

Public Health Reports

Treasury Department, United States Marine-Hospital Service. Published in accordance with act of Congress approved February 15, 1893.

VOL. XIII. WASHINGTON, D. C., NOVEMBER 25, 1898. No. 47.

UNITED STATES.

[Reports to the Supervising Surgeon-General, United States Marine-Hospital Service.]

Report of tests made in Louisiana in the use of Professor Sanarelli's serum antiamarylic as a curative agent in yellow fever.

SIR: Under your instructions of September 26, 1898, to proceed to New Orleans, La., to endeavor to obtain cases of yellow fever in which to use the serum, I called upon the authorities of the Charity Hospital on October 1 and upon those in charge of Touro Infirmary in that city, and made known to them your earnest desire to have granted us the privilege of visiting cases of this disease in those institutions and of using the serum in those we thought suitable, this to be done only in consultation with the attending physician.

Prof. Ernest Lewis, vice-president of the board of regents of the Charity Hospital, after consultation with the superintendent of the institution, informed me that it was thought best to refuse your request on the ground that a test of the same serum, presented to the institution by Professor Sanarelli, was then in process, and that the limited number of cases in hospital scarcely furnished material for this test.

The authorities at the Touro Infirmary, especially Dr. Loeber, promised every facility for the use of the serum, manifesting a lively interest in the subject. At the same time they informed me that a definitely marked case of yellow fever was very rare in their hospital; that the prevailing type was so poorly marked, so slightly developed, that often it was found necessary to rely upon the fact of the presence of the disease in the community for a diagnosis. All such cases were treated very tentatively, scarcely any medicine being demanded; and in these it was thought there could be no definite results gained from serum exhibition, since they invariably recovered. Such were the cases then on hand. But I was promised instant notification of any admission of a serious type, and preparation was made to respond to such calls.

Consultation with Surgeon Carter, senior surgeon at New Orleans, on October 8, no suitable cases having been admitted to the Touro Infirmary, decided me to seek at Wilson, La., then generally infected, cases in which to test the prophylactic influence of the serum, and I proceeded there on that date. In this village of some 600 people I found the majority of the population sick or convalescent from a very mild type of fever, so much so that there seemed but little evidence of alarm. Through the courtesy of Acting Assistant Surgeon Bland, U. S. M. H. S., I saw a number of these cases, and he and other local physicians soon acquainted the people with the object of my visit. There was evidence of an indisposition to be "experimented" upon and many declined "the South American treatment." Of those who had been exposed, and who would probably develop the disease, there were 3 or 4 who expressed a disposition to submit to the prophylaxis, but they invariably asked for a guarantee, and when this could not be given they hesitated between the unknown remedy and the light type of the disease.

However, 2 cases of tolerably well-developed yellow fever were found willing to receive the serum treatment, and these are detailed below. In the second case the use of the serum was followed by such annoying urticarious erythema, especially after the second injection, that the apprehensions of the family were aroused, and the fact of the new treatment having produced symptoms not seen in any other cases, and of so serious an appearance, immediately became the subject of general comment, and I quickly found the serum relieved of all sympathy, and invested with unknown possibilities for harm. I could get no consent to its prophylactic use.

At this time advice from Surgeon Carter directed me to Baton Rouge, La., where fever was then very rapidly spreading, and by invitation of Dr. C. McRea, I visited that city on October 12, meeting and discussing with a large number of the physicians the probability of being able to use the serum. There was an expression of the liveliest interest in the subject and a disposition to render me aid, but a general conviction that they were scarcely warranted in advising the use of the serum in view of the very simple nature of the prevailing disease. In those cases developing more serious symptoms it was not deemed best to rely upon the serum. Hoping that cases might have occurred in the Touro Infirmary at New Orleans I returned to that city, and although there had been and were none suitable in that institution, I had the opportunity to see one at the United States Marine Hospital under the care of Dr. Faget. This is detailed below:

Case No. 1: Robert Anderson; aged 50 years; a vigorous man, was taken sick at 10 p. m., October 8, 1898, with intense pain in back and limbs and a severe rigor, followed by high fever. When seen at 4 p. m. of the 9th, in consultation with Dr. Bland, the typical facies, pains and commencing icterus left no doubt that he had succumbed to the infection to which he had been freely exposed. Thus far only a mild mercurial had been prescribed, and with his consent the anti-amylic serum was used. At 6.15 p. m., 10 c. c. of serum were injected into the connective tissues of the loin, pulse 84, temperature 38.7° C.; much congestion of vessels of skin of face. Temperature to be taken every two hours as nearly as practicable.

At 9 p. m., temperature 39°, pulse 86, more marked flushing of the face and some sweating; at 11 p. m., temperature 38.8°, pulse 84, semi-delirious and perspiring very freely, urine free; at 1 a. m., October 10, temperature 38.6°, pulse 81, sleeping; at 3 a. m., temperature

38.4°, pulse 78, quiet; at 6 a. m., temperature 38.1°, pulse 76, urine free; at 8 a. m., temperature 37.8°, pulse 66, urine free; at 9 a. m., 10 c. c. of serum were injected into the connective tissue of loin; at 10 a. m., temperature 37.6°, pulse 70, congestion of face; at 3.40 p. m., temperature 38.3°, pulse 78, sweating profusely; at 5.45 p. m., temperature, 38.5°, pulse 78, urine free; at 7 p. m., temperature 38.6°, pulse 78; at 9.30 p. m., temperature 38.5°, pulse 74, restless; at 11 p. m., temperature 38.5°, pulse 72, slept one and one-half hours; at 1 a. m., October 11, temperature 38.3°, pulse 74, urine free; at 3 a. m., temperature 38.3°, pulse 73, sleeping; at 5.20 a. m., temperature 38.6°, pulse 75, feeling weak; at 7.10 a. m., temperature 37.8°, pulse 70; at 9 a. m., temperature 37.7°, pulse 68, injected serum 8 c. c.; at 7 p. m., temperature 38.4°, pulse 78, urine free; at 10.15 p. m., temperature 38.2°, pulse 76, refused nourishment; at 3 a. m., October 12, temperature 38.1°, pulse 76; at 6 a. m., temperature 38.1°, pulse 72, slept well; at 8 a. m., temperature 37.8°, pulse 75, urine free; at 5 p. m., temperature 38°, pulse 70; at 9 p. m., temperature 37.6°, pulse 68, bowels free; at 1 a. m., October 13, temperature 37.4°, pulse 68, urine free; at 6 a. m., temperature 37.2°, pulse 62, takes food; at 6 p. m., temperature 37.3°, pulse 62, well; at 7 a. m., October 14, temperature 37°, pulse 64; at 6 p. m., temperature 37°, pulse 68, discharged.

Case No. 2: Fred. A., aged 19; a healthy young man, son of preceding patient, and much exposed to the infection, was taken sick at 6 p. m. of October 9, 1898, with a hard chill; pain in back and limbs, intense headache and nausea. He received a mustard bath and a mercurial with phenacetine. Temperature ranged from 38.5° to 39.5°, pulse 115.

At 9 a. m., 10th, he was given 12 c. c. of serum under the skin; temperature 39.3°, pulse 110; at 10 a. m., temperature 39.6°, pulse 110, and there was marked congestion of face, lips, ears, and body; at 12 m., temperature 39.6°, pulse 110; at 3.40 p. m., temperature 39.6°, pulse 110; at 6 p. m., temperature 39.2°, pulse 114, perspiring; at 8 p. m., temperature 39°, pulse 96; at 11 p. m., temperature 38.9°, pulse 98, slept well; at 1 a. m., October 11, temperature 38.7°, pulse 96; at 3 a. m., temperature 38.5°, pulse 88; at 5 a. m., temperature 38.9°, pulse 98.

Complains of much dizziness; at 8.30 a. m. gave another 12 c. c. of serum under the skin, temperature 39°, pulse 100; at 9.30, temperature 39.3°, pulse 100; at this hour the congestion of the face was extreme, and there was marked erythema; at 12 m., temperature 39.5°, pulse 105, perspiring and ptialism; at 4.30 we were hastily summoned, and found the patient suffering extremely from the urticarious rash, face puffed and congested, temperature 40°, pulse 110, urine abundant, copious saliva; at 6 p. m., temperature 39.6°, pulse 110, phenacetin given; at 8 p. m., temperature 38.8°, pulse 102, nausea; at 10 p. m., temperature 39°, pulse 104, and vomiting; at 12 m., temperature 39.6°, pulse 110, rash disappearing; at 2 a. m., October 12, temperature 39.3°, pulse 105, urine scant; at 4.30 a. m., temperature 39.3°, pulse 105, slept well; at 6 a. m., temperature 39.3°, pulse 110; at 9 a. m., temperature 39.3°, pulse 97, perspiring; at 11 a. m., temperature 39.4°, pulse 110; at 1.30 p. m., temperature 38.8°, pulse 106; at 5.30 p. m., temperature 39.4°, pulse 90, urine scant; at 7 p. m., temperature 39.3°, pulse 98; at 9 p. m., temperature 39.4°, pulse 98; at 12.30 a. m., October 13, temperature 38.3°, pulse 88; at 4 a. m., temperature 38.1°, pulse 81, slept well; at 6 a. m., temperature 38.4°, pulse 86; at 8 a. m., temperature 38.5°, pulse 83; at 10 a. m., temperature 38.8°, pulse 82; at 12 m., temperature 38.8°, pulse 85; at 2.30 p. m., temperature 38.8°, pulse 82; at 6 p. m., tempera-

ture 38.7°, pulse 83; at 8 p. m., temperature 38.4°, pulse 82, nauseated; at 12 m., temperature 37.8°, pulse 78; at 4.30 a. m., October 14, temperature 37.6°, pulse 77; at 7 a. m., temperature 37.5°, pulse 76; at 9 a. m., temperature 37.5°, pulse 77; at 6 p. m., temperature 37.7°, pulse 80; at 10 p. m., October 15, temperature 37.2°, pulse 78, discharged.

Case No. 3: A. B., seaman, about 35 years of age, was admitted to the isolation ward at the United States Marine Hospital at New Orleans October 13, 1898, and when seen in consultation with Dr. Faget was moribund from almost fatal suppression of urine. He was unconscious; there was hiccough, and jactitation, small weak pulse, devoid of tone. In the hope that the serum would produce a renewal of the suppressed renal function, he was given 20 c. c. serum under the skin, and although there was noticed a slight reaction in temperature from the subnormal, the kidneys did not react, and he died of a uræmic seizure twelve hours after the administration.

One word as to the possibilities of this serum as outlined by Professor Sanarelli; because of its not being an antitoxin it does not tend to overcome the toxins of yellow fever produced in the system, and depends for its curative and prophylactic properties upon its germicidal influence. Hence it is argued by Professor Sanarelli that its use will be absolutely negative in cases in which an amount of toxin has been produced sufficient to destroy life. These cases he does not attempt to treat, passing them by as out of the pale of serum influence. To those who have witnessed the successful struggle of many apparently beyond prognostic hope, there will at once arise the question of properly determining in such cases the fatal degree of intoxication which exists; therefore Professor Sanarelli advises and insists upon the early use of the serum, and thus the destruction of the organism before it has elaborated the fatal proportion of its toxin; such an exhibition of the serum invites the criticism that the mortality rate must be that of selected cases, and, therefore, of diminished statistical value; and in an epidemic of mild type, such as the recrudescence of this fall in Louisiana, it would be contradicted.

As to its influence in case No. 1, there was no doubt a very prompt reaction evidenced by the rise of temperature and pulse, and the great congestion of the face and skin of body. This was followed by a cessation of all pain in a few hours, and a fall of pulse and temperature to a point lower than before the administration. The second and third injections showed less marked reaction. The exhibition of the serum produced a free flow of nonalbuminous urine, some ptyalism, and free perspiration. I am free to confess that the man would have done equally well with any ordinary medication.

In case No. 2 I am satisfied that the boy would have done as well without any medication. His mental and physical condition were not improved by its use. The influence of the serum upon the vasoconstrictors was very pronounced, and caused mental and physical suffering. At first the urine was quite free, and always nonalbuminous, but on the second day became more scant, yet the skin acted very freely. The rash was very general on trunk and limbs. The face, eyelids, and ears were swollen, puffed, and bluish in color, with slightly raised patches which resembled urticaria, the general surface being erythematous with scattered and intensely itchy plaques. The reaction in this case was excessive, the temperature rising to 40° C. The family requested us to desist from this treatment, and I did not object since the pulse was intermittent and dicrotic. As to the doses in these cases,

I had never observed the action of the serum, and therefore refrained from the exhibition of the full dose directed by Professor Sanarelli, that of 20 c. c., and feel satisfied that the latter dose would have caused much alarm, and probably harm, in the second case reported. I regret that I have not been able to accomplish your purpose to have a full test made of this serum, but I realized that it was more necessary to arrive at a just conclusion of its merits, based on correct data, than merely to use it on uncertain cases. A more thorough test will be made at the earliest opportunity.

Respectfully, yours,

EUGENE WASDIN,
Surgeon, U. S. M. H. S.

WASHINGTON, D. C., November 10, 1898.

Case of yellow fever in Washington, D. C.

WASHINGTON, D. C., November 23, 1898.

SIR: I have the honor to report a death in this city, on the 18th instant, from yellow fever. The deceased was a civil engineer in the employ of the Nicaraguan Canal Commission, who had arrived at New York on the steamer *Allegheny* on the 16th instant from Greytown, Nicaragua, via Port Limon, Costa Rica. He came directly to this city from New York on the day of his arrival, registered at a hotel here about 7 o'clock, and went immediately to his room, where he apparently became unconscious shortly afterward. Nothing more is known of him until about 3 o'clock a. m. on the morning of the 18th instant, when the occupant of the adjoining room was aroused by noises in the apartment occupied by the deceased. A physician was immediately called, and, suspecting the nature of the disease, took steps to have it definitely diagnosed. The patient died at 2 o'clock p. m. on that date. All doubt as to the nature of the disease was removed by a necropsy held on the 19th instant.

I am glad to take this opportunity to thank you for the prompt assistance furnished in this case by your Bureau.

Respectfully,

WM. C. WOODWARD, M. D.,
Health Officer.

Further concerning suspicious cases on the Duchesse Anne.

ANGEL ISLAND, CAL., November 12, 1898.

SIR: Confirming my telegram of yesterday, I have the honor to report the facts more in detail concerning the quarantining of the French bark *Duchesse Anne*.

The bark arrived here October 28, seventy-four days from Hongkong. One case of smallpox was noted on the bill of health. Otherwise the city and vicinity of Hongkong were free from quarantinable diseases. The captain, Joseph Servany, aged 31, born in France, died August 20, five days out. A sailor, Ange Menier, aged 55, France, died September 19, twenty-five days out.

The cause of death could not be ascertained on account of the ignorance of the mate and crew of the vessel of medical matters. The captain had been ailing for several days, but confided to no one on board as to his symptoms. At 5 o'clock on the evening of the 5th he was "out of his head," and died at 8 o'clock. Swellings of the glands were not noted. There was œdema of the feet and legs. Nothing more definite than this could be elicited. The sailor, Menier, had been sick

with cough, spitting of blood, and losing weight for some time, and was known to have "lung trouble," and is believed to have died of tuberculosis. No other cases of sickness occurred on the voyage. One or two rats were trapped, but no dead ones were found. There was no special reason to think that the captain had plague. No diagnosis was possible from the meager history. The vessel was disinfected throughout twice, all the crew bathed and their effects steamed or formalinized, and released October 31.

Respectfully, yours,

M. J. ROSENAU,
Passed Assistant Surgeon, U. S. M. H. S.

Smallpox in Mobile, Ala.

MOBILE, ALA., November 14, 1898.

SIR: I have the honor to state that on the 12th instant a colored family, consisting of man, woman, and child, were sent to the pesthouse with smallpox from a house outside of the city limits.

It appears that about three weeks ago they gave quarters to a colored man from Barlowbend, Clarke County. This man, Richard Rivers, has escaped and is being looked for. There is no connection with the last case reported as from Dwight.

The city court has fined one colored man "\$20 or forty days" for refusing to be vaccinated after failing to find law to punish him for harboring and concealing smallpox cases.

Two negroes escaped from a house under surveillance and are also being looked for. The health officers and police are on the alert and will capture cases early if possible.

I have information that smallpox is increasing in Hale County in the vicinity of Greensboro.

I am, very respectfully, your obedient servant,

R. D. MURRAY,
Surgeon, U. S. M. H. S.

Case of smallpox at Newport News, Va.

CAPE CHARLES QUARANTINE, November 17, 1898.

SIR: I have the honor to report that yesterday, at the request of Dr. Bagby, health officer at Newport News, Va., I visited with him a suspicious case, isolated outside of the town, and found the man, a negro, sick with varioloid.

Very respectfully,

W. J. PETTUS,
Passed Assistant Surgeon, U. S. M. H. S.

Smallpox in Larimer County, Colorado.

DENVER, COLO., November 16, 1898.

