PUBLIC HEALTH REPORTS.

UNITED STATES.

Provisions of circular of April 16, 1901, extended to include hides and other merchanise—Disinfection of hides and other merchandise.

DEPARTMENT OF STATE,
Washington, D. C., July 19, 1901.

GENTLEMEN: Referring to the Department's circular of April 16, 1901, in regard to certificates of disinfection of rags exported to the United States, I now have to inform you that the provisions of that circular are hereby extended to cover hides and all other merchandise subject to disinfection under the laws and regulations.

A letter on the subject from the Treasury Department is appended.

Respectfully, DAVID J. HILL, *Assistant Secretary.*

CONSULAR OFFICERS OF THE UNITED STATES.

TREASURY DEPARTMENT,
Washington, D. C., June 25, 1901.

SIR: Referring to that portion of your communication of the 12th instant, regarding the certificate for rags to accompany said rags from the point of origin in the interior of any foreign country to the seaport, for ultimate destination to the United States, and to the recommendation of the United States consul-general at Frankfort, to the effect that these certificates be extended to cover hides and all other wares subject to disinfection under the laws, I have the honor to inform you that the Surgeon-General of the Marine-Hospital Service has reported upon a copy of that letter, which was sent to him, to the effect that such extension of certificate will be desirable from a sanitary standpoint, and this Department, therefore, concurs in the opinion of the consul-general in the matter.

Respectfully, O. L. SPAULDING, *Acting Secretary.*

Hon. SECRETARY OF STATE.

Old rubber shoes and rubber waste from Russia need not be disinfected except for special reasons.

DEPARTMENT OF STATE,
Washington, D. C., July 31, 1901.

SIR: I have the honor to acknowledge the receipt of your letter of the 27th instant, requesting that the consul at Hamburg be informed that old rubber shoes and rubber waste shipped from Russia to the

United States need not be disinfected unless he should be aware of some special reason why such action should be taken in any given case.

The consul at Hamburg was informed by telegraph in accordance with your request on the 30th instant, and was instructed to transmit the information to the consuls at Bremen and Stettin. A copy of your letter has to-day been forwarded to each of the consuls mentioned.

Respectfully, ALVEY A. ADEE, *Acting Secretary.*

Hon. SECRETARY OF THE TREASURY.

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

Mosquitoes blown aboard ship 10 miles from land.

GULF QUARANTINE STATION, *August 2, 1901.*

SIR: Referring to the question of mosquitoes as a means of infection in disease, I have to report that the captain of the ship *America*, arriving in quarantine July 24, stated that mosquitoes came aboard the vessel on the previous night, at a distance of at least 10 miles from land, the nearest point being Chandeleur Island.

The opinion prevails in this locality that mosquitoes are blown by southwest winds from the Louisiana marshes to this island, a distance of 10 to 20 miles, and the experience of this summer seems to accord with the opinion.

Mosquitoes were few in number until about the middle of July, when, after several days of southwest winds, the number was vastly increased. At that time there was no other local condition to explain the sudden increase.

Respectfully, P. C. KALLOCH,
Surgeon, U. S. M. H. S.

Numerous mosquitoes and cockroaches on Spanish bark Maria Blanquer.

SOUTH ATLANTIC QUARANTINE STATION, *August 2, 1901.*

SIR: I have the honor to inform you that numerous mosquitoes were collected on board the Spanish bark *Maria Blanquer*, remanded from Brunswick to this station. The vessel is from Rio de Janeiro, with no sickness or history of sickness en route.

The vessel is interesting in that there was a perfect plague of the insects (as well as blatta orientalis, "cockroach") on board, the personnel having to cover themselves to have rest.

When the forecastle was opened, after fumigation, mosquitoes could be scooped up by the hand.

The master is positive that there were none on board until the twenty-second day out, when some were noticed in the water tank when opened. The water all came from Rio de Janeiro.

Respectfully, HUGH S. CUMMING,
Passed Assistant Surgeon, U. S. M. H. S.

Leper at Mississippi River Quarantine Station brought from Canary Islands to be deported.

[Telegram.]

NEW ORLEANS, LA., *July 25, 1901.*

Quarantine regulations regarding leper arriving on steamship *Miguel Gallart* thoroughly carried out. Patient detained at Mississippi River Quarantine and vessel disinfected. Leper will be deported by same vessel.

WERTENBAKER.

[This patient was a stowaway on the Spanish steamship *Miguel Gallart* from the Canary Islands.]

Smallpox reported at Kluckwan, Alaska.

JUNEAU, ALASKA, *July 26, 1901.*

SIR: Marshal Shoup received word this morning from his department at Porcupine that smallpox had broken out at Kluckwan. This Indian camp is right on the trail, and all who go to or from the Porcupine must pass through it. No particulars were given, but it has been the rule for it to go all through a camp once it started, and the Indians are leaving as fast as they can get away.

