen	May 24-July 25.....	9	5	
Saigon	July 19-Aug. 8.....	5	2	
Italy, general	June 8-Aug. 30.....	496		
Catania	May 22-July 31.....		4	
Genoa	May 1-31.....	2		
Messina	July 19-25.....			Present.
Naples	June 7-Aug. 15.....	81	5	
Palermo	May 24-Aug. 22.....	29	4	
Turin	June 8-14.....	1		
Japan:				
Formosa	June 7-13.....	1		
Kobe	May 31-July 4.....	12		May 30, 1 case on S. S. Mongolia; June 13, 1 case on S. S. Muncaster Castle.
Nagasaki	May 26-31.....	1		
Osaka	May 10-Aug. 1.....	115	59	
Yokohama	June 2-29.....	3		
Java:				
Batavia	May 10-Aug. 8.....	48	2	
Mexico:				
Aguascalientes	June 8-July 12.....		8	
Mexico City	May 10-July 25.....		197	
Monterey	June 8-14.....		1	
Netherlands, The:				
Amsterdam	July 27-Aug. 1.....	1		
Norway:				
Christiania	Aug. 9-29.....	86	5	
Peru:				
Lima	June 1-July 18.....	4		Aug. 22, 2 cases in the lazaretto.
Paita	Aug. 25.....			Present, and in vicinity.
Philippine Islands:				
Manila	May 3-Aug. 8.....	136	49	First quarter calendar year 1908, 42 cases, 12 deaths.
Porto Rico:				
Mayaguez	June 7-27.....	6		
Portugal:				
Lisbon	May 31-Sept. 5.....	32		
Russia:				
Batoom	May 1-31.....	1		
Moscow	May 24-Aug. 29.....	274	137	
Odessa	May 24-Aug. 8.....	38	4	
Riga	June 7-Aug. 29.....	22		
St. Petersburg	May 17-Aug. 15.....	447	106	
Warsaw	May 10-July 25.....		61	
Siberia:				
Vladivostok	May 6-June 21.....	11		
Spain:				
Barcelona	June 1-Aug. 31.....		13	
Cadiz	July 27.....			Present.
Malaga	Mar. 1-Apr. 30.....		4	July 27, present.
Valencia	June 1-Aug. 29.....	82	9	
Straits Settlements:				
Penang	Aug. 2-8.....	1		
Singapore	May 24-July 13.....		5	
Switzerland:				
Zurich	Aug. 23-29.....	3		
Turkey in Asia:				
Bagdad	May 10-Aug. 15.....	164	56	
Smyrna	May 13-June 16.....		6	
Turkey in Europe:				
Constantinople	June 1-Aug. 30.....		74	
Zanzibar	June 8-July 21.....		2	