SIR: In compliance with the agreement embodied in resolutions adopted by the conference of State boards of health respecting interstate notification of the occurrence of certain communicable diseases, you are hereby notified that 5 cases of smallpox have been reported to this office as existing near Timnath, Larimer county, this State. The origin of the disease is New Mexico. Precautions taken as usual.

Any further information of importance to you becoming known, will be promptly communicated.

Respectfully, yours,

HENRY SEWALL,
Secretary State board of health.

Yellow fever in the United States as officially reported from July 1 to November 24, 1898.

Places.	Date.	Cases.	Deaths.	Remarks.
District of Columbia:				
Washington.....	Nov. 18.....	1	1	
Louisiana:				
Alexandria.....	July 1-Oct. 15.....	200	2	Estimated.
Amite City.....	do.....	1	1	
Baton Rouge.....	do.....	176	4	
Baton Rouge, East.....	Oct. 17.....			Yellow fever reported.
Baton Rouge, West.....	do.....			Do.
Bowle.....	Oct. 6.....	1		
Cinclare.....	July 1-Oct. 15.....	11	1	
Delogny.....	do.....	1		
Feliciana, East.....	Oct. 17.....			Do.
Feliciana, West.....	do.....			Do.
Franklin.....	July 1-Oct. 20.....	607	9	
Harveys Canal.....	July 1-Oct. 6.....	14	3	
Houma.....	July 1-Oct. 15.....	40	2	
Iberville.....	Oct. 17.....			Do.
Jackson.....	July 1-Oct. 15.....	15	0	
Jefferson Parish.....	July 1-Sept. 20.....	5	0	
Lake Charles.....	July 1-Oct. 15.....	1	0	
Lobdell.....	Oct. 12.....			Do.
Lutcher.....	July 1-Oct. 15.....	14	2	
New Orleans.....	do.....	74	19	
Plaquemine.....	do.....	6	1	
St. Charles Parish.....	Oct. 4.....			Do.
St. James Parish.....	July 1-Oct. 1.....	1		
Wilson.....	July 1-Oct. 15.....	303	7	
Mississippi:				
Canton.....	July 1-Oct. 26.....	9		
Clinton.....	July 1-Oct. 15.....	40		
Crystal Springs.....	July 1-Oct. 21.....	7		
Edwards (vicinity).....	July 1-Oct. 16.....	12	1	
Fayette.....	July 1-Oct. 13.....	5		
Harriston.....	July 1-Oct. 30.....	134	8	
Hattiesburg.....	July 1-Oct. 21.....	35	3	
Hermanville.....	July 1-Oct. 13.....	3		
Jackson.....	July 1-Nov. 10.....	208	11	
Madison and vicinity.....	July 1-Nov. 10.....	95	1	
Meridian.....	July 1-Oct. 17.....	3		
Natchez.....	July 1-Nov. 2.....	37	4	
Orwood.....	July 1-Oct. 27.....	100	5	
Oxford.....	do.....	86	12	
Poplarville.....	July 1-Oct. 18.....	24	1	
Port Gibson.....	July 1-Oct. 6.....	1	1	
Queen Hill.....	July 1-Oct. 15.....	1	1	
Ridgeland.....	July 1-Oct. 17.....	7		
Starkville.....	July 1-Oct. 18.....	9		
Taylors.....	July 1-Oct. 21.....	106	14	
Tougaloo.....	July 1-Oct. 17.....	2		
Waterford.....	July 1-Oct. 6.....	2		
Water Valley.....	July 1-Oct. 21.....	12		
Waveland.....	July 1-Oct. 18.....	20	1	
Woodville.....	July 1-Oct. 6.....	1		
Yazoo City.....	July 1-Nov. 10.....	26		
New York:				
New York.....	Oct. 23.....	1	1	

Total for Louisiana, 1,470 cases, 51 deaths. Mortality, 3.47 per cent.
 Total for Mississippi, 935 cases, 63 deaths. Mortality, 6.40 per cent. Total for New York, 1 case,
 1 death. Grand total for 1898, 2,456 cases, 115 deaths. Mortality, 4.68 per cent.

Smallpox in the United States as reported to the Supervising Surgeon-General United States Marine-Hospital Service, January 1 to November 25, 1898.

Places.	Date.	Cases.	Deaths.	Remarks.
Alabama:				
Bessemer.....	Jan. 6-Feb. 19....	148		
Birmingham.....	Jan. 6-Feb. 19....	47		
	May 18.....	15		
In Jefferson county, outside of the city.....	Feb. 6-Feb. 19....	26		
Carneys Bluff.....	Feb. 17.....			Smallpox reported.
Cedarville.....	Aug. 1-Sept. 29....	50		
Corona.....	Mar. 4.....	1		
Dallas County (near Selma)...	Oct. 20.....	15		
Dolomite.....	Dec. 1-Jan. 17....	21		
Dwight, Washington County	Aug. 16-Sept. 12..	12	1	
Gosport.....	Feb. 17.....			Do.
Glendon.....	Feb. 17.....			Do.
Haynesville.....	Mar. 11.....	400		
Horse Creek Mine.....	Mar. 4.....	3		
Hurricane Bayou.....	Mar. 31-June 12..	30		
Jackson.....	Feb. 17.....	10		
Letohatchie.....	May 18.....	50		
	July 30.....	25		Three miles from town.
Mobile.....	Feb. 5-June 15..	82	1	
	July 1-Aug. 17....	9		
	Oct. 27.....	1	1	
	Nov. 12.....	3		
Montevallo.....	Mar. 3.....	1		
Montgomery.....	June 29.....	2		
Newton.....	Jan. 15-Feb. 2....	7		
Nichola.....	Feb. 17.....			Smallpox reported.
Ozmar.....	Jan. 19.....			Do.
Patton.....	Feb. 1-Mar. 4....	9		
Pinckard.....	Feb. 2.....	50		
Port Deposit.....	May 18.....	1		
Rock Springs.....	Mar. 11.....	15		
Saltpa.....	Feb. 17.....			Do.
Selma.....	Jan. 13-Feb. 14..	8		
	Oct. 13.....	1		
Shelby.....	Jan. 28-Apr. 22..	8		
Talladega.....	Jan. 9-Feb. 15....	45		
Walker Springs.....	Feb. 17.....			Do.
Wayne County.....	June 23-July 1....	2		
Whistler.....	June 4-June 15....	1		
Arkansas:				
Beebe.....	June 30.....	1		
Conway.....	Sept. 28.....	3		
Fair Oaks.....	Mar. 1.....	5		
Hot Springs.....	June 30.....	2		
Little Rock and vicinity.....	Mar. 31-May 20....	110	1	
Newport.....	Apr. 28.....	1		
Sweet Home.....	May 20.....	11	1	
California:				
San Francisco.....	Nov. 7.....	1		
Colorado:				
Boulder County.....	June 24-July 26....	5		
Colorado Cañon.....	Aug. 8.....	7		
Larimer County.....	Nov. 16.....	5		
Las Animas County.....	July 26.....	5		
District of Columbia:				
Washington.....	Feb. 7.....	1		Naval Hospital.
	Apr. 2-May 5....	9		
	Aug. 13.....	1		
Florida:				
Bartow.....	June 25.....	1		
Bluff Springs.....	June 18.....	1		
Jacksonville.....	Mar. 20-Mar. 26..	1		
Pensacola.....	Apr. 24-May 11..	2		
Washington County.....	Jan. 24.....	12		
Georgia:				
Atlanta.....	Jan. 17-Feb. 16..	178	2	Most cases from county
	May 27-July 27..	2		
Cartersville.....	Jan. 15-Mar. 1....	9	1	
Griffin.....	Feb. 12.....	2		
Macon.....	Jan. 15-June 1....	100	3	
Stilesboro.....	Jan. 15.....			Smallpox reported.
Illinois:				
Chicago.....	May 4.....	1		
Indiana:				
Evansville.....	Feb. 26.....	1		
Richmond.....	Nov. 9.....	1		
Kansas:				
Fort Scott.....	Sept. 15.....	1		
Kentucky:				
Butler.....	Feb. 8-Feb. 24....	1		
Louisville.....	Apr. 16.....	1		

Smallpox in the United States, etc.—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Kentucky—Continued.				
Middlesborough.....	Feb. 8-Apr. 7.....	183	2	Smallpox reported.
Laurel County.....	July 20.....			Do.
Clay County.....	July 20.....			Do.
Jackson County.....	July 20.....			Do.
Louisiana:				
New Orleans.....	Mar. 13-May 21.....	5		
Massachusetts:				
Greenfield.....	Feb. 5-Feb. 22.....	1		
Westfield.....	Feb. 20-Mar. 2.....	1		
Michigan:				
Detroit.....	Sept. 17-Sept. 27.....	6		
	Oct. 2-Oct. 8.....	1	1	
Ecorse Township.....	Oct. 30-Nov. 5.....			Do.
Ionia.....	Mar. 20-Apr. 23.....			Do.
Otsego.....	Sept. 10.....			Do.
Royal Oak.....	Feb. 12-Mar. 12.....	1		
Seneca Township.....	Aug. 6.....	1		
	Aug. 27.....			Do.
Mississippi:				
Basin.....	May 16.....	7		
Chicoora.....	June 23-July 1.....			Cases reported.
Denny.....	May 16-May 31.....	19		
Hattiesburg.....	June 4-June 15.....	4		
Hendersons Point.....	Feb. 8.....	3		
Laurel.....	May 26-July 28.....	11		
Meridian.....	July 28.....	2		
Moss Point.....	Feb. 15.....	1		
Ocean Springs.....	Feb. 20.....	3		
Prairie.....	June 4-June 15.....			Several cases.
State Line.....	June 23-July 1.....	1		
Shubuta, Clark County.....	May 28-June 15.....	50		
New Jersey:				
Westfield.....	Mar. 4.....	1		
New Mexico:				
Albuquerque and vicinity.....	Mar. 5-Sept. 4.....	52	3	Smallpox reported prevalent along the line of the Santa Fe R. R. August 4, 1898.
New York:				
Buffalo.....	May 21-June 18.....	1		
Deposit.....	Nov. 1-Nov. 30.....	1		
Livonia.....	July.....	1		
New York City.....	May 14-May 21.....	1		
Waverley.....	July.....	5		
North Carolina:				
Alamance County.....	Feb. 18-Feb. 25.....	1		
Asheville.....	Apr. 14-July 19.....	1		
Buncombe County.....	Apr. 16.....	1		
Catawba.....	July 19.....	6		In one family.
Charlotte.....	Jan. 25-Feb. 12.....	4		
Clay County.....	Feb. 15-Feb. 24.....	3		
Cleveland.....	July 19.....	7		18 found recovered; total, 20 cases.
Durham.....	do.....	1		
Edgecombe County.....	Nov. 12.....	10		
Elmwood.....	do.....	2		
Iredell County.....	May 19-June 2.....	9		
Mooreville.....	July 19.....	1		
Reldsville.....	do.....	1		
Wilmington.....	Jan. 12.....	1		
Wilson County.....	May 28.....	1		
Ohio:				
Bays.....	July 14.....	2		
Cincinnati.....	May 5.....	1		
	Oct. 8.....	3		
Columbus.....	Apr. 16-Apr. 22.....	1		
Cleveland.....	Nov. 14.....	1		
Dayton.....	Sept. 23.....	1		
	Oct. 8.....	1		
Delphos.....	May 4-July 14.....	15		
Fairfield County.....	Apr. 8-May 11.....	12	1	
Goshen.....	July 23.....	15		
New Paris.....	Oct. 8.....	1		
Oberlin.....	do.....	1		
Put-in-Bay.....	do.....	1		
Sandusky.....	Sept. 6.....	26		
St. Marys.....	Oct. 8.....	1		
	do.....	2		
Unionopolis.....	do.....	1		
Van Wert.....	do.....	1		
Wapakoneta.....	June 23-July 15.....	13		
	Oct. 8.....	20		

Smallpox in the United States, etc.—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Pennsylvania:				
Chester County (near Spring City).....	Oct. 7-Oct. 29....	10	1	
Dunbar.....	June 23-July 13....	6		
Philadelphia.....	Apr. 13.....	2		
Sayre, Bradford County.....	Oct. 7.....	1		
South Carolina:				
Arkwright.....	Mar. 25.....	9		
Beaufort.....	Jan. 17.....			Smallpox reported.
Charleston.....	Apr. 22.....	1		
Columbia.....	Apr. 6-May 2....	86		
Dyson.....	Mar. 25.....	3		
Greenville.....	Jan. 17.....			Do.
Orangeburg.....	Jan. 17.....			Do.
Pelham.....	Mar. 25.....	20		
Ridge Springs.....	Mar. 25.....	1		
Rock Hill.....	Jan. 17.....			Do.
Spartanburg.....	Jan. 17-July 23....	4		Do.
Sumter.....	May 2.....	12		
Swansea.....	Jan. 15.....			Do.
Tennessee:				
Bristol.....	Mar. 1-Mar. 31....	1		
Chattanooga.....	Jan. 1-Apr. 30....	21		
Cleveland.....	Apr. 1-Apr. 30....	6		
	July 1-July 31....	12		
Elk Valley.....	Mar. 1-Mar. 31....	1		
Huntington (near).....	Jan. 1-Jan. 29....	1		
Jellico.....	Feb. 1-Mar. 31....	9		
Johnson City.....	Feb. 1-Mar. 31....	13		
Knoxville.....	Jan. 1-Apr. 30....	43		
Lenoir City.....	Jan. 1-Feb. 28....	5		
Memphis.....	Jan. 22-Apr. 30....	4		
	July 1-July 31....	2		
Mingo mines.....	Jan. 1-Jan. 29....	6		
Mingo.....	Feb. 1-Mar. 31....	3		
Morristown.....	Feb. 1-Mar. 31....	6		
Newcomb.....	Feb. 1-Feb. 28....	3		
Rockford.....	Mar. 1-Mar. 31....	1		
Rutledge.....	Feb. 1-Apr. 30....	14		
Shields Ferry.....	Mar. 1-Mar. 31....	4		
Sprowles.....	Mar. 1-Mar. 31....	1		
Texas:				
Brownsville.....	Feb. 26.....	1		
Columbus.....	Feb. 2-Apr. 2....	30	7	Do.
Virginia:				
Colburn.....	Feb. 1.....			Do.
Norfolk City.....	Mar. 1-Mar. 10....	2		
	Sept. 19-Nov. 12....	18		
Norfolk County.....	Jan. 1-Nov. 10....	60		Estimated.
Norton.....	Feb. 1.....			Smallpox reported.
West Virginia:				
Bluefield.....	Feb. 25.....	5		
Fayette County.....	May 6.....	8		
Mercer County.....	May 6.....	6		
McDowell County.....	May 6.....	12		
Wisconsin:				
Milwaukee.....	May 19.....	1		
Oshkosh.....	Apr. 23.....	1		
Wausau.....	Oct. 12.....	1		

Report of immigration at Boston for the week ended November 19, 1898.

OFFICE OF U. S. COMMISSIONER OF IMMIGRATION,
Port of Boston, November 19, 1898.

*Number of alien immigrants who arrived at this port during the week ended November 19, 1898;
also names of vessels and ports from which they came.*

Date.	Vessel.	Where from.	No. of immigrants.
Nov. 13	Steamship Boston.....	Yarmouth, Nova Scotia.....	58
Do.....	Steamship Catalonia.....	Liverpool, England.....	114
Nov. 14	Steamship Admiral Dewey.....	Port Antonio, Jamaica.....	3
Nov. 15	Steamship Victorian.....	Liverpool, England.....	3
Do.....	Steamship Columbian.....	London, England.....	2
Do.....	Steamship Michigan.....	Liverpool, England.....	1
Nov. 16	Steamship Prince Edward.....	Yarmouth, Nova Scotia.....	44
Nov. 17	Steamship Boston.....	do.....	68
Do.....	Steamship Hibernian.....	Glasgow, Scotland.....	10
Nov. 18	Steamship Halifax.....	Halifax, Nova Scotia.....	59
Do.....	Steamship Canada.....	Liverpool, England.....	222
Do.....	Steamship Sylvania.....	do.....	9
Nov. 19	Steamship Prince Edward.....	Yarmouth, Nova Scotia.....	30
Do.....	Steamship Anglian.....	London, England.....	3
	Total.....		626

GEORGE B. BILLINGS,
Commissioner.

Report of immigration at New York for the week ended November 12, 1898.

OFFICE OF U. S. COMMISSIONER OF IMMIGRATION,
Port of New York, November 15, 1898.