On July 3 I intercepted 3 canoes with 11 Indians in them, with 10 cases of smallpox just recovered. They were all sent to the pesthouse and fumigated and made to take a bath. The 1 case that had escaped was a woman that had had syphilis, and had been vaccinated about two years ago.

I have a great deal of trouble enforcing regulations, as a great many say it is not smallpox or some of the white people would take it. And again, if it was smallpox more of them would die.

I have further to report, as the steamship *Cottage City* was making her landing last night (1 a. m.), a longshoreman fell off the dock and was drowned, the body being recovered in one hour. He fell a distance of about 24 feet, sank before a boat could reach him, and did not come to the surface again.

Respectfully, SAML. C. LEONHARDT,
Acting Assistant Surgeon, U. S. M. H. S.

End of smallpox in Duluth, Minn.

DULUTH, MINN., *July 27, 1901.*

SIR: I have the honor to report that there are, as far as my department is able to discover, no cases of smallpox in this city, this being the first time this happy state of affairs has existed since August, 1900.

Respectfully, J. M. ROBINSON,
Commissioner of Health.

Smallpox in Buffalo and Gowanda, N. Y.

BUFFALO, N. Y., *July 29, 1901.*

SIR: I have the honor to state for your information that during the past week there has been detected and isolated in this city an additional case of smallpox in the person of an Italian immigrant (child) who was found suffering from the disease in the early eruptive stage at one of the railway depots. The mother stated that they had sailed from Italy

on the 29th ultimo, arriving in New York seventeen days later. The child must have been ill from five to seven days when isolated.

Also I am informed by the health authorities that 7 cases of the disease have been found and isolated at Gowanda, a town some 30 miles from this city on the Erie Railway, and that all exposed persons, 100 in number, have been quarantined, vaccinated, and are under observation.

Respectfully,

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

Arrival at Reedy Island Quarantine of vessels from Mexican and West Indian ports.

REEDY ISLAND QUARANTINE,
via Port Penn, Del., July 28, 1901.

SIR: Through the medical officer in command of national quarantine service on Delaware River and Bay, I have the honor to report the arrival at this station of the following vessels: July 22, 1901, British steamship *Mexicano*, from Vera Cruz, in ballast, no passengers; bill of health signed by consul and Acting Assistant Surgeon Dudley. July 25, 1901, Norwegian steamship *Gwent*, from Gibara (Sama), with fruit; no passengers; bill of health signed by Acting Asst. Surg. S. Gomez; Norwegian steamship *Spero*, from Banes, with fruit; no passengers; bill of health signed by Acting Asst. Surg. Benjamin de Zayas. July 27, 1901, American bark *Matanzas*, from Havana, in ballast; no passengers; bill of health signed by Surgeon Glennan.

Respectfully,

T. F. RICHARDSON,
Assistant Surgeon, U. S. M. H. S., In Command.

REPORTS FROM THE MEXICAN BORDER.

Eagle Pass, Tex.—Inspection service.—I have the honor to make the following report for the week ended July 27, 1901:

Date.	Number of persons.	Sanitary condition.	Condition of—		Where from.	Destination.
			Baggage.	Merchandise.		
July 21 (*a*)	40	Good	Good	Good	Various points in Mexico.	Various points in United States.
July 22 (*b*)	43	do	do	do	do	Do.
July 23 (*c*)	85	do	do	do	do	Do.
July 24 (*d*)	51	do	do	do	do	Do.
July 24 (*e*)	25	do	do	do	do	Do
July 25 (*f*)	44	do	do	do	do	Do.
July 26 (*g*)	50	do	do	do	do	Do.

a Fumigated 500 pieces of Pullman linen.
b Fumigated 290 pieces of Pullman linen.
c Fumigated 385 pieces of Pullman linen.
d Fumigated 225 pieces of Pullman linen.
e Fumigated 205 pieces of Pullman linen.
f Fumigated 186 pieces of Pullman linen.
g Fumigated 231 pieces of Pullman linen.

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

Laredo, Tex., July 28, 1901—Inspection service.—I have the honor to submit the following report for week ended July 20, 1901: Number of passenger trains entering from Mexico inspected, 14; persons on passenger trains entering from Mexico inspected, 519; immigrants inspected, 28; immigrants vaccinated, 6. Three bundles of immigrant baggage disinfected; Pullman Company soiled linen disinfected, 3,988 pieces.

Laredo, Tex., July 30, 1901—Inspection service.—I have the honor to submit following report for week ended July 27, 1901: Number of trains entering from Mexico inspected, 14; persons on passenger trains entering from Mexico inspected, 420; immigrants inspected, 28; immigrants vaccinated, 10; 2 persons six days out from Vera Cruz detained; 3 trunks and 1 valise disinfected; disinfected 3,720 pieces of soiled Pullman Company linen.

H. J. HAMILTON,
Acting Assistant Surgeon, U. S. M. H. S.

Statistical reports of States and cities of the United States—Yearly and monthly.