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.
Aberdeen	Aug. 29	174,579	42										1
Aden	Aug. 24	43,974	46	4									
Aguascalientes	Sept. 6	40,000	54	1				10					
Aix-la-Chapelle	Aug. 22	158,367	79	6							2		
Amsterdam	Aug. 29	564,770	120	25									
Do	Sept. 5	564,770	110	11									
Antwerp	Aug. 29	320,000	82	9						1			
Asuncion	Aug. 1	75,000	22	3						1			
Athens	Aug. 29	241,058	56	4					1	6			
Baracoa	Sept. 5	27,000	3	1									
Barmen	Aug. 29	160,000	35	4									2
Basel	do	131,000	25	3									1
Belfast	do	380,344	124	15									
Belize	Sept. 10	9,113	3							2		2	
Bergen	Aug. 29	87,749	20									2	
Birmingham	Sept. 5	558,336	172									1	
Bluefields	Aug. 29	2,500	3							1	1	1	1
Do	Sept. 5	2,500	1										
Bombay	Aug. 18	977,822	602	34		40	2	5		2		4	
Bordeaux	Aug. 29	253,000	96	12						2			
Breslau	Aug. 15	335,186	188	37						1		3	
Do	Aug. 22	335,186	149	21									
Bristol	Sept. 5	372,785	100										1
Brussels	Aug. 29	630,078	136	8								2	
Calcutta	Aug. 8	847,796	388	21	12	8		3		1	1	2	
Cardiff	Aug. 22	191,446	68	6									3
Do	Aug. 29	191,446	58	2								1	1
Cartagena, Colombia	Aug. 23	30,000	15	1									
Ceiba	Sept. 5	6,500	2										
Chemnitz	Aug. 29	272,575	76	5							2		4
Cienfuegos	Sept. 5	37,000	11									1	
Coatzacoalcas	Aug. 29	3,300	4										
Do	Sept. 5	3,300	3										
Cognac	Aug. 29	19,483	7	1									
Cologne	do	463,451	177	21									
Colombo	Aug. 8	180,212	142	7				1		1	2	4	6
Constantinople	Aug. 30	1,000,000	244	39				4		17	9	1	
Dublin	Aug. 29	394,625	179	36					1		2	3	
Edinburgh	do	350,624	103										
Erfurt	do	105,875	93	3									
Flushing	Sept. 5	20,257	2							1			
Frankfort-on-the-Main	Aug. 29	358,000	102										
Frontera	Sept. 5	9,000	6										
Glasgow	Sept. 4	859,715	256							3	1	2	11
Gothenburg	Aug. 29	160,500	30	2						1		1	1
Greenock	do	71,783	20										
Do	Sept. 5	71,783	16										2
Quayaquil	Aug. 15	70,000	51	7			1	4					1
Do	Aug. 22	70,000	43	3			1	8					
Halifax	Sept. 5	40,757	15										
Do	Sept. 12	40,757	18										
Hamburg	Aug. 29	854,472	261	26							1	3	7
Havre	do	132,430	39	7						2			
Honolulu	Aug. 22	39,906	18	5									
Do	Aug. 29	39,906	16	5									
Hull	do	271,137	115									3	1
Königsberg	do	234,500	99	7						1	1	1	4
Leeds	Sept. 5	477,107	140	5									1
Leipzig	Aug. 29	528,184	172	16							1	3	2
Leith	do	84,689	16	2									
Liege	Aug. 22	174,487	49	3						1		1	1
Do	Aug. 29	174,487	46	3								1	1
Liverpool	do	753,203	252	23						1	5	2	3
Do	Sept. 5	753,203	269	11				1		2	1	3	3
London	Aug. 29	7,823,327	1,903							6	18	18	22
Lübeck	do	96,000	43	2									
Madras	July 31	509,346	385			13							
Do	Aug. 7	509,346	562			81							
Do	Aug. 14	509,346	648		1	140		1				1	
Magdeburg	Aug. 22	247,725	88	5								2	2
Manchester	Aug. 29	631,633	215	16							3	2	5
Mannheim	Aug. 15	179,309	41	6								1	
Do	Aug. 22	179,309	35	4						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.	Whooping cough.
Messina.....	do	107,000	30							5		1	1	
Milan.....	Aug. 23	584,390	171							2		1		
Monterey.....	Sept. 7	100,000	54	5						1				
Montreal.....	Sept. 5	378,856	183	10						1				
Moscow.....	Aug. 22	1,333,104	884	59				10		1	6	5	11	3
Munich.....	do	556,000	202	31							2			4
Nagasaki.....	Aug. 9	173,113	55											
Do.....	Aug. 16	173,118	69											
Newcastle-on-Tyne	Aug. 29	272,969	98							2		1		
Nottingham.....	do	255,000	74								1			
Nuevo Laredo.....	Sept. 5	8,000	5	1						1				
Para.....	Aug. 29	185,000	64	6			1							
Paris.....	do	2,776,394	721	176						3	3	3	2	4
Penang.....	Aug. 1	101,469	77	13										
Plymouth.....	Sept. 5	116,000	32											
Port Elizabeth.....	Aug. 15	32,959	19	4						1				1
Prague.....	Aug. 22	231,780	96	29						1		1		
Do.....	Aug. 29	231,780	102	22						1	1	1		
Rangoon.....	Aug. 8	252,155	183	8	28	1								
Rio de Janeiro.....	Aug. 16	811,443	546	74				268		1				
Rotterdam.....	Sept. 5	408,145	106							1	6	1		
St. John, N. B.....	Sept. 12	40,789	20	1										
St. Stephen, N. B.....	do	2,840	1											
Santa Cruz de Ten-														
eriffe.....	Aug. 29	46,000	18	2										
Santiago de Cuba	Sept. 5	45,497	9	2										
Santos.....	July 5	75,000	30	2										
Do.....	July 12	75,000	26	3										
Do.....	July 19	75,000	43	3						1	1			
Do.....	July 26	75,000	41	1										
Do.....	Aug. 2	75,000	24	2										
Do.....	Aug. 9	75,000	30	2										
Schiedam.....	Aug. 15	31,193	17	1										
Do.....	Aug. 22	31,193	13	1										
Do.....	Aug. 29	31,193	12									1		
Do.....	Sept. 5	31,193	13											
Singapore.....	Aug. 1	260,000	259	30						4				
Southampton.....	Sept. 5	122,196	30											
South Shields.....	Aug. 29	115,585	28	1										
Stettin.....	do	230,000	114	7										1
Suez.....	Aug. 5	19,786	10											
Do.....	Aug. 12	19,786	10											
Do.....	Aug. 19	19,786	12											
Do.....	Aug. 26	19,786	10											
Sunderland.....	Aug. 22	157,495	46	2										
Do.....	Aug. 29	157,495	55	4						1				1
Trieste.....	do	213,719	75											
Valencia.....	do	250,000	69	8										
Veracruz.....	Aug. 22	32,000	33	6										
Do.....	Aug. 29	32,000	41	5			1							
Victoria, B. C.....	Sept. 5	27,500	5											1
Vienna.....	Aug. 29	2,021,052	521	93						3	2	2	2	1
Vigo.....	do	40,000	11											
Warsaw.....	July 11	751,595	278	43				6		2	2	2	5	1
Do.....	July 18	751,595	321	59				3		2	2	3	3	
Do.....	July 25	751,595	306	49				7	1	2	4	1	6	1
West Hartlepool.....	Aug. 29	66,750	15											
Winnipeg.....	Sept. 5	114,000	16							2				
Do.....	Sept. 12	114,000	26							2				
Zurich.....	Aug. 29	180,000	51	4								1		

By authority of the Secretary of the Treasury:

WALTER WYMAN,

Surgeon-General,

United States Public Health and Marine-Hospital Service.