*Number of alien immigrants who arrived at this port during the week ended November 12, 1898;
also names of vessels and ports from which they came.*

Date.	Vessel.	Where from.	No. of immigrants.
Nov. 6	Steamship Ethiopia.....	Glasgow.....	31
Do.....	Steamship Hekla.....	Copenhagen.....	63
Do.....	Steamship La Gascogne.....	Havre.....	447
Do.....	Steamship Campania.....	Liverpool and Queenstown.....	442
Do.....	Steamship Trojan Prince.....	Naples.....	1,035
Do.....	Steamship Palatia.....	Hamburg.....	295
Do.....	Steamship Southwark.....	Antwerp.....	263
Do.....	Steamship Kaiser Wilhelm der Grosse.....	Bremen.....	595
Do.....	Steamship Werkendam.....	Rotterdam and Boulogne.....	333
Do.....	Steamship Coleridge.....	Rio de Janeiro and Bahia.....	20
Do.....	Steamship Majestic.....	Liverpool and Queenstown.....	354
Do.....	Steamship Fulda.....	Genoa, Naples and, Gibraltar.....	611
Do.....	Steamship H. H. Meier.....	Bremen.....	275
Do.....	Steamship Mongolian.....	Glasgow and Moville.....	37
Do.....	Steamship Fürst Bismark.....	Hamburg, Havre, and Cherbourg.....	531
Do.....	Steamship St. Louis.....	Southampton.....	125
	Total.....		5,507

THOMAS FITCHIE,
Commissioner.

Report of immigration at Philadelphia for the week ended November 19, 1898.

OFFICE OF U. S. COMMISSIONER OF IMMIGRATION,
Port of Philadelphia, November 19, 1898.

Number of alien immigrants who arrived at this port during the week ended November 19, 1898, also names of vessels and ports from which they came.

Date.	Vessel.	Where from.	No. of immigrants.
Nov. 13	Steamship Russia.....	Liverpool and Queenstown.....	89
Nov. 17	Steamship Maine.....	London.....	1
	Total.....		90

JNO. J. S. RODGERS,
Commissioner.

QUARANTINE REPORTS.

National quarantine and inspection stations.

[Vessels named only when detained or given treatment at quarantine.]

Name of station.	Week ended.	Name of vessel.	Date of arrival.	Port of departure.	Destination.	Treatment of vessel, passengers, and cargo.	Date of departure.	Remarks.	Vessels inspected and passed.
Alexandria, Va	Nov. 19	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	No transactions.	.....
Beaufort, N. C	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	do.	.....
Brunswick, Ga.	Nov. 12	Br. ss. Kelvin (a).	Nov. 4	Rio	Brunswick.	Disinfected and held.	Nov. 9	.....	9
Cape Charles, Va.	Nov. 19	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	.....	1
Cape Fear, N. C.	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	.....	3
Delaware Breakwater, Quarantine, Del.	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	.....	.....
Eureka, Cal.	Nov. 12	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	No transactions.	.....
Grays Harbor, Wash.	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	do	.....
Gulf Quarantine, Ship Island, Miss.	Nov. 12	Br. bk. Birmam Wood (a)	Nov. 2	Rio	Mobile	Disinfected and held.	Nov. 10	1 death from yellow fever in port of departure.	1
		Am. ss. James Slater (a)	Nov. 3	St. Thomas.	Pascagoula.	do	Nov. 8	.....	.....
		Am. sc. Belle Wooster (a)	.....do.	Habana	Ship Island.	do	Nov. 9	1 case acute nephritis in quarantine.	.....
		Am. bktn. Vindicator (a)	Nov. 5	Santiago de Cuba.	Apalachicola.	do	Nov. 12	1 case remittent fever in quarantine.	.....
		Br. sc. Lena Pick-up.	Nov. 8	Cienfuegos.	Mobile.	do	.....	.....	.....
		Nor. bk. Lucy Reppen.	Nov. 9	Guadeloupe.	Ship Island.	do	.....	3 suspicious cases at sea.	.....
		It. bkn Madre M.	Nov. 11	Dakar	Mobile.	Held for disinfection.	.....	.....	6
Honolulu, Hawaiian Islands.	Oct. 29	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	.....	.....
	Nov. 5	Br. ss. Belgic.	Nov. 2	Yokohama.	San Francisco	Inspected and given supplemental bill of health.	Nov. 2	1 suspicious case removed, 3 days later developed variola.	6
Newbern, N. C	Nov. 19	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	No transactions.	5
Port Townsend, Wash.	Nov. 12	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	.....	13
Reedy Island Quarantine, Del.	Nov. 19	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	.....	.....
San Diego, Cal.	Nov. 12	.....do.	.....do.	.....do.	.....do.	.....do.	.....do.	.....	5

a Previously reported.

QUARANTINE REPORTS—Continued.
National quarantine and inspection stations.

[Vessels named only when detained or given treatment at quarantine.]

Name of station.	Week ended.	Name of vessel.	Date of arrival.	Port of departure.	Destination.	Treatment of vessel, passengers, and cargo.	Date of departure.	Remarks.	Vessels inspected and passed.
San Francisco Quarantine, Cal.	Nov. 5	Fr. bk. Duchesse	Oct. 28	Hongkong.....	San Francisco	Disinfected and released...	Oct. 31	2 deaths at sea, cause unknown.	..... 2
South Atlantic Quarantine, Fiskebeard Island, Ga.	Nov. 12	Anne. (b)							
Tortugas Quarantine, Key West, Fla.	.....do.....	Nor. bk. Morland (a)	Oct. 22	Para.....	Carabelle.....	Disinfected and held.....			
		Am. sc. Aaron Kingsland. (c)	Oct. 29	Habans.....	Key West.....	Disinfected.....	Nov. 6		
		Nor. ss. Kitty (c)	Nov. 1	.....do.....	Mobile.....	.....do.....	Nov. 8	Without pratique.....	
		Am. sc. Rollin Sanford. (c)	Nov. 3	Cardenas.....	Tamps.....	.....do.....	Nov. 9	Without pratique.....	
		Nor. ss. John Wilson. (c)	Nov. 4	Habans.....	Mobile.....	.....do.....	.....do.....	Without pratique.....	
		Am. sc. Pearl City. (c)	.....do.....	.....do.....	Key West.....	.....do.....	Nov. 12	No transactions.....	
Washington, N. C.....	Nov. 19								

b Omitted from last report.

Reports of States, and yearly and monthly reports of cities of the United States.

ALABAMA—Montgomery.—Month of October, 1898. Estimated population, 1,700. Total number of deaths, 43; white, 20; colored, 23. No contagious diseases reported.

CALIFORNIA—Los Angeles.—Month of October, 1898. Estimated population, 103,000. Total number of deaths, 118, including enteric fever, 5, and 27 from phthisis pulmonalis.

Oakland.—Month of October, 1898. Estimated population, 75,000. Total number of deaths, 80, including enteric fever 1, and 13 from phthisis pulmonalis.

San Diego.—Month of October, 1898. Estimated population, 17,000. Total number of deaths, 12, including enteric fever 1, and 4 from phthisis pulmonalis.

CONNECTICUT.—Reports to the State board of health for the month of October, 1898, from 168 towns, having an aggregate population of 890,160, show a total of 1,109 deaths, including diphtheria, 28; enteric fever, 44; measles, 1; scarlet fever, 2; whooping cough, 9, and 111 from phthisis pulmonalis.

New Haven.—Month of October, 1898. Estimated population, 110,000. Total number of deaths, 125, including diphtheria, 1; enteric fever, 7; whooping cough, 2, and 9 from phthisis pulmonalis.

FLORIDA.—Month of July, 1898. Reports to the State board of health from 45 counties, having an aggregate population of 391,422, show a total of 368 deaths, including enteric fever, 38; measles, 2; scarlet fever, 1; whooping cough, 2, and 36 from phthisis pulmonalis.

Month of August. Total number of deaths, 544. Enteric fever, 111; measles, 6; scarlet fever, 1; whooping cough, 3, and 34 from phthisis pulmonalis.

Month of September. Total number of deaths, 678, including diphtheria, 2; enteric fever, 198(a); measles, 6; whooping cough, 2, and 28 from phthisis pulmonalis.

ILLINOIS—Chicago.—Month of October, 1898. Estimated population, 1,750,000. Total number of deaths, 1,607, including diphtheria, 59; enteric fever, 62; measles, 3; scarlet fever, 6; whooping cough, 12, and 163 from phthisis pulmonalis.

INDIANA.—Reports to the State board of health for the third quarter of the year 1898, give a total of 4,364 deaths, including diphtheria, 89; enteric fever, 248; scarlet fever, 13; whooping cough, 42, and 462 from phthisis pulmonalis.

MICHIGAN.—Reports to the State board of health, Lansing, for the week ended November 12, 1898, from 66 observers, indicate that enteric fever, remittent fever, tonsillitis, diarrhea, and influenza increased, and intermittent fever decreased in area of prevalence. Phthisis pulmonalis was reported present at 146, enteric fever at 72, diphtheria at 36, scarlet

a Many death returns from enteric fever in military camps.

fever at 36, whooping cough at 15, measles at 3 places, and smallpox at 1 place—Ecorse Township.

MISSOURI—St. Joseph.—Month of October, 1898. Estimated population, 75,000. Total number of deaths, 90, including diphtheria, 25, and 4 from phthisis pulmonalis.

St. Louis.—Month of September, 1898. Estimated population, 623,000. White, 587,000; colored, 36,000. Total number of deaths, 626; white, 552; colored, 74; including diphtheria, 14; enteric fever, 14; scarlet fever, 3; whooping, 5, and 83 from phthisis pulmonalis.

NEW YORK—Buffalo.—Month of October, 1898. Estimated population, 370,000. Total number of deaths, 362, including diphtheria, 9; enteric fever, 11; scarlet fever, 1; whooping cough, 5, and 35 from phthisis pulmonalis.

Yonkers.—Month of October, 1898. Estimated population, 42,000. Total number of deaths, 67, including diphtheria, 1; whooping cough, 2, and 2 from phthisis pulmonalis.

OHIO—Columbus.—Month of October, 1898. Estimated population, 135,000. Total number of deaths, 97, including diphtheria, 2; enteric fever, 5, and 21 from phthisis pulmonalis.

RHODE ISLAND.—Month of October, 1898. Estimated population, 21,500. Total number of deaths, 25, including enteric fever, 1, and 5 from phthisis pulmonalis.

PENNSYLVANIA—York.—Month of October, 1898. Estimated population, 25,615. Total number of deaths, 30, including diphtheria, 2; enteric fever, 2; whooping cough, 1, and 3 from phthisis pulmonalis.

TENNESSEE—Memphis.—Month of August, 1898. Estimated population, 61,747. Total number of deaths, 116, including enteric fever, 3, and 13 from phthisis pulmonalis.

Month of September. Total number of deaths, 105, including enteric fever, 2, and 9 from phthisis pulmonalis.

Month of October. Total number of deaths, 105, including diphtheria, 1; enteric fever, 2, and 18 from phthisis pulmonalis.

WASHINGTON—Seattle.—Month of October, 1898. Estimated population, 70,000. Total number of deaths, 46, including diphtheria, 4; enteric fever, 1, and 3 from phthisis pulmonalis.

Tacoma.—Month of October, 1898. Estimated population, 50,000. Total number of deaths, 28, including enteric fever, 2, and 4 from phthisis pulmonalis.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Population, U. S. Census of 1890.	Total deaths from all causes.	Deaths from—											
				Phthisis pulmonalis.	Yellow fever.	Smallpox.	Varicoid.	Cholera.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.	
Allegheny, Pa.....	Nov. 19.....	105,287	47	4							5		3		1
Ashtabula, Ohio.....	Do.....	8,388	5										1		
Boston, Mass.....	Do.....	448,477	222	30							1	1	3		3
Bristol, R. I.....	Nov. 12.....	5,478	2												
Butler, Pa.....	Aug. 20.....	8,734	2										1		
Do.....	Aug. 27.....	8,734	6								1				
Do.....	Sept. 3.....	8,734	2								1				
Do.....	Sept. 10.....	8,734	4												
Do.....	Sept. 17.....	8,734	1												
Do.....	Sept. 24.....	8,734	2												
Do.....	Oct. 1.....	8,734	3	1											
Do.....	Oct. 8.....	8,734	4								1				
Do.....	Oct. 15.....	8,734	2												
Do.....	Oct. 22.....	8,734	2												
Do.....	Oct. 29.....	8,734	5												
Charleston, S. C.....	Nov. 12.....	56,955	36	6							1				
Cincinnati, Ohio.....	Nov. 11.....	296,908		11							3				
Concord, N. H.....	Nov. 12.....	17,044	4												
Dayton, Ohio.....	Do.....	61,220	28	2							1	1	1		
Do.....	Nov. 19.....	61,220	28								1		1		
Detroit, Mich.....	Do.....	205,876	81										1		
Dubois, Pa.....	Nov. 5.....	6,149	1								1				
Do.....	Nov. 12.....	6,149	2												
Dunkirk, N. Y.....	Do.....	9,416	4												
Erie, Pa.....	Nov. 19.....	40,634	15	2											
Everett, Mass.....	Nov. 12.....	11,068	9	2											
Fall River, Mass.....	Nov. 21.....	74,398	27	2											
Flint, Mich.....	Nov. 19.....	9,803	1												
Grand Rapids, Mich.....	Do.....	60,278	17	2									1		
Green Bay, Wis.....	Nov. 12.....	9,069	5								1				
Do.....	Nov. 19.....	9,069	6	1											
Haverhill, Mass.....	Do.....	27,412	13	6							1				
Jacksonville, Fla.....	Nov. 12.....	17,201	23	1							6				
Do.....	Nov. 19.....	17,201	19	2							3				
Johnstown, Pa.....	Do.....	21,805	16	1									2		
Kalamazoo, Mich.....	Nov. 12.....	17,853	9												
Lancaster, Pa.....	Do.....	32,011	9								1				
Lawrence, Mass.....	Do.....	44,654	14								1				
Lowell, Mass.....	Nov. 19.....	77,696	31	2							2				
Lynchburg, Va.....	Do.....	19,709	9	1											
McKeesport, Pa.....	Nov. 12.....	20,741	10								2				
Manchester, N. H.....	Nov. 19.....	44,126	20	2							2		3		
Massillon, Ohio.....	Do.....	10,092	2	1											
Medford, Mass.....	Do.....	11,079	6												
Melrose, Mass.....	Nov. 5.....	8,519	2												
Michigan City, Ind.....	Nov. 19.....	10,776	2												
Middletown, N. Y.....	Nov. 15.....	11,977	8	2							1				
Middletown, Ohio.....	Oct. 8.....	7,681	2												
Do.....	Oct. 15.....	7,681	3												
Do.....	Oct. 22.....	7,681	3	1											
Do.....	Oct. 29.....	7,681	1												
Do.....	Nov. 5.....	7,681	2												
Do.....	Nov. 12.....	7,681	2												
Milwaukee, Wis.....	Nov. 19.....	204,468	62	7									1		2
Minneapolis, Minn.....	Nov. 12.....	164,738	31	5											
Nashville, Tenn.....	Nov. 19.....	76,168	35	5							1				
New Bedford, Mass.....	Do.....	40,733	20	1									1		
Newburyport, Mass.....	Nov. 12.....	13,947	4	1							2				1
Newport, R. I.....	Nov. 19.....	19,457	6												
Norristown, Pa.....	Do.....	19,791	8												
Oakland, Cal.....	Nov. 15.....	46,682	14	3											
Do.....	Nov. 22.....	46,682	21	6											
Do.....	Nov. 29.....	46,682	19	2											
Do.....	Nov. 5.....	46,682	18												
Orange, N. J.....	Nov. 19.....	18,844	10	4											
Petersburg, Va.....	Nov. 20.....	22,680	7								3				
Philadelphia, Pa.....	Nov. 12.....	1,046,964	397	55							5	1	26		4
Do.....	Nov. 19.....	1,046,964	414	43							9	2	23		1
Pittsburg, Pa.....	Nov. 12.....	233,617	89	2							2		3		1
Do.....	Nov. 19.....	233,617	91	5							1	1	7		3
Portland, Me.....	Do.....	35,425	11										3		

Estimated population, 65,165—white, 23,870; colored, 36,295.

MORTALITY TABLE, CITIES OF THE UNITED STATES—Continued.

Cities.	Week ended.	Population, U. S. Census of 1890.	Total deaths from all causes.	Deaths from—												
				Phthisis pulmonalis.	Yellow fever.	Smallpox.	Varioid.	Cholera.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.		
Pottstown, Pa.....	Nov. 11....	13,284	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Providence, R. I.....	Nov. 19....	132,146	64	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pueblo, Colo.....	Nov. 12....	24,558	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Louis, Mo.....	Sept. 8....	451,770	165	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Sept. 10....	451,770	138	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Sept. 18....	451,770	140	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Sept. 24....	451,770	149	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Oct. 1....	451,770	149	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Oct. 8....	451,770	147	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Oct. 15....	451,770	114	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Oct. 22....	451,770	143	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Oct. 29....	451,770	161	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Nov. 5....	451,770	21	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Nov. 12....	451,770	165	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Salt Lake City, Utah.....	do.....	44,843	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego, Cal.....	do.....	16,159	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Jose, Cal.....	Nov. 5....	18,060	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Nov. 12....	18,060	7	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Santa Barbara.....	Nov. 5....	5,864	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Nov. 12....	5,864	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Spokane, Wash.....	do.....	19,922	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Springfield, Ill.....	Nov. 14....	24,903	5	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Nov. 21....	24,903	10	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Steelton, Pa.....	Nov. 19....	9,250	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Taunton, Mass.....	do.....	25,448	8	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tiffin, Ohio.....	Nov. 12....	10,801	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Nov. 19....	10,801	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waltham, Mass.....	do.....	18,707	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Warren, Ohio.....	do.....	5,973	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wausau.....	Nov. 12....	9,253	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington, D. C.....	do.....	230,392	98	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wilmington, Del.....	Nov. 19....	61,431	26	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Winona, Minn.....	Nov. 8....	18,208	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Worcester, Mass.....	Nov. 18....	84,655	30	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yonkers, N. Y.....	do.....	32,083	13	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Youngstown, Ohio.....	Nov. 19....	33,220	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

a Not contracted at Wausau.

Table of temperature and rainfall, week ended November 14, 1898.

[Received from Department of Agriculture, Weather Bureau.]

Locality.	Temperature in degrees Fahrenheit.			Rainfall in inches and hundredths.		
	Normal.	Excess.	Deficiency.	Normal.	Excess.	Deficiency.
Atlantic Coast:						
Eastport, Me.....	39		1	1.01		.06
Portland, Me.....	41		2	.98	.89	
Northfield, Vt.....	34		2	.77	.51	
Boston, Mass.....	43	1		1.08	.42	
Vineyard Haven, Mass.....	46	3		.71	1.37	
Nantucket, Mass.....	46	2		.80	.36	
Woods Hole, Mass.....	46	2		1.19	.62	
Block Island, R. I.....	47		1	.98	.41	
New Haven, Conn.....	44		1	.91	.82	
Albany, N. Y.....	42		2	.70	1.24	
New York, N. Y.....	47	2		.91	.61	
Harrisburg, Pa.....	44	2		.68	.28	
Philadelphia, Pa.....	48	1		.77	1.54	
New Brunswick, N. J.....	47	0		.90	1.06	
Atlantic City, N. J.....	48	0		.81	.08	
Baltimore, Md.....	49	1		.70	.47	
Washington, D. C.....	48	1		.67		.37
Lynchburg, Va.....	50		1	.70		.61
Capo Henry, Va.....	53	4		.84		.78
Norfolk, Va.....	54	3		.70		.57
Charlotte, N. C.....	54		2	.70	.07	
Raleigh, N. C.....	53	2		.52	.15	
Kittynawk, N. C.....	58	3		.91		.08
Hatteras, N. C.....	58	2		1.20		.94
Wilmington, N. C.....	58	2		.59	.17	
Columbia, S. C.....	56		1	.56	1.68	
Charleston, S. C.....	60	4		.70	.46	
Augusta, Ga.....	57	1		.70	1.28	
Savannah, Ga.....	60	3		.51	.26	
Jacksonville, Fla.....	63	5		.56		.28
Jupiter, Fla.....	72	3		.80		.09
Key West, Fla.....	75	3		.52		.46
Gulf States:						
Atlanta, Ga.....	56		3	.82	.20	
Tampa, Fla.....	65	8		.44		.40
Pensacola, Fla.....	62		1	.85	1.46	
Mobile, Ala.....	59	0		.87	2.08	
Montgomery, Ala.....	57			.73	2.02	
Vicksburg, Miss.....	58		2	1.12	1.90	
New Orleans, La.....	62		1	.98	.93	
Shreveport, La.....	56		3	1.09	1.58	
Fort Smith, Ark.....	50		2	.89		.55
Little Rock, Ark.....	53		2	1.30	.97	
Palatine, Tex.....	56		4	1.07	.81	
Galveston, Tex.....	64		5	1.05	2.12	
San Antonio, Tex.....	60		5	.48	.38	
Corpus Christi, Tex.....	62		4	.78	.36	
Ohio Valley and Tennessee:						
Memphis, Tenn.....	53		1	1.10	.81	
Nashville, Tenn.....	51	0		.90	.93	
Chattanooga, Tenn.....	53		3	.91		.59
Knoxville, Tenn.....	50		2	.91		.61
Louisville, Ky.....	49		1	.97	.45	
Indianapolis, Ind.....	45		1	.94	.29	
Cincinnati, Ohio.....	47	0		.76	1.22	
Columbus, Ohio.....	45		1	.76	.82	
Parkersburg, W. Va.....	45	1		.70	.85	
Pittsburg, Pa.....	46	2		.56	.60	
Lake Region:						
Oswego, N. Y.....	41			.78	1.09	
Rochester, N. Y.....	41		1	.70	1.29	
Buffalo, N. Y.....	42		2	.84	1.24	
Erie, Pa.....	45		4	1.02	.81	
Cleveland, Ohio.....	44		2	.70	.91	
Sandusky, Ohio.....	44		3	.77	.99	
Toledo, Ohio.....	43		4	.70	.85	
Detroit, Mich.....	42		5	.63	1.51	
Lansing, Mich.....	38		5	.56	1.28	
Port Huron, Mich.....	40		3	.70	1.66	
Alpena, Mich.....	36	0		.69		.45
Sault Ste. Marie, Mich.....	33	0		.59		.49
Marquette, Mich.....	36		2	.63		.22
Green Bay, Wis.....	35	0		.56		.56
Grand Haven, Mich.....	40		3	.70	.24	
Milwaukee, Wis.....	39		1	.49		.13
Chicago, Ill.....	42		3	.63	.97	
Duluth, Minn.....	34		2	.39		.39

a The figures in these columns represent the average daily departure.

Table of temperature and rainfall, week ended November 14, 1898—Continued.

Locality.	Temperature in degrees Fahrenheit.			Rainfall in inches and hundredths.		
	Normal.	α Excess.	α Defic'ny.	Normal.	Excess.	Deficiency.
Upper Mississippi Valley :						
St. Paul, Minn.....	35		0	.28		.27
La Crosse, Wis.....	38		2	.35		.25
Dubuque, Iowa.....	39		2	.49		.44
Davenport, Iowa.....	41		4	.49	.22	
Des Moines, Iowa.....	42		3	.39		.22
Keokuk, Iowa.....	42		2	.49	.42	.18
Hannibal, Mo.....	42		0	.49		
Springfield, Ill.....	44		4	.70	1.04	
Cairo, Ill.....	50		1	1.06		.31
St. Louis, Mo.....	47		1	.77	.67	
Missouri Valley :						
Columbia, Mo.....	43		2	.68	01	
Springfield, Mo.....	44		2	.84		.34
Kansas City, Mo.....	44		3	.51		.35
Topeka, Kans.....	41		1	.28		.28
Wichita, Kans.....	42		4	.21		.21
Concordia, Kans.....	41		5	.21		.21
Lincoln, Nebr.....	39		4	.16		.16
Omaha, Nebr.....	40		3	.26		.25
Sioux City, Iowa.....	35		2	.14	10	
Yankton, S. Dak.....	36		2	.14		.14
Valentine, Nebr.....	36		7	.11		.10
Huron, S. Dak.....	31		3	.14		.14
Pierre, S. Dak.....	33		3	.14		.14
Moorhead, Minn.....	28		2	.21		.19
Bismarck, N. Dak.....	31		4	.14		.11
Williston, N. Dak.....	31		3	.14		.14
Rocky Mountain Region :						
Havre, Mont.....	34		5	.17	.00	
Helena, Mont.....	34		4	.14		.13
Miles City, Mont.....	33		0	.08		.06
Rapid City, S. Dak.....	34		5	.08		.07
Spokane, Wash.....	39			.36		
Wallawalla, Wash.....	45		10	.28		.18
Baker City, Oreg.....	37		9	.21		.07
Winnemucca, Nev.....	37			.14		
Idaho Falls, Idaho.....	31		7	.28		.28
Salt Lake City, Utah.....	41		8	.28		.28
Lander, Wyo.....	27		1	.21		.04
Cheyenne, Wyo.....	34		16	.07	.94	
North Platte, Nebr.....	37		8	.07	.03	
Denver, Colo.....	38		11	.14	.18	
Pueblo, Colo.....	37		5	.07		.02
Dodge City, Kans.....	42		6	.11	.15	
Oklahoma, Okla.....	50		8	.42		.34
Amarillo, Tex.....	46		10	.07		.04
Abilene, Tex.....	50		3	.33		.25
Santa Fe, N. Mex.....	37		2	.19		.18
El Paso, Tex.....	51		2	.14		.14
Phoenix, Ariz.....	58	2	2	.07		.07
Pacific Coast :						
Seattle, Wash.....	45		2	1.09		.86
Tacoma, Wash.....	44		4	1.47		1.19
Fort Canby, Wash.....	49		3	1.94		1.63
Portland, Oreg.....	47		6	1.28		1.06
Roseburg, Oreg.....	47			.78		
Eureka, Cal.....	50			.79		
Redbluff, Cal.....	56			.64		.64
Carson City, Nev.....	42		10	.33		.33
Sacramento, Cal.....	55		0	.43		.43
San Francisco, Cal.....	57		0	.55		.55
Fresno, Cal.....	57		5	.28		.28
San Luis Obispo, Cal.....	58		2	.42		.42
Los Angeles, Cal.....	60		1	.26		.26
San Diego, Cal.....	59			.11		
Yuma, Ariz.....	63			.07		

α The figures in these columns represent the average daily departure.

FOREIGN.

[Reports received from United States consuls through the Department of State and from other sources.]

Cholera, yellow fever, plague, and smallpox as reported to the Supervising Surgeon-General United States Marine-Hospital Service, January 1 to November 26, 1898.

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
China:				
Hongkong	Apr. 24-Apr. 30...	5	3	
India:				
Bombay	Nov. 24-Nov. 30.....		4	
	Dec. 1-Mar. 1.....		55	
	Mar. 2-Mar. 29.....		11	
	Mar. 30-May 24.....		16	
	June 1-June 7.....		1	
	June 20-June 28.....		2	
	July 5-July 12.....		3	
	July 19-July 26.....		4	
	July 26-Aug. 30.....		4	
	Sept. 13-Sept. 27.....		2	
	Oct. 3-Oct. 18.....		4	
Calcutta.....	Nov. 14-Dec. 4.....		42	
	Dec. 5-Jan. 1.....		31	
	Jan. 2-Jan. 29.....		28	
	Jan. 30-Feb. 26.....		82	
	Feb. 27-Mar. 26.....		95	
	Mar. 27-June 11.....		271	
	June 25-July 16.....		17	
	July 16-July 30.....		8	
	July 31-Aug. 20.....		10	
	Aug. 27-Sept. 3.....		4	
	Sept. 4-Sept. 24.....		9	
	Oct. 1-Oct. 8.....		2	
Madras.....	Nov. 30-Dec. 10.....		8	
	Dec. 4-Dec. 31.....		11	
	Jan. 1-Jan. 28.....		45	
	Jan. 29-June 10.....		48	
	May 28-June 3.....		1	
	July 9-July 22.....		43	
	July 22-July 29.....		36	
	July 30-Aug. 5.....		38	
	Aug. 6-Aug. 12.....		71	Cholera reported epidemic.
	Sept. 4-Sept. 30.....		169	
	Oct. 1-Oct. 14.....		28	
Singapore.....	Nov. 1-Nov. 30.....		1	
	Dec. 1-Dec. 31.....		1	
	Mar. 1-Mar. 31.....		1	
Japan:				
Awomori Ken.....	Aug. 17-Sept. 11.....	1		
Fukuoka Ken.....	June 27-July 27.....	1		
Fukushima Ken.....	Aug. 17-Sept. 11.....	3	2	
Higo.....	May 19-June 5.....	1	1	
Ishikawa Ken.....	June 27-July 27.....	3	2	
Kanagawa Ken.....	Mar. 24-June 26.....	15	7	
	Aug. 17-Sept. 29.....	6	3	
Okayama.....	Apr. 29-May 19.....	1		
Osaka and Higo.....	Mar. 26-June 11.....	4	2	
	May 21-May 28.....	1		
	July 16-Sept. 3.....	7	4	
Tokyo Fu.....	Apr. 11-June 15.....	14	4	
	July 28-Sept. 29.....	29	20	
Yamagata Ken.....	June 27-July 27.....	1		
Yokohama.....	Apr. 15-Apr. 29.....		1	
Straits Settlements:				
Singapore.....	June 1-June 30.....		1	

YELLOW FEVER.

Brazil:				
Araguara.....	Mar. 1-Mar. 31...	4	3	
	Apr. 1-May 31...	125	57	
Bahia.....	Dec. 27.....	3	2	
	Dec. 29.....	6		Taken off of Nor. bk. Adonis.
	May 2-June 7...	6	3	
	Aug. 12-Aug. 25...	5		
Ceara.....	Nov. 1-Nov. 30...		1	

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

YELLOW FEVER—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Brasil—Continued.				
Descalvado.....	May 1-May 31.....	2	1	
Jaboticabal.....	Mar. 1-Mar. 31.....	35	16	
Para.....	Dec. 12-Jan. 1.....		24	
	Jan. 2-Jan. 15.....		22	
	Jan. 16-Feb. 28.....		30	
	June 1-June 23.....	5	1	
	Sept. 20-Oct. 3.....		2	
Eibeirao Bonito.....	Feb. 1-Mar. 31.....	99	22	
	Apr. 1-Apr. 30.....	6	3	
Rio Clara.....	Mar. 1-Mar. 31.....	9	4	
	Apr. 1-May 31.....	69	33	
Rio de Janeiro.....	Nov. 21-Dec. 4.....	1		
	Dec. 5-Jan. 1.....	8	3	
	Jan. 1-Jan. 29.....	22	17	
	Jan. 30-July 29.....		990	
	July 30-Sept. 2.....	59	39	
	Sept. 3-Sept. 30.....	24	14	
	Oct. 1-Oct. 14.....	13	9	Yellow fever reported.
Sao Carlos de Pinhal.....	Feb. 29-Mar. 31.....	223	53	
	Apr. 1-May 31.....	262	90	Yellow fever reported epidemic.
	May 24.....			
Santos.....	Jan. 2-Jan. 8.....	1	1	
	Jan. 23-Jan. 29.....	3		
	Jan. 30-Feb. 28.....	21	3	
	Mar. 1-Mar. 31.....	32	13	In isolation hospital.
	Apr. 1-Apr. 30.....	103	52	84 deaths in isolation hospital.
	May 3-May 24.....	159	97	
	June 4-June 18.....	72	43	
Sao Paulo.....	Feb. 1-Mar. 31.....	4	3	
Taboticabal.....	Apr. 1-Apr. 30.....	106	42	
Tahir.....	May 1-May 31.....	3	1	
Victoria.....	Apr. 29-May 13.....	3	2	
Colombia:				
Barranquilla.....	Oct. 16-Oct. 22.....	2	2	
Cartagena.....	June 1-June 30.....		1	
	July 1-July 30.....	5	4	
	Sept. 1-Sept. 30.....	1	1	
Colon.....	June 6-June 22.....			Sporadic cases of yellow fever occur from time to time.
Costa Rica:				
Limon.....	June 14-Aug. 19.....		3	
	Aug. 16-Aug. 24.....		2	
	Aug. 25-Sept. 10.....		2	
Cuba:				
Cienfuegos.....	Dec. 20-Jan. 2.....		2	No reports received since hostilities with Spain began.
	Jan. 3-Jan. 23.....		1	
Gibara.....	Sept. 1-Sept. 15.....	4	0	
Habana.....	Dec. 17-Dec. 30.....		6	
	Jan. 1-Nov. 17.....		125	
Manzanillo.....	Dec. 1-Dec. 31.....		28	Do.
	Jan. 1-Jan. 31.....		9	
	Feb. 14-Feb. 28.....		5	
Matanzas.....	Dec. 15-Jan. 19.....		4	Do.
	Feb. 9-Feb. 23.....		2	
Regla.....	Dec. 31-Feb. 28.....		7	Do.
	Mar. 1-Mar. 24.....		2	
Sagua la Grande.....	Dec. 18-Jan. 20.....			A few cases of yellow fever, but impossible to obtain statistics. No reports received since hostilities with Spain began.
Santiago de Cuba.....	Dec. 19-Jan. 29.....		6	
	July 20-Aug. 2.....			Yellow fever reported.
	Aug. 18.....	1		
Siboney.....	July 10.....	14		
Jamaica:				
Kingston.....	Dec. 19-Jan. 1.....	1	1	
	Jan. 2-Jan. 31.....	2	2	
	Feb. 5-Feb. 19.....	2	1	
	Aug. 10.....		1	From steamer Darien.
St. Andrew.....	Dec. 19-Jan. 1.....	1		
	Feb. 27-Mar. 5.....	1	1	
St. Catherine.....	Dec. 19-Jan. 1.....	1		
St. Elizabeth.....	Dec. 19-Jan. 1.....	1	1	
Mexico:				
Jimenez.....	Sept. 23.....			Yellow fever reported.
Monterey.....	Aug. 2.....			Do.
	Oct. 25.....	40		Do.
	Nov. 1.....	0	4	
	Nov. 2.....	11	8	

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

YELLOW FEVER—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Mexico—Continued.				
Monterey.....	Nov. 5.....	1	5	
	Nov. 6.....	0	3	
	Nov. 7.....		0	
	Nov. 8.....		2	
Tampico.....	July 17-July 24...	15	7	
	July 24-July 31.....		9	
	Aug. 1-Sept. 4.....		122	Reported epidemic August 6.
	Sept. 5-Oct. 2.....		61	
Vera Cruz.....	Oct. 3-Oct. 23.....		21	
	July 9.....			1 case reported.
	Aug. 14-Sept. 15.....		23	
	Sept. 22-Oct. 6.....		16	
	Oct. 20-Nov. 8.....		24	
Santo Domingo:				
Santo Domingo.....	May 7-May 14...	1	1	
San Salvador.....	June 4.....	34	8	Yellow fever reported.
	July 2.....	5	2	
	July 10-Aug. 7.....	33	6	
West Indies:				
Curacao.....	June 4.....	10	1	On H. M. S. Atkmaar. Patients taken to quarantine hospital.
Yucatan:				
Merida.....	July 8.....			Yellow fever reported.

PLAGUE.

Arabia:				
Aden.....	July 28.....	1	1	Patient removed from steamship Carthage from Bombay.
Djiddah.....	Mar. 22-Apr. 16...		34	
Nuslah.....	Mar. 1-Mar. 25...	1		
China:				
Amoy.....	June 11.....			Plague reported. June 14, 20 deaths a day. Under date of June 14, the United States consul reports that in Amoy and three adjacent cities the deaths amount to "not less than 100 daily."
Canton.....	Mar. 22-Apr. 5...	10		
Hongkong.....	Nov. 7-Nov. 20.....	2	2	
	Dec. 18-Jan. 1.....	2	2	
	Jan. 2-Jan. 29.....	6	5	
	Jan. 30-Feb. 26.....	64	56	
	Feb. 27-Apr. 30.....	596	529	
	Apr. 30-May 28.....	518	443	
	June 1-June 14.....	131	91	
	June 4-June 25.....		134	
	June 26-July 16.....		17	
	Aug. 7-Aug. 13.....	1		
	Aug. 27-Sept. 3.....	1	1	
	Sept. 27-Oct. 1.....	1	1	
	Swatow.....	Mar. 25.....			Do.
Macao.....	Apr. 9.....			Do.
Shanghai.....	Apr. 23.....			On ss. Glenturret, in quarantine.
Egypt:				
Suez.....	May 5.....			1 case plague on ss. Mahale.
India:				
Bombay.....	Nov. 24-Nov. 30.....		70	
	Dec. 1-Feb. 8.....		4,833	
	Feb. 9-Mar. 1.....		3,436	
	Mar. 2-Mar. 29.....		4,579	
	Mar. 30-May 17.....		2,731	
	June 1-June 23.....		94	
	July 5-July 26.....		122	
	July 27-Aug. 30.....		467	
	Sept. 14-Sept. 27.....		276	
	Oct. 3-Oct. 18.....		390	
	Apr. 25-May 4.....	25	12	Plague reported. "Sporadic." May 28.
June 25-July 30.....		48		
July 31-Sept. 3.....		27		
Sept. 4-Sept. 24.....		10		
Japan:				
Hiogo.....	May 19-June 5.....	1	1	In quarantine on steamship Peru
Osaka and Hiogo.....	May 21-May 28.....	1	1	

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

PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Japan—Continued.				
Taiwan, Formosa.....	Dec. 28-Apr. 28...	505	84	
Formosa Ports (Taipeh-Tainan, and Taiwan.)	Apr. 29-June 15...	2, 338	1, 483	
Yokohama.....	Mar. 1-Apr. 11...	2	1	
Nagasaki.....	June 6-June 15...	1	1	In quarantine steamship Hikozan Maru.
Karachi.....	Apr. 6-Apr. 12...	51	31	
Russia:				
St. Petersburg.....	Mar. 26-Apr. 2.....		1	
	Aug. 18.....		1	

SMALLPOX.

Africa:				Smallpox reported.
Cape Colony.....	Sept. 3.....			
Lorenzo Morquez.....	Jan. 1-Jan. 31.....		3	
Natal:				Do.
Pretria.....	Sept. 3.....			Do.
Australia:				
Sydney.....	June 1-June 30...	1		
Belgium:				
Antwerp.....				
	May 1-May 7...	2		
	June 4-June 11...	3	2	
	July 31-Aug. 6...	1	2	
	Aug. 13-Aug. 20...	2	1	
	Oct. 1-Oct. 29...	11	6	
Brussels.....				
	June 4-June 11...		1	
Ghent.....				
	May 7-May 14...		1	
	July 9-July 30...		4	
	Sept. 10-Sept. 17...		1	
Liege.....				
	July 23-July 30...		1	
	Aug. 13.....		1	
Bohemia:				
Prague.....				
	Dec. 12-Jan. 1...	11		
	Jan. 2-May 14...	151		
	June 11-June 18...	5		
Brazil:				
Bahia.....				
	June 11-June 25...	17		
	Aug. 23-Oct. 1...	141	20	
	Oct. 2-Oct. 22...	64	5	
Ceara.....				
	Mar. 1-Mar. 31...		10	
Montevideo.....				
	May 14-May 21...	1		
Pernambuco.....				
	Dec. 1-Dec. 25...		8	
Rio de Janeiro.....				
	Apr. 15-Apr. 23...			
	Nov. 21-Dec. 4...	10		
	Dec. 5-Jan. 1...	9	1	
	Jan. 1-Apr. 8...	2	1	
	July 1-July 29...	11		
	Aug. 26-Sept. 30...	46	9	
	Oct. 1-Oct. 14...	26	13	
Sao Paulo.....				
	Feb. 1-July 29...	40	13	
Sorocaba.....				
	Dec. 16-Jan. 30...	32	10	
British Columbia:				
Vancouver.....				
	June 14.....	9		
Victoria.....				
	May 9.....	1		
Canada:				
Halifax.....				
	May 14-May 28...	6		
Maisonneuve.....				
	Jan. 26-Feb. 16...	3		
Montreal.....				
	Jan. 3-Jan. 12...	3	0	
	Feb. 11-Feb. 16...	1		
China:				
Hongkong.....				
	Nov. 7-Dec. 4...	6	4	
	Dec. 5-Jan. 1...	11	8	
	Jan. 2-Apr. 30...	194	113	
	May 1-May 14...		4	
	May 28-June 18...	3	2	
Cuba:				
Cardenas.....				
	Dec. 19-Jan. 22...		5	
	Mar. 6-Mar. 27...		8	
Olenfuegos.....				
	Dec. 20-Jan. 2...		7	
	Jan. 3-Jan. 23...		19	
	Feb. 7-Feb. 27...		35	
	Feb. 28-Apr. 3...		9	
Habana.....				
	Dec. 17-Apr. 7...		154	
Gibara.....				
	Sept. 1-Sept. 15...	65	10	

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

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Cuba—Continued.				
Matanzas.....	Jan. 20-Feb. 23...	.....	8	
Regia.....	Feb. 18-Apr. 7...	.....	3	
Sagua la Grande.....	Dec. 19-Jan. 29...	233	29	
	Jan. 30-Feb. 26...	470	35	
	Feb. 27-Apr. 4...	437	26	
England:				
Bristol.....	Feb. 6-Feb. 19...	1	1	
	July 16-July 23...	1	1	
Leeds.....	Mar. 19-Apr. 9...	6	4	
Liverpool.....	Jan. 15-Jan. 29...	3	3	
	Feb. 1-Apr. 2...	6	6	
London.....	Feb. 27-Mar. 26...	4	1	
	June 4-June 25...	1	1	
	Aug. 21-Sept. 17...	9	9	
	Oct. 8-Oct. 15...	.....	1	
Middlesborough.....	Feb. 9.....	90	.....
Newcastle on Tyne.....	Mar. 19-June 18...	13	2	
	June 25-July 2...	.....	1	
Southampton.....	Jan. 8-Feb. 12...	2	.....
	June 18-June 25...	2	3	Removed from vessels.
	Sept. 10-Sept. 17...	5	.....	Do.
South Shields.....	May 7-May 14...	1	.....
Sunderland.....	Dec. 18-Jan. 8...	1	.....
	Feb. 27-Mar. 26...	4	.....
	June 11-June 18...	1	.....
West Hartlepool.....	Jan. 9-Jan. 22...	5	.....
France:				
Marseilles.....	May 1-May 31...	1	1	
Nantes.....	July 1-July 31...	.....	1	
Paris.....	July 2-July 9...	.....	1	
	July 31-Aug. 6...	.....	1	
Germany:				
Bremen.....	Apr. 23-May 14...	2	.....
Hamburg.....	Mar. 6-Mar. 12...	2	.....
	July 16-July 23...	1	.....
Gibraltar.....	Dec. 6-Dec. 12...	1	.....
	Dec. 27-Apr. 3...	6	.....
	Sept. 12-Sept. 25...	2	.....
Honduras:				
Tegucigalpa.....	July 9-July 23...	2	.....
India:				
Bombay.....	Feb. 9-May 24...	.....	32	
	June 20-June 28...	.....	3	
	July 5-July 12...	.....	1	
	Aug. 2-Aug. 30...	.....	3	
	Oct. 3-Oct. 11...	.....	1	
Calcutta.....	Dec. 19-Dec. 25...	.....	1	
	Jan. 30-May 28...	.....	56	
	June 4-June 11...	.....	2	
	June 25-July 16...	.....	5	
	Aug. 21-Sept. 3...	.....	1	
	Sept. 4-Sept. 17...	.....	2	
Madras.....	Nov. 27-Dec. 3...	.....	1	
	Dec. 4-Dec. 31...	.....	3	
	Jan. 1-Jan. 28...	.....	6	
	Jan. 29-Feb. 4...	.....	6	
	Feb. 5-Apr. 22...	.....	66	
	Apr. 30-May 20...	.....	12	
	May 20-May 27...	.....	2	
	July 22-July 29...	.....	1	
	Aug. 6-Sept. 2...	.....	4	
	Sept. 3-Sept. 23...	.....	3	
Singapore.....	Mar. 1-Mar. 31...	.....	1	
	Aug. 1-Aug. 31...	.....	1	
	Sept. 1-Sept. 30...	.....	1	
Italy:				
Messina.....	Dec. 12-Jan. 8...	.....	5	
	Jan. 30-May 21...	.....	5	
Japan:				
Aichi Ken.....	Dec. 28-June 5...	9	1	
	June 27-July 27...	4	.....
	Sept. 20-Sept. 29...	1	.....
Akita Ken.....	Dec. 28-June 5...	18	4	
	June 27-July 27...	4	2	
	Aug. 17-Sept. 11...	53	16	
Awomori Ken.....	Dec. 28-Aug. 16...	244	39	
	Aug. 17-Sept. 29...	64	21	
	Sept. 30-Oct. 20...	29	5	

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

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Japan—Continued.				
Chiba Ken	Dec. 28-Apr. 10...	9	.....
	June 27-July 27...	1	.....
Formosa.....	Feb. 4-Mar. 3...	7	4	
Fukui Ken.....	Dec. 28-Feb. 3...	1	.....
Fukuoka Ken.....	Mar. 24-June 5...	6	.....
Fukushima Ken.....	Dec. 28-Aug. 16...	151	39	
Gifu Ken.....	Feb. 4-Feb. 22...	1	.....
Gumma Ken.....	Feb. 4-Feb. 22...	1	.....
Hiogo.....	Apr. 29-June 5...	3	.....
	June 27-July 27...	6	1	
Hiroshima Ken.....	Jan. 22-Feb. 3...	1	.....
Ishikawa Ken.....	Apr. 29-May 19...	2	.....
	Sept. 12-Sept. 19...	1	.....
Iwate Ken.....	Dec. 28-June 5...	47	10	
	June 27-July 27...	4	2	
	Sept. 30-Oct. 20...	1	.....
Kagoshima Ken.....	Feb. 4-Feb. 22...	1	.....
Kanagawa Ken.....	Dec. 28-Jan. 21...	3	.....
	June 27-July 27...	1	.....
Kioto Fu.....	Apr. 29-May 19...	1	.....
Kochi Ken.....	Dec. 28-Jan. 21...	1	.....
Miyagi Ken.....	Dec. 17-July 27...	107	27	
Miyazaki Ken.....	Jan. 22-Feb. 3...	3	1	
	Apr. 29-June 5...	96	7	
	June 16-June 26...	1	.....
Nagano Ken.....	Feb. 4-Mar. 23...	9	5	
	Apr. 29-May 19...	1	.....
Nagasaki Ken.....	Jan. 22-Mar. 23...	4	1	
	Apr. 29-May 19...	1	.....
Nara.....	Apr. 29-May 19...	1	.....
Niigata Ken.....	Mar. 4-Mar. 23...	4	1	
	June 16-June 26...	1	.....
Oita Ken.....	July 28-Aug. 16...	1	.....
Okayama Ken.....	Feb. 4-Apr. 10...	3	1	
	June 16-June 26...	1	.....
Osaka Fu.....	Dec. 28-June 5...	4	.....
	June 27-July 27...	1	.....
Oyama Ken.....	Mar. 4-Mar. 23...	1	.....
Saitama Ken.....	Dec. 17-Dec. 27...	1	.....
Shizuoka Ken.....	Apr. 29-May 19...	2	1	
Shiga Ken.....	May 19-June 26...	3	.....
Tochigo Ken.....	Mar. 24-Apr. 10...	1	.....
Tokyo Fu.....	Dec. 28-Mar. 23...	6	.....
	June 16-July 27...	9	.....
	Sept. 20-Sept. 29...	1	.....
	Sept. 30-Oct. 20...	1	.....
Tokushima Ken.....	Apr. 29-June 5...	3	.....
Tottori.....	June 6-June 15...	1	.....
Yamagata Ken.....	Jan. 22-Aug. 16...	48	9	
	June 27-July 27...	4	1	
	Aug. 17-Sept. 29...	8	.....
Yamaguchi Ken.....	Feb. 4-Apr. 28...	10	1	
Yamanashi Ken.....	Mar. 24-Apr. 28...	5	1	
	June 27-July 27...	4	.....
Yehime Ken.....	Dec. 17-Apr. 10...	59	13	
	Apr. 29-June 26...	12	.....
The Hokkaido.....	Dec. 17-June 15...	510	142	
	July 28-Sept. 29...	4	2	
Mexico:				
Nogales.....	May 13.....	4	.....
Norway:				
Christiania.....	Mar. 20-May 21...	19	2	
	July 2-July 23...	9	1	
	July 31-Aug. 13...	4	.....
	Aug. 13-Aug. 20...	1	1	
	Aug. 20-Aug. 27...	1	.....
	June 4-June 11...	3	.....	At quarantine hospital.
Nova Scotia:				
Halifax.....				
Netherlands:				
Amsterdam.....	Dec. 12-Dec. 24...	1	.....
Rotterdam.....	Dec. 12-Dec. 31...	3	1	
	Jan. 1-Jan. 29...	1	.....
Russia:				
Moscow.....	Nov. 29-Dec. 4...	1	1	
	Dec. 5-Dec. 11...	1	1	
	Jan. 1-May 14...	63	17	
	May 21-May 28...	4	2	
	June 4-July 9...	30	11	
	July 23-July 30...	2	2	
	Aug. 27-Sept. 24...	40	3	

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

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Russia—Continued.				
Moscow	Oct. 3-Oct. 29...	37	15	
Odeesa.....	Dec. 5-Jan. 1...	53	9	
	Jan. 2-Jan. 29...	34	7	
	Jan. 30-July 3.....		21	
	July 23-Aug. 6...	7	2	
	Aug. 13-Oct. 22...	26	4	
St. Petersburg.....	Dec. 4-Dec. 25...	35	13	
	Jan. 9-Jan. 29...	56	19	
	Jan. 30-July 30.....		80	
	Aug. 6-Aug. 27...	3		
	Aug. 28-Sept. 3...	6	2	
	Sept. 4-Sept. 24...	8	5	
	Oct. 8-Oct. 29...	6	2	
Warsaw.....	Dec. 19-May 28...		136	
	June 4-June 18.....		15	
	June 25-July 23...		22	
	Aug. 1-Aug. 8.....		6	
	Aug. 13-Aug. 20...		3	
	Sept. 3-Oct. 15.....		36	
Scotland :				
Edinburgh.....	Apr. 16-Apr. 30...	2		
Glasgow.....	Dec. 5-Dec. 25...	3	1	
Leith.....	Apr. 3-Apr. 30...	2	1	
Spain :				
Corunna	Jan. 1-Feb. 5.....		2	
Madrid.....	Dec. 22-Dec. 28...		1	
	Feb. 8-Apr. 6.....		3	
Straits Settlements:				
Singapore.....	June 1-June 30.....		3	
Turkey :				
Constantinople.....	Jan. 10-Feb. 6.....		53	
	Feb. 28-May 8.....		94	
	Sept. 5-Sept. 25...		17	
	Sept. 26-Oct. 17...		21	
Uruguay :				
Montevideo.....	Dec. 25-Mar. 19...	5		
	May 1-May 7.....		1	
	June 19-June 26...	1		
	July 9-July 16.....		2	
	July 30-Aug. 6.....		1	
	Sept. 1-Sept. 13...		1	
	Oct. 8-Oct. 15.....		2	
Venezuela :				
Caracas.....	June 7-July 25.....			More than 150 cases in the city.
Puerto Cabello.....	Apr. 2-Apr. 11...	23	6	Smallpox increasing, June 7, 1898.
Valencia.....	Apr. 2-Apr. 11...	54		July 23, about 1,000 cases.
Wales :				
Cardiff.....	To Aug. 21.....	2,000	600	
	Dec. 13-Dec. 24...	1		

Current quarantine measures.

[Translated in this Bureau from the "Veröffentlichungen des Kaiserlichen Gesundheitsamtes," Berlin, September 25, 1898.]

AUSTRIA.—The Government has, through the minister of foreign affairs, informed the contracting powers to the Venetian convention of 1897, of the outbreak of sporadic cases of plague in the Vienna public hospital, and of the measures taken to prevent its spread. Four persons who are not ill are under medical observation.

RUSSIA.—In consequence of the epidemic outbreak of plague at Anzob, in Samarcand, the Russian Government has ordered measures to be taken for the suppression of the disease and investigation into its nature. The routes to Anzob are under observation; the clothing of the dead plague patients is burned; the sick are isolated, houses are

disinfected, and strict precautions are taken in the handling of the sick and the burial of the dead. The well persons are allowed to remain in the village and clothing and bedding is given them. Anzob is surrounded with a cordon and the medical personnel has been strengthened.

PORTUGAL.—By order of the minister of the interior, October 24, the regulations of April 14, 1897, to prevent introduction of plague, are put in force against arrivals from Austria-Hungary.

EGYPT.—The international board of health resolved on October 4 to suspend measures against arrivals from Bombay. The same body also declared the pilgrimage closed, and suspended measures against the Hedjaz.

YELLOW FEVER.

DANISH ANTILLES.—According to advices of October 19, quarantine against Santos is suspended, and medical inspection instituted in its place. Five days quarantine is ordered for vessels from Vera Cruz and Tampico.

AUSTRIA.

Cases of plague in Vienna.

VIENNA, *November 2, 1898.*

SIR: I have the honor to acknowledge the receipt of the following telegram, which arrived last night:

American Consul-General, Vienna: Do you think emigrants coming from or through Vienna liable to convey infection plague? Wire immediately.—LEONHARD, *Acting Consul-General.*

I at once replied by cable:

Infection to emigrants improbable. Six cases; all hospital attendants; three deaths.—HURST.

The bubonic plague was contracted a few days ago by the servant, presumably through his own carelessness, in the pathological laboratory of the general hospital of this city, where cultures of the bacilli, brought from India, were made. Later, a doctor and 4 nurses who had been in contact with the servant were infected. Of these 6 cases, 3 resulted fatally. The patients are rigorously isolated, and it is altogether unlikely that the disease will spread. No danger is to be apprehended, at present, on account of emigrants coming from or passing through Vienna.

I shall watch the matter closely and report to the Department promptly any unfavorable developments.

I have the honor to be, sir, your obedient servant,
CARL BAILEY HURST,

United States Consul-General.

HON. ASSISTANT SECRETARY OF STATE.

Plague in Vienna—(Continued).

[No. 2714.]

IMPERIAL AND ROYAL AUSTRO-HUNGARIAN LEGATION,
Washington, D. C., November 5, 1898.

Mr. SECRETARY: Several cases of plague occurred at Vienna in the middle of last month, owing to the careless self-infection of a person engaged in the service of the bacteriological institute.

The danger of an epidemic has, however, been removed by the sanitary measures which were promptly adopted.

The Government has notified the governments that took part in the International Sanitary Convention, concluded at Venice in 1897, of the occurrence of these isolated cases of plague, in accordance with the aforesaid sanitary convention, and I have been instructed to so notify the Federal Government. I request your kind mediation, Mr. Secretary of State, to this effect, and I inclose a copy of the two circulars issued by my Government.

I avail myself of this occasion to renew to you, Mr. Secretary of State, the assurance of my most distinguished consideration.

HENGELMULLER.

HON. SECRETARY OF STATE.

[Inclosure No. 1.]

Copy of a circular bearing date of October 24, 1898, which has been addressed to the foreign embassies and legations at Vienna.

The I. and R. ministry of foreign affairs has the honor to inform the embassy (legation) of ——— that the governments of the signatory States of the International Convention concluded at Venice in 1897, have been informed of the occurrence of several isolated cases of plague among the personnel of the general hospital at Vienna, and likewise of the measures which were immediately ordered by the I. and R. department of the interior with a view to preventing the spread of the malady. The embassy, (legation) of ——— is further informed that all details concerning the progress of the disease, and the subsequent measures to which the competent authorities may have recourse, will be published in the official bulletin of the newspaper called the "Wiener Abendpost." A copy of this paper will be regularly sent to the embassy (legation) of ——— by the I. and R. department of the interior.

[Inclosure No. 2.]

Copy of a telegram bearing date of October 22, 1898, to the I. and R. embassy and legation at Berlin, Paris, London, Constantinople, Madrid, St. Petersburg, Rome, (Quirinal), Lisbon, the Hague, Brussels, Copenhagen, Stockholm, Athens, Bucharest, Sophia, Belgrade, Berne, Cairo.

A servant named Bariah, who was employed in the Bacteriological Institute at Vienna, contracted pestilential pneumonia owing to careless self-infection, and died in consequence thereof on the 19th instant in the isolated ward of the hospital. There was no direct contact during the progress of the disease except with Doctor Miller, the attendant physician, and two female nurses named Pecha and Hohegger. All of them were removed at once to the newly erected isolation house of the remote Francis Joseph Hospital, where they were completely isolated. The nurse Pecha and Doctor Miller were there attacked by pestilential pneumonia. Nurse Hohegger has enjoyed perfect health. Of the persons who were in indirect communication, all of whom were isolated and under the surveillance of physicians, not one has fallen sick. From the outset the most careful sanitary measures of isolation and disinfection have been employed, and all the articles used by the sick persons, their excretions, feces, and effects have, without exception, been burned, and thus all danger of infection from the soil, pipes, etc., has been removed.

The sanitary condition of the entire population is to-day, eight days after the first case of the disease and four days after the first death, absolutely normal. You will report these facts without delay to the Government to which you are accredited, and will add that we will report anything else that may be of importance, in pursuance of the stipulations of the convention concluded at Venice. There is now no focus of disease and no danger of an epidemic.

BRAZIL.

Sanitary report from Rio—Beriberi on vessels.

RIO DE JANEIRO, October 11, 1898.

SIR: I have the honor to transmit to you the official report for the week ended September 30. There were 244 deaths from all causes, an increase of 19 as compared with the foregoing week; 8 deaths from *accessio pernicioso*, a decrease of 1; 4 deaths from yellow fever, an increase of 1; 17 cases of smallpox, an increase of 6; 3 deaths from smallpox, a decrease of 1; 1 death from typhoid fever, a decrease of 1; 2 deaths from whooping cough, an increase of 1; no deaths from beriberi, a decrease of 2, and 52 deaths from tuberculosis, an increase of 14.

* * * * * * *

Information.—Although the yellow fever is now making few victims, it still continues.

Meanwhile, smallpox begins to threaten the population. In former sanitary reports since the beginning of September I have stated pro week: 4 cases and 2 deaths, 8 cases and no deaths, 5 cases and 2 deaths, 11 cases and 3 deaths; however, recently the number of smallpox cases has greatly increased. The increase has suddenly become so considerable that the municipal authorities and the vaccination institute have published advertisements notifying the people of the danger and asking them to resort to vaccination and revaccination. Under such conditions on the 7th of October, I have asked special information. The result was, that, on that day there were in treatment 16 smallpox patients in the isolation hospital. Moreover, there are in the city, in the Rua Riachuelo, 6 cases, and in one suburb (Engenho novo) 10 cases, reported to the authorities. All these cases occurred in different precincts. Very recently there has occurred on the average 1 death daily. It is reasonable to suppose that, besides the cases reported, there are still others. Therefore, I have to state that we have here at this time the beginning of a smallpox epidemic. The character of the disease is benignant. I have not on that account considered myself yet authorized to send you a telegram, because that might have produced an exaggerated alarm. But I have given notice to the consul-general, Seeger, and we have resolved to keep a watchful eye to the continuation of the epidemic, against which the vaccination institute is strenuously struggling, and to recommend to the captains, who apply for bills of health at this office, the vaccination of their crew. Of course, until the obligation is not actually imposed, there is in general little hope that the captains will be actuated by their common sense, since they are not thoroughly conscious of their responsibility in such hygienic questions and consider more their private interests than the general welfare. Should the epidemic continue to spread there, I beg to give you telegraphic notice.

I have to notify you of another important event which relates to the beriberi in an infectious state. The Brazilian man-of-war, *Benjamin Constant*, was sent some time ago to the north of Brazil on a voyage of instruction. The number of officers and crew was about 250. In the harbor of Pará beriberi broke out. The man-of-war went from there to Pernambuco. During the voyage there died 10 men. In the harbor of Pernambuco there died 8 men and were sick 10 officers and 65 men of the crew. The ship was disinfected, the crew discharged, and the *Benjamin Constant* will come to the south of Brazil.

The same misfortune occurred to that man-of-war three years ago. Also on board of other men-of-war lying in the harbor of Pará, beriberi has made its appearance among the crews.

Since last report the following-named ships have been inspected and received bills of health from this office: October 4, steamship *Red Cross*, British, for Galveston. October 5, steamship *Elsie*, British, for Galveston. October 6, steamship *Galileo*, Belgian, for New York; steamship *Roman Prince*, British, for New York. October 7, steamship *Cupri*, German for New York; steamship *Mohican*, British, for Galveston; bark *Rowtenburn*, British, for San Francisco. October 8, bark *Serea*, Portuguese, for Brunswick; steamship *Menantic*, British, for Galveston.

Respectfully, yours,

W. HAVELBURG, M. D.,

United States Deputy Consul-General.

Sanitary report from Rio—Yellow fever discussed.

RIO DE JANEIRO, October 20, 1898.

SIR: I have the honor to transmit to you the official report for the week ended October 7. There were 231 deaths from all causes, a decrease of 13 as compared with the foregoing week; 7 deaths from *accessio pernicioso*, a decrease of 1; 5 deaths from yellow fever, an increase of 1; 7 deaths from smallpox, an increase of 4; no death from typhoid fever, a decrease of 1; no death from whooping cough, a decrease of 2; 3 deaths from beriberi, an increase of 3, and 61 deaths from tuberculosis, an increase of 9. * * *

The smallpox epidemic, which I have reported, has not increased. The number of deaths was only 6 during the last week. There occurred some new cases. On the 16th there were 18 cases undergoing treatment at the isolation hospital. In the city and suburbs there were 11 additional cases. It may be well to remark specially that there were 2 cases in the police brigade and 3 cases among the regular troops. The character of the disease has continued mild. Of the captains, to whom the vaccination of their crew was recommended, none consented to follow the advice. Only on board of steamers with physicians have the crew and passengers been vaccinated, as I have particularly recommended. * * *

Since last report the following named ships have been inspected and received bills of health of this office: October 13, steamship *Olbers*, Belgian, for New York. October 15, steamship *Deramore*, British, for St. Lucia; steamship *Montclair*, British, for New Orleans; steamship *Kelvin*, British, for Brunswick; barkentine *Good News*, American, for Baltimore. October 17, steamship *Concordia*, French, for New Orleans. October 18, steamship *Linda*, British, for New York. October 20, steamship *Coleridge*, British, for New York.

Dr. Freire's claims in the cause and cure of yellow fever.—The subject on which I now proceed to report constitutes a disagreeable duty, since what I have to say may be regarded in a personal light, and not simply as a scientific question. I refer to the question of yellow fever and the publications made since 1882 by the former professor of organic chemistry of the faculty, Dr. Domingos Freire. In all standard works on bacteriology Dr. Freire's publications are mentioned, and it can not be denied that they have not been favorably criticised. It is not my desire to report in full the various published opinions, nor to allude to occurrences that render the question disagreeable. Moreover, Sternberg, during his scientific researches at this place, had a very disagreeable controversy.

In former reports my predecessor has sometimes mentioned Freire's prophylactical vaccinations, which, it may be stated, have produced no apparent effect in the prevention of yellow fever.

During the last few years, in which the question of the etiology of yellow fever has again attracted more than usual attention, Professor Freire has once more applied to the Government for the appointment of a committee to ascertain the correctness of his assertions. In repeated communications the committee has reported very favorably on Professor Freire's ideas. The committee's last report, presented to the minister of the interior, certifies to the existence of the micrococcus xanthogenicus in the capillary vessels of the patients. By needle punctures, says the committee, the micrococcus has been found with great facility in the venous blood of the patients, and therefrom has been cultivated. Among special properties of the micrococcus it has been observed that it has two and more cilia. Inoculations of cultures of the micrococcus into animals produced pathological symptoms like those of yellow fever. Of 14 injected animals, 13 died with the following complex symptoms: Fever, injection of the conjunctivæ, photophobia, hemorrhages, bilious vomits, the characteristic vomits, anuria in some animals, albuminuria in others.

The results of the necropsies were, vascular injection, jaundice of the peritoneum, black coagula in the heart, hemorrhagical foci, fatty degeneration of the liver, deformation of the blood corpuscles.

From this alleged resemblance between the results of the experiments and yellow fever symptoms the committee arrives at the conclusion that Professor Freire's discovery has been demonstrated.

By fractional cultures there was produced a mild form of yellow fever. Animals subjected to this treatment were thus protected from the fatal influence of injection of very virulent cultures. Moreover, the committee has made injections of such fractional cultures in 10 persons also.

It appears from the statistics of Dr. Freire that he has made 13,000 vaccinations in the states of Rio de Janeiro, Minas, Geraeo, and Sao Paulo with .3-5 per cent mortality. Jumble, in Senegal, asserted that during the first three years of residence 75 per cent of strangers are taken ill and 66 per cent die. The committee, accordingly, accepts Dr. Freire's theory in regard to the worth of vaccinations.

No direct therapeutic experiments could be made, because no special infirmary was placed at the disposal of the committee; but from private experiments the committee considers itself authorized to regard as the best treatment of yellow fever that with salicylic acid and its combinations recommended by Freire.

If the committee, which has promulgated these opinions, is right, then the yellow fever problem has been almost completely solved. Then its etiology, prophylactics, and therapeutics have been put on an almost certain basis. Unfortunately all the practicing physicians here with whom I have spoken, and also myself, do not share that conviction.

Besides I may remark, in perfect accord with my colleagues of this place, that the members of the committee who have passed an opinion so important and so essential in its consequences, able as they may be in their special spheres of action, have never made special studies of bacteriology, as is well known, and therefore they should not feel aggrieved if their opinion should not be regarded as authoritative.

The discovery of Freire's micrococcus xanthogenicus and its peculiar culture has not been accomplished, either formerly or at present, by anyone else. It is not necessary for me to repeat this again, as it is a

fact well known and has been repeatedly published. It is possible that the alleged micrococcus is confounded with *m. pyogenes aureus*. To the scientific world Professor Freire has not revealed the demonstration of his micrococcus *xanthogenicus*. Before some scientific societies of Europe Professor Freire has made theoretic lectures, but he has not submitted the proofs of his assertions. He presented some years ago to the International Congress of Hygiene at Pesth an elaboration, which treated of the prophylactic vaccinations. As there was no opposition at that meeting, Professor Freire published and advertised his yellow-fever vaccinations as having been approved by that congress.

Living in the same city as Professor Friere some years ago, and also during the last year, I have made him a visit and requested him to show me his micrococcus *xanthogenicus*. But this request was met with a negative.

This report is far from being agreeable to me. Here, however, principally among the public, much is said about Freire, his vaccinations, etc. It might be considered as failing in my duty if I should allow to pass in silence these facts, which are, however, rather social than scientific. But unfortunately there has resulted from Professor Friere's interference nothing that can advance to any extent the knowledge of yellow fever.

Therefore, if in this question there should not appear some new important phase, I will not again touch upon such a disagreeable question.

Sanarelli's serum in yellow fever.—Some months ago I related some facts in regard to the serum treatment of yellow fever by Sanarelli. Dr. Vitol Brazil of the bacteriological laboratory of Sao Paulo, states, that he has seen some of the patients who were treated by Sanarelli with great quantities of serum immediately after the beginning of the sickness, and who died without any alterations in the fatal symptoms. Up to the present, nothing authorizes us to say that the treatment by means of serum will prove successful. Impressed by what he has seen at Sao Carlos de Pinhal, the above-mentioned Brazilian author resolved to ascertain by experiments the effect produced by the serum on the bacillus. The serum used in these experiments was prepared by Sanarelli and placed at the disposal of the laboratory.

The yellow fever serum (serum antiamaril) added to a culture of yellow fever germ, even in a proportion of four parts to one part of culture liquid, does not prevent the development of the bacillus *icteroides*; what would be the results if the serum were really bactericidal? The addition of yellow fever serum, even in an insignificant quantity, one drop to 10 cubic centimeters of culture liquid to a fluid culture of the bacillus causes the bacillus *icteroides* to become agglutinated on the side of the tubes. Dr. Brazil had two qualities of serum of Sanarelli derived from the immunisation of two horses (A, E) and of one ox (F). The serum A represents an-improper medium for the development of the bacillus *icteroides*, because that germ does not proliferate when inoculated in pure serum.

The bacillus *icteroides* in direct contact for a long time with serum A, does not suffer loss in regard to its vitality, for transplanted within another medium it develops abundantly.

The bacillus *icteroide* is developed abundantly in the serum F. The cultures developed in a medium, containing a large proportion of very active serum antiamaril (A and E), or those developed in pure serum F, continue virulent, killing in four or five days the rabbits which have been inoculated with them.

Applied as a prophylactic the serum antiamaril does not prevent, at least experimentally, the development of the disease.

The serum antiamaril displays no bactericidal force, neither *in vitro* nor when applied to the treatment of animals inoculated with the bacillus icteroides, for nearly all the animals that were treated with the serum antiamaril died, and in all of them the bacillus icteroides was successfully isolated.

Criticism of serum Sanarelli.—On that question I beg to make some remarks. It is certainly very interesting to study the relations and the influence existing between a bacillus and the serum derived from the immunisation of an animal with the same bacillus. In this regard it is really surprising that those experiments have not shown a closer degree of relationship between the bacillus icteroides and the serum prepared by its means by Sanarelli.

But it is not the question. The principal question is the relation between the bacillus icteroides and the serum of blood of yellow fever patients.

If yellow fever is a sickness, in whose course we observe the effects of toxic substances and then the formation of antitoxic substances, as is observed in diphtheria and typhoid fever, then we have a right to hope that the bacillus icteroides, if it is the cause of the sickness, will be influenced by serum, prepared from blood of yellow fever patients or reconvalescents.

From 5 fatal cases of yellow fever I have obtained at periods varying from two days to one hour before death occurred a small quantity of blood, from which I have prepared serum. I have proceeded likewise in obtaining the blood in 10 cases of reconvalescents, who had undoubtedly been attacked by yellow fever, one, two and three weeks after the disappearance of the acute symptoms.

Of that serum I have mixed some drops in different proportions with fresh bouillon culture of bacillus icteroides in the manner employed in the bacteriological diagnosis of typhoid fever.

I have prepared inoculations of the bacillus icteroides in pendant drops of that serum, and have observed the preparations at medium temperature and at 37° in the culture stove.

I have observed neither the symptom of an agglutination of the bacillus, nor a disturbing influence on the development of the bacillus icteroides.

Therefore, I can express the opinion that either the bacillus icteroides is not the real cause of yellow fever, or the bacteriological rule for the formation of toxic and antitoxic substances and their special reactions on the respective bacillus does not always hold good under the conditions now scientifically recognized.

Results of studies of Sanarelli's bacillus in the State bacteriological laboratory.—Another memorandum, which treated of the yellow fever question, was presented to the Brazilian minister of the interior. This related to the experiments made in the bacteriological laboratory of the State by Dr. Alfonso Ramos, with the intention of investigating Sanarelli's discovery.

Sanarelli describes his bacillus and its cultures so, that it seems, it has such special qualities, that it will be easily possible to distinguish it from others.

I was astonished to observe that the bacillus sent me by Sanarelli has shown nothing of those particulars; neither do the colonies grow on agar in a special form, but only in round, punctiform colonies; nor could I obtain the form of a wax seal which Sanarelli considered as

characteristic. I have made some of my experiments in the bacteriological military laboratory of which Dr. Ismael da Rocha is the director. Moreover, the bacillus varies very much in its form.

All of this was also observed by Dr. Ramos and his collaborators. Dr. Ramos states that Sanarelli, on being questioned, admitted the great pleomorphism of his bacillus. Under such conditions Dr. Ramos tried to obtain the bacillus itself. It was never possible to find and to isolate the bacillus in the blood of patients. Shortly before death there were always found several kinds of microbes in the blood and liquids.

Of 38 necropsies that were made, very seldom was the bacillus *icteroides* successfully isolated. Unfortunately I had no suitable opportunity this year personally to make such experiments.

Dr. Sanarelli believes that the bacillus *icteroides* may be isolated only in 58 per cent of the cases, because its multiplication in the human body is not extensive and its virulence depends on the toxin, and, therefore, it is logical that, for the production of the disease, the influence of great quantities of bacillus is not required.

The cultures of the laboratory presented characters unlike those indicated by Sanarelli, but by comparing them with the cultures of Dr. Mendonca at Sao Paulo, and others, it was possible to demonstrate, by analogy, that they had in hand the bacillus *icteroides*.

My experiments have shown that the subcutaneous and abdominal injection in guinea pigs is always fatal in four to seven days, with symptoms of general infection. Injections, especially intravenous injections, have never produced the death of dogs. Sanarelli stated that he considered dogs the best animals for experimental yellow fever. I learned from private information that Sanarelli has limited this statement to dogs of superior races, and young animals. I have produced experimental infection, and the death of very young dogs and cats, but I have observed nothing that compels me to believe that the death in these experiments was caused by yellow fever. I have found general degeneration of the parenchyma of the organs, albuminuria, etc., but nothing of hemorrhages.

In the above-mentioned laboratory of the state, rabbits and dogs were subjected to the injections of cultures and toxin.

In regard to rabbits, says the director of the laboratory, the infection has an invariable type. The animal dies, when injected in the veins, two days afterwards, and four to five days after a subcutaneous injection. The symptoms which they present and the post mortem alterations are not sufficient to demonstrate the identity of the spontaneous and experimental infection.

The inoculations of dogs have been more numerous than those of rabbits; the total number was thirty.

According to the form in which the injection is made—that is, whether it is made subcutaneously or intravenously; whether the culture is injected pure or mixed with toxin, or the toxin is injected alone—the symptoms differ, notwithstanding the predominance of certain characteristic symptoms.

The subcutaneous injections do not produce positive signs of infection, perhaps because the intense local irritation promotes an efficient reaction of phagocytes, which wards off the danger.

The more or less rapid production of the different phases of the disease is a question of the size of the dose of the culture or toxin; in one instance the animal falls down, as if struck by a thunderbolt, and dies in a few hours, showing hyperthermia, vomiting, bloody diarrhea, arrhythmia of the heart, albuminuria, and finally anuria, accompanied or not

by convulsions; in other instances the symptoms develop slowly, and are for the most part the same as those observed in human yellow fever, including general jaundice.

The pathological anatomy was as follows: Inflammation of the mucous surface of the stomach with ecchymosis; the stomachical contents penetrated by numerous dark striæ, black vomit, hemorrhagic enteritis and cystitis, fatty degeneration of the liver, kidneys either white or lightly yellow, with hemorrhagic points; spleen almost always normal; color of the heart muscle like that of dry leaves; the right ventricle with dark coagulated blood; lungs normal.

Therefore the director of the laboratory concludes that in regard to the bacillus the etiological problem is solved by Sanarelli.

The experiments in regard to the serum were absolutely nugatory.

Cultures lose their virulence.—I may offer for consideration the following: Observations at different places have shown that the cultures of the bacillus icteroides do not retain or increase their virulence. On the contrary, they lose it. Sanarelli himself observed and acknowledged it. How is it possible, then, to immunise animals for the purpose of producing antitoxic serum, if it is not possible to obtain more toxic substances?

The acts of immunisation presume the possibility of disposing of very toxic substances, *i. e.* very virulent cultures. But in regard to the bacillus icteroides, it is a problem to be solved, since up to the present it is known that the cultures under the regular natural conditions of the laboratory lose their virulence.

Respectfully, yours,

W. HAVELBURG, M. D.,
Sanitary Inspector, U. S. M. H. S.

The SUPERVISING SURGEON-GENERAL,
U. S. Marine-Hospital Service.

CUBA.

Sanitary report from Habana.

HABANA, CUBA, *November 11, 1898,*

SIR: The following report for the week ended Thursday, November 10, is respectfully submitted:

Yellow fever.—There were no deaths from yellow fever recorded during the week, although 4 cases developed among the Americans.

All of these cases developed among persons connected with the United States Army, all of whom were living in the same hotel. One of these cases was treated by me for several days at the hotel until the medical officer of the United States Commission took charge of the case and removed the patient to a hospital.

It is a significant fact that the 4 patients were the only cases at this hotel, and that they performed their official work on the bottom floor of another building.

It is my opinion that they became infected in that building and not at the hotel where there are 25 or 30 nonimmunes. * * *

The mortality in yellow fever among Americans here is beyond the limit; of the cases known to me, 12 in number, there have been 7 deaths and 2 cases under treatment.

It is beyond a shadow of a doubt that if these patients had been under the care of experienced physicians, trained nurses, and in a well-equipped hospital the mortality would have been less.

Malarial fevers.—The deaths from these fevers have increased over

last week, as may be observed from the table which accompanies this report. I have not been able to observe clinically this fatal type of fever, all of the cases coming under my observation and treatment being of a mild nature and yielding to quinine.

Intestinal diseases.—The deaths from enteritis and dysentery are slightly decreasing, which always follows at the end of every rainy season.

There have been no deaths from smallpox and it would appear that there are no cases of the disease in the city. It is reported that there are cases among the insurgents encamped in different parts of the province of Habana.

The total mortality is again increasing but I expect that there will be a steady decrease in the death rate from all causes, it being evident that the rainy season is over.

The filthy conditions of the wharves spoken of in one of my reports have resulted in the protest of several masters of vessels when they were ordered to discharge their vessels at the wharves on the Regla side of the harbor. Both English and American masters have protested against this disposition of their respective vessels, and I have advised such a course when consulted. The wharves were covered with human excrement, and the stench from this material was unbearable.

The weather is clear and cool and the rainy season is past.

Very respectfully,

W. F. BRUNNER,

Sanitary Inspector, U. S. M. H. S.

The SUPERVISING SURGEON-GENERAL,

U. S. Marine-Hospital Service.

Mortality of the city of Habana for the week ended Thursday, November 10, 1898.

Cause of death.	Total.
Yellow fever.....	0
Enteric fever.....	28
Malarial fever.....	86
Pernicious fever.....	19
Smallpox.....	0
Enteritis.....	54
Dysentery.....	35
Tuberculosis.....	53
Pneumonia.....	4
Diphtheria.....	1
Starvation.....	2
Deaths from all causes.....	515
Deaths in military hospitals from yellow fever.....	0
Deaths in the city from yellow fever.....	0
Annual ratio per 1,000.....	133.90

Sanitary report from Habana.

HABANA, CUBA, *November 18, 1898.*

SIR: The following report for the week ended Thursday, November 17, is respectfully submitted:

Yellow fever.—There were 6 deaths from this disease, and there are approximately 50 cases, nearly all of them in the military hospitals. The disease will now continue to decrease unless there is a considerable increase in fresh material. No new cases have developed among Americans.

The deaths from enteric and the so-called pernicious fevers show a slight increase over the preceding week, while the deaths from malarial

fevers show a marked decrease. The deaths from intestinal diseases remain about the same.

The deaths from all causes are considerably less than for any week since my return, and within the next thirty days will, in my opinion, be reduced to the normal Habana rate. While the close quarantine season came to an end on November 15, I still continue to issue to passengers going to all ports in the United States certificates of good health. I also examine baggage of second-class passengers going to ports in Florida, labeling each piece of baggage "to be disinfected." This is done in accordance with the practice heretofore in vogue. The protests of masters of vessels discharging their cargo at the Regla wharves have been productive of much good; the deposits of fœcal matter have been removed and no fresh material is placed there. There has been but one slight rainfall during the week; the days are warm, but the nights are pleasant and cool.

Very respectfully,

W. F. BRUNNER,
Sanitary Inspector, U. S. M. H. S.

The SUPERVISING SURGEON-GENERAL,
U. S. Marine-Hospital Service.

Mortality of the city of Habana for the week ended Thursday, November 17, 1898.

Cause of death.	Total.
Yellow fever.....	6
Enteric fever.....	31
Malarial fever.....	63
Prnicious fever.....	29
Dysentery.....	26
Eteritis.....	66
Starvation.....	1
Pneumonia.....	7
Tuberculosis.....	47
Deaths from all causes.....	449
Deaths in military hospital from yellow fever.....	4
Deaths in private hospitals from yellow fever.....	1
Deaths in the city from yellow fever.....	1
Annual ratio per 1,000.....	116.72

HAWAII.

Enteric fever in the camps at Honolulu.

HONOLULU, HAWAII, *October 27, 1898.*

SIR: I have the honor to report the prevalence of enteric or typhoid fever at camps Otis and McKinley among the United States troops now stationed here. There are at present 50 cases in the United States military hospital at Honolulu. The source of the infection has not been determined. There are few cases in the city proper, apart from the military establishment, and the general health of the town is good.

Respectfully, yours,

D. A. CARMICHAEL,
Surgeon, U. S. M. H. S.

The SUPERVISING SURGEON-GENERAL,
U. S. Marine-Hospital Service.

Steamship Belgic arrives at Honolulu with suspicious cases.

HONOLULU, HAWAII, *November 2, 1898.*

SIR: I have the honor to report the arrival of the Occidental and Oriental Steamship Company's steamship *Belgic* at this station to-day

en route for San Francisco, Cal., from Hongkong, Shanghai, Nagasaki, Hiogo, and Yokohama. The vessel landed 1 case of smallpox at Yokohama, and disinfection of the steerage passengers' baggage, bathing of their persons, and vaccination were performed at the quarantine station at Yokohama.

On arrival here, thirteen days from Yokohama, there are 2 suspicious cases on board and the ship has been quarantined by the Hawaiian authorities. The vessel has 15 in the cabin for Honolulu and 36 for San Francisco; 7 in the European steerage for Honolulu, 11 for San Francisco, and in the Asiatic steerage she has 114 Chinese and 516 Japanese for Honolulu, and for San Francisco 292 Chinese, 43 Japanese, and 1 Korean. She has a crew of 122 and 1 stowaway. The vessel leaves for San Francisco this evening.

Respectfully, yours,

D. A. CARMICHAEL,
Surgeon, U. S. M. H. S.

The SUPERVISING SURGEON-GENERAL,
U. S. Marine-Hospital Service.

JAPAN.

Sanitary report from Yokohama.

YOKOHAMA, JAPAN, *October 21, 1898.*

SIR: I have the honor to forward, herewith, my regular report of infectious disease in Japan, for period, September 30 to October 20, 1898.

I am, sir, very respectfully, your obedient servant,

STUART ELDRIDGE, M. D.,
Sanitary Inspector, U. S. M. H. S.

The SUPERVISING SURGEON-GENERAL,
U. S. Marine-Hospital Service.

Report of infectious diseases in Japan from September 30 to October 20, 1898.

Locality.	Cholera.		Dysentery.		Smallpox.		Plague.	
	Cases.	Deaths	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Kioto Fu.....			136	35				
Osaka Fu.....			143	31				
Tokyo Fu.....			330	114	1			
Aichi Ken.....			244	71				
Akita Ken.....			48	9				
Awomori Ken.....			184	40	29	5		
Chiba Ken.....			287	82				
Fukui Ken.....			31	19				
Fukuoka Ken.....			40	7				
Fukushima Ken.....			411	78				
Giftu Ken.....			191	54				
Gumma Ken.....			281	95				
Hioگو Ken.....			291	109				
Hiroshima Ken.....			197	75				
Ibaraki Ken.....			157	50				
Ishikawa Ken.....			148	65				
Iwate Ken.....			335	79	1			
Kagawa Ken.....			287	87				
Kagoshima Ken.....			179	47				
Kanagawa Ken.....			323	77				
Kochi Ken.....			102	22				
Kumamoto Ken.....			144	19				
Miyagi Ken.....			115	51				
Miyazaki Ken.....			38	7				
Miye Ken.....			120	38				
Nagano Ken.....			1,233	410				
Nagasaki Ken.....			83	23				
Nara Ken.....			33	11				
Niigata Ken.....			2,187	563				
Oita Ken.....			78	23				
Okayama Ken.....			132	56				
Okinawa Ken.....			4	2				
Saga Ken.....			9	5				
Saitama Ken.....			156	109				
Shidzuoka Ken.....			557	181				
Shiga Ken.....			56	26				
Shimane Ken.....			281	111				
Tochigi Ken.....			70	19				
Tokushima Ken.....			195	77				
Tottori Ken.....			83	28				
Toyama Ken.....			51	24				
Wakayama Ken.....			47	15				
Yamagata Ken.....			16	4				
Yamaguchi Ken.....			135	33				
Yamanashi Ken.....			753	257				
Yehime Ken.....			101	32				
The Hokkaido.....			2					
Taiwan (Formosa).....			(a)					
Total.....			11,088	3,350	31	5		

(a) No report.

*Disinfection of the steamship Belgic at Yokohama.*YOKOHAMA, JAPAN, *October 22, 1898.*

SIR: I have the honor to report that, in accordance with the arrangement with the Japanese Government, of which I notified you under date of 10th instant, and the operation of the new harbor regulations sent to you at the same time, the steamship *Belgic*, upon which a case of semi-confluent smallpox developed on the voyage from Kobe to Yokohama, on her arrival here yesterday morning was immediately sent to the Japanese quarantine station for disinfection.

The ship was detained in quarantine for twenty-four hours, and was visited by me prior to her liberation, at which visit I satisfied myself that, so far as the case in question is concerned, with the exception of the disinfection of the crew, all requisite precautions had been taken, comprehending the bathing of all steerage passengers, the disinfection of their clothing and bedding by steam, and the fumigation and, after, washing of the steerage quarters with disinfecting solution.

This is the first case of the detection of infectious disease on ship-board that has occurred since the new regulations have taken effect, and I found some little difficulty in securing the performance of even this, perhaps, somewhat incomplete purification, as the Japanese scarcely treat smallpox as a quarantinable disease, relying upon frequent vaccination as the great preventive. I hope, before meeting with any similar emergency again, to be able to arrange with the authorities that the crew shall invariably be included in the process of disinfection, or at least all those who can, by any possibility, have been exposed to infection.

I may add that the sending of the *Belgic* to the quarantine station was done with the full concurrence of the agent and officers, who hope that the performance of a more thorough disinfection here than has hitherto been possible, and provided no further case occurs during the voyage, may exempt them from the annoying and expensive quarantine which has so often been necessary at San Francisco.

I am, sir, very respectfully, your obedient servant,

STUART ELDRIDGE, M. D.,

Sanitary Inspector, U. S. M. H. S.

The SUPERVISING SURGEON-GENERAL,
U. S. Marine-Hospital Service.

TURKESTAN.

Plague in Samarcand.

ST. PETERSBURG, *October 31, 1898.*

SIR: Confirming my telegram of the 28th instant, copy of which find appended on the overleaf, I now have the honor to inclose translation of a note with its inclosure from the imperial ministry of foreign affairs giving the facts regarding the appearance of bubonic plague in the government of Samarcand, concerning which Count Lamsdorff spoke to me on the occasion of my interview with him on his last reception day. Believing that the information could not fail to be of interest, and might possibly be of instant importance, I telegraphed you as above referred to.

I have the honor to be, sir, your obedient servant,

HERBERT H. D. PEIRCE.

Hon. SECRETARY OF STATE.

[Translation—Inclosure No. 1.]

MINISTRY OF FOREIGN AFFAIRS, FIRST DEPARTMENT,

October 15, 1898.

In compliance with the request which you made me at my reception yesterday, I hasten to furnish you herewith a copy of the official communication concerning the appearance in the village of Anzob, in the government of Samarcand, of an epidemic malady, showing the symptoms of peste (bubonic plague).

Further communications concerning the progress of this disease will be regularly sent to you, although the Government of the United States did not sign the Sanitary Convention of Venice of 1897, providing for the periodical dispatch of such communications.

Accept, Monsieur Chargé d'Affaires, the assurance of my distinguished consideration.
LAMSDORFF.

Mr. H. PEIRCE, *Chargé d'Affaires of the United States.*

[Translation—Inclosure No. 2.]

By a telegram dated October 10 last, the governor-general of Turkestan informed the commission established by supreme command to take measures for preventing and combatting the propagation of the plague, that according to a report of the military governor of Samarcand dated October 8, an epidemic malady, with a high rate of mortality, had broken out in the village of Anzob, canton of Tskender, arrondissement of Piandjekend in the said province, which village is situated in a region mountainous, difficult of access, and separated from the neighboring localities by mountains 13,000 to 14,000 feet in height. In the meeting of the sanitary committee which was held at Samarcand, the physicians, from the descriptions of the symptoms of the malady, but without having then made any bacteriological examinations, recognized that the epidemic in question presented the appearances of the plague.

Later reports of the military governor of Samarcand show that, from information gathered on the spot by the physician of the arrondissement, the first suspicious case in the village occurred in the following circumstances: In the village of Marzni of the same canton there fell sick a native woman, who died soon after. A native of Anzob named Agiour bibi undertook to inter the deceased, whom she washed, and received for her work a remuneration from the parents of the latter. She went back to Anzob, where she fell sick herself at once, and died three days thereafter. From this time there occurred cases of the malady among the relatives of the said Agiour bibi, as well as among her friends who were present at the funeral, and afterwards among the inhabitants of the village of Anzob. One of the inhabitants advised the disinterment of the body of Agiour bibi because it had not been buried according to the precepts of chéariat, a circumstance to which is attributed the spread of the disease. The natives of Anzob followed this advice, and, being convinced apparently that the body had not been regularly buried, disinterred it and reburied it. The epidemic among the inhabitants of the village augmented considerably after that, showing the same symptoms which had been before observed, with mortal results.

The local administration did not fail to take at once the measures prescribed by the edict of June 3, 1897. They took, as well, the following precautions: The roads leading to Anzob were closed; the clothes worn by the persons who died, and their bedding, were burned; the village was cleaned; the sick were placed in special places; instructions were given for the care of the sick and the burial of the dead; the well people were allowed to remain provisionally in the village, and were furnished with linen, clothes, and bedding, their old clothes being burned; there was formed around Anzob a cordon made up of the inhabitants of the neighboring villages, and posts of observation were organized; bodies of Cossacks were ordered to watch these posts of observation; the medical staff was strengthened by the addition of assistant doctors and surgeons, who were provided with the necessary medicines and disinfectants. The heads of the neighboring villages affirm that no suspected cases have appeared in those localities.

Immediately after the receipt of the above information the commission, instituted by supreme command in order to prevent and put an end to the propagation of the plague, sent to the province of Samarcand bacteriological experts who had studied exhaustively in India the bubonic plague, in order to determine, by means of chemical and bacteriological research, the nature of the malady.

In consequence of an imperial order, dated October 24 last, his Highness Prince Alexander Petrovitch, of Oldenbourg, president of the above-mentioned commission, went to the province of Samarcand to take on the spot energetic measures to stop the propagation of the disease and to make healthy the locality where it has appeared.

TURKEY.

Smallpox in Bagdad.

BAGDAD, November 20, 1898.

State Department, Washington, D. C.: Smallpox.

VENEZUELA.

Abatement of smallpox epidemic.

CARACAS, November 7, 1898.

SIR: I have the honor to report that the epidemic of smallpox, which has been very serious in Venezuela for the past five months, is almost entirely exterminated.

In Valencia, where the disease was very bad, the last official reports showed about 80 cases in the hospital. In Caracas the government has officially closed the hospital, as there are no cases at all, and La Guayra is also free from the disease.

The West Indies still keep up a quarantine against vessels from Venezuelan ports, but this quarantine is not general, most of the ports only quarantining against vessels with passengers from near the infected districts.

I have the honor to be, sir, your obedient servant,

WILLIAM W. RUSSELL.

HON. SECRETARY OF STATE.

FOREIGN STATISTICAL REPORTS.

COLOMBIA—*Carthagera*.—Month of October, 1898. Estimated population, 25,000. Total number of deaths, 39. No contagious diseases reported.

FRANCE—*Nantes*.—Month of October, 1898. Estimated population, 130,000. Total number of deaths, 231, including diphtheria, 1; enteric fever, 7; measles, 1, and 1 from whooping cough.

ROUBAIX.—Month of October, 1898. Estimated population, 125,697. Total number of deaths, 204, including diphtheria, 1; enteric fever, 3, and 7 from whooping cough.

GERMANY—*Dresden*.—Month of September, 1898. Estimated population, 386,300. Total number of deaths, 658, including diphtheria, 5; measles, 4; scarlet fever, 1; whooping cough, 12, and 68 from phthisis pulmonalis.

GREAT BRITAIN—*England and Wales*.—The deaths registered in 33 great towns in England and Wales during the week ended November 5 correspond to an annual rate of 17.0 a thousand of the aggregate population, which is estimated at 11,218,378. The highest rate was recorded in Liverpool, viz, 22.2, and the lowest in Croydon, viz, 6.7.

London.—One thousand three hundred and ninety-four deaths were registered during the week, including measles, 23; scarlet fever, 13; diphtheria, 28; whooping cough, 10; enteric fever, 29; typhus, 1, and diarrhea and dysentery, 34. The deaths from all causes correspond to

an annual rate of 16.1 a thousand. In greater London 1,825 deaths were registered, corresponding to an annual rate of 14.8 a thousand of the population. In the "outer ring" the deaths included 17 from diphtheria, 4 from scarlet fever, and 10 from whooping cough.

Ireland.—The average annual death rate represented by the deaths registered during the week ended November 5 in the 23 principal town districts of Ireland was 21.8 a thousand of the population, which is estimated at 1,007,798. The lowest rate was recorded in Lurgan, viz, 4.6, and the highest in Armagh, viz, 35.6 a thousand. In Dublin and suburbs 166 deaths were registered, including diphtheria, 3; enteric fever, 3; measles, 1; scarlet fever, 2, and whooping cough, 3.

Scotland.—The deaths registered in 8 principal towns during the week ended November 5 correspond to an annual rate of 18.9 a thousand of the population, which is estimated at 1,568,536. The lowest mortality was recorded in Dundee, viz, 17.4, and the highest in Perth, viz, 28.9 a thousand. The aggregate number of deaths registered from all causes was 571, including diphtheria, 10; measles, 7; scarlet fever, 6, and whooping cough, 7.

GUIANA—*Parimaribo.*—Month of August, 1898. Estimated population, 30,535. Total number of deaths, 74. No contagious diseases reported.

Month of September, 1898. Estimated population, 30,535. Total number of deaths, 88. No contagious diseases reported.

INDIA—*Singapore.*—Month of September, 1898. Estimated population, 97,111. Total number of deaths, 613, including beriberi, 89; smallpox, 1, and 107 from phthisis pulmonalis.

JAPAN—*Nagasaki.*—Ten days ended September 30, 1898. Estimated population, 39,000. Total number of deaths not reported. One death from enteric fever.

MALTA.—Two weeks ended September 30, 1898. Estimated population, 177,745. Total number of deaths, 188, including 5 from enteric fever.

NICARAGUA—*San Juan del Norte.*—Month of October, 1898. Estimated population, 1,156. Total number of deaths, 6. No contagious diseases reported.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Amsterdam	Nov. 5	510,139	130					1		1	1	3
Antwerp	Oct. 29	282,872	80					2	3			1
Barranquilla	Oct. 15	40,000	27					2				
Do	Oct. 22	40,000	26		2							
Belfast	Oct. 29	304,610	138					18	1	1		
Do	Nov. 5	304,610	153					17		2	2	3
Belize	Nov. 10	13,000	4									
Belleville	Nov. 14	10,300	3									
Berlin	Oct. 22	1,720,201	562					1	8	15	1	
Birmingham	Nov. 5	510,343	184					1			2	2
Bluefields	Oct. 29	3,018	4									
Do	Nov. 5	3,018	3									
Bombay	Oct. 18	821,764	a 328	2		1		1			2	
Bradford	Nov. 5	231,260	67					4	1		1	
Bristol	Oct. 29	316,900	82					3	2			3
Brussels	do	531,024	167					1			1	
Budapest	do	640,000						1			1	
Calcutta	Oct. 8	681,566	395	2						3	2	8
Catania	Nov. 3	120,000	55					1	4			
Christiania	Nov. 5	207,000	62							1		
Colombo	Oct. 8	130,000	71					1				
Do	Oct. 15	130,000	71									
Copenhagen	Oct. 29	351,000	130						1			1
Dresden	Oct. 22	386,300	118							1		3
Dublin	Oct. 29	349,594	177					5	1	3		1
Do	Nov. 5	349,594	166					3	2	3	1	3
Frankfort on the Main	do	246,000	56							1		
Gibraltar	Oct. 30	25,900	7									
Girgenti	Oct. 29	24,428	13									
Glasgow	do	724,349	264					10	4	2	3	2
Do	Nov. 5	724,349	250					11	3	5	2	4
Gothenburg	Oct. 29	120,562	32						1			
Halifax	Nov. 12	38,700	8						1			
Hamburg	Nov. 5	661,015	222					1		2		5
Havre	Oct. 15	119,470	57					1				2
Hongkong	Sept. 17	248,710	84									
Do	Sept. 24	248,710	90									
Do	Oct. 1	248,710	b 85									
Do	Oct. 8	248,710	74									1
Leeds	Nov. 5	416,618	149					5	3	3	1	
Leghorn	Oct. 30	104,372	34					2				
Leipzig	Oct. 22	422,071	117							1	2	
Do	Oct. 29	422,071	127							2	3	
Leith	do	76,277	23					1				
Liege	do	168,241	50									
Liverpool	do	668,645	325					1	5	2	2	13
Do	Nov. 5	668,645	275					3	8	5	5	1
Livingston	do	1,500	1									
London	Oct. 29	6,408,321	1,817					28	15	65	20	16
Do	Nov. 5	6,408,321	1,825					40	17	45	24	20
Lyons	Oct. 29	466,028	152					5		1	1	1
Madras	Oct. 14	452,518	510	7		2					4	
Magdeberg	Oct. 8	222,675	117							2	2	
Manchester	Oct. 29	541,296	238					8	2	1	9	1
Do	Nov. 5	541,296	218					7	1	1	5	1
Mannheim	Oct. 29	110,099	26									
Matamoras	Nov. 4	16,304	2									
Do	Nov. 11	16,304	3									
Messina	Oct. 29	107,000	34									
Do	Nov. 5	107,000	31					2				
Montevideo	Oct. 15	215,061	66					1				
Moscow	Oct. 22	1,000,000	491					3	7	7	6	3
Do	Oct. 29	1,000,000	488					5	7	12	8	3
Munich	do	430,000	207						3	1		4
New Castle on Tyne	do	223,000	83									2
Nuremberg	Oct. 22	190,750	82									2
Odessa	Oct. 29	400,600	156					1	1	4	1	1
Osaka and Hiogo	Sept. 10	202,912	120									
Do	Sept. 17	202,912	104					1		1		
Do	Sept. 24	202,912	125					3			1	
Do	Oct. 1	202,912	112							2		
Do	Oct. 8	202,912	130							2		

a Plague 150.

b Plague 1.

MORTALITY TABLE, FOREIGN CITIES—Continued.

Cities	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.	
Osaka and Hiogo.....	Oct. 15....	202,912	a 191										
Palermo.....	Oct. 29....	300,000	110					3		3			1
Paris.....	do.....	2,511,955	801					6	2	4	2		5
Pernambuco.....	Sept. 3....	200,000	129										
Do.....	Sept. 10....	200,000	118										
Do.....	Sept. 17....	200,000	123										
Do.....	Sept. 24....	200,000	120										
Plymouth.....	Nov. 5....	99,136	39									2	
Prague.....	Oct. 29....	198,320	127				1		4	4	1		
Puerto Cortes.....	Nov. 5....	2,000	0										
Rio de Janeiro.....	Sept. 30....	750,000	244		4	3		1					2
Do.....	Oct. 7....	750,000	231		5	7							
Do.....	Oct. 14....	750,000	249		4	6		1				1	1
Rotterdam.....	Nov. 5....	306,409	97					2					
St. Petersburg.....	Oct. 29....	1,267,023	563					25	13	31	11		10
St. Stephen, N. B.....	Nov. 12....	3,000	0										
Schiedam.....	Nov. 5....	26,884	11										
Sheffield.....	Nov. 3....	360,181	155					4		2			2
South Shields.....	Oct. 29....	98,922	41					1	1		4		
Stettin.....	do.....	150,000	58						1				
Stockholm.....	do.....	283,550	93							5			3
Stuttgart.....	Sept. 3....	162,984	50										
Trapani.....	Oct. 29....	45,095	15										
Vera Cruz.....	Nov. 3....	24,000	65		11								
Do.....	Nov. 10....	24,000	51		8								
Vienna.....	Oct. 22....	1,606,629	6532					1	2	10	7		1
Warsaw.....	do.....	601,408	383						54	4	20		4
Zurich.....	Oct. 29....	162,233	47										1

a From Sept. 10 to Oct. 15, 21 deaths from dysentery.

b Plague 1.

By authority of the Secretary of the Treasury:

WALTER WYMAN,
Supervising Surgeon-General U. S. Marine-Hospital Service.