ILLINOIS—*Chicago.*—Month of May, 1901. Census population, 1,758,-025. Total number of deaths, 2,046, including diphtheria, 32; enteric fever, 24; measles, 26; scarlet fever, 21; whooping cough, 15; smallpox, 1, and 279 from tuberculosis.

INDIANA—*Muncie.*—Month of July, 1901. Census population, 20,972. Total number of deaths, 23, including whooping cough, 1, and 1 from tuberculosis.

MICHIGAN.—Reports to the State board of health, Lansing, for the week ended July 20, 1901, from 80 observers, indicate that bronchitis, diphtheria, diarrhea, dysentery, enteric fever, inflammation of kidney, pleuritis, scarlet fever, tonsillitis, whooping cough, and smallpox were more prevalent than in the preceding week. Cerebro-spinal meningitis was reported present at 6, whooping cough at 7, diphtheria at 20, measles at 31, enteric fever at 36, scarlet fever at 54, smallpox at 63, and phthisis pulmonalis at 177 places.

Reports to the State board of health, Lansing, for the week ended July 27, 1901, from 87 observers, indicate that cholera infantum and cholera morbus were more prevalent and bronchitis, diphtheria, measles, pleuritis, scarlet fever, and whooping cough were less prevalent than in the preceding week. Cerebro-spinal meningitis was reported present at 5, whooping cough at 12, measles at 21, diphtheria at 23, enteric fever at 44, scarlet fever at 61, smallpox at 68, and phthisis pulmonalis at 184 places.

MISSOURI—*Carthage.*—Period from June 10 to July 10, 1901. Census population, 9,416. Total number of deaths, 10, including 1 from phthisis pulmonalis.

St. Louis.—Month of June, 1901. Census population, 575,200—white 538,200—colored, 37,000. Total number of deaths, 879—white, 778; colored, 101, including diphtheria, 33; enteric fever, 6; measles, 8; scarlet fever, 5; whooping cough, 9; smallpox, 1, and 114 from tuberculosis.

NEW JERSEY—*Paterson.*—Month of June, 1901. Estimated population, 107,409. Total number of deaths, 145, including diphtheria, 3; enteric fever, 2; scarlet fever, 3; smallpox, 1, and 12 from phthisis pulmonalis.

NEW YORK.—Reports to the State board of health, Albany, for the month of June, 1901, from 156 cities, towns, and villages, having an aggregate estimated population of 7,268,000, show a total of 9,500 deaths, including diphtheria, 246; enteric fever, 83; measles, 95; scarlet fever, 165; whooping cough, 54; smallpox, 74, and 1,111 from phthisis pulmonalis.

OHIO—*Columbus.*—Month of June, 1901. Estimated population, 140,000. Total number of deaths, 98, including diphtheria, 1; enteric fever, 3; whooping cough, 1, and 12 from tuberculosis.

Report of immigration at Boston during week ended July 27, 1901.

OFFICE OF U. S. COMMISSIONER OF IMMIGRATION,
Port of Boston, July 29, 1901.

Number of alien immigrants who arrived at this port during the week ended July 27, 1901; also names of vessels and ports from which they came.

Date.	Vessel.	Where from.	No. of immigrants.
July 21	Steamship Prince Arthur	Yarmouth, Nova Scotia	61
July 22	Steamship Admiral Farragut	do	12
Do	Steamship Halifax	Halifax, Nova Scotia	46
Do	Steamship Boston	Yarmouth, Nova Scotia	7
Do	Steamship Westmoreland	Buenos Ayres, South America	1
July 23	Steamship Captain Bennett	Puerto Plata, Santo Domingo	1
Do	Steamship Prince George	Yarmouth, Nova Scotia	36
Do	Steamship Peruvian	Glasgow, Scotland	36
July 24	Steamship Admiral Schley	Port Morant, Jamaica	3
Do	Steamship Prince Arthur	Yarmouth, Nova Scotia	18
Do	Steamship Olivette	Halifax, Nova Scotia	35
July 25	Steamship Ethelred	Puerto Plata, Santo Domingo	1
Do	Steamship Prince George	Yarmouth, Nova Scotia	52
Do	Steamship Boston	do	12
July 26	Steamship Prince Arthur	do	18
Do	Steamship Yarmouth	Halifax, Nova Scotia	22
Do	Steamship Commonwealth	Liverpool, England	451
July 27	Steamship Ultonia	do	234
Do	Steamship Boston	Yarmouth, Nova Scotia	21
	Total		1,067

GEORGE B. BILLINGS,
Commissioner.

Report of immigration at New York during the week ended July 27, 1901.

OFFICE OF U. S. COMMISSIONER OF IMMIGRATION,
Port of New York, July 29, 1901.

Number of alien immigrants who arrived at this port during the week ended July 27, 1901; also names of vessels and ports from which they came.

Date.	Vessel.	Where from.	No. of immigrants.
July 22	Steamship Rotterdam	Rotterdam	755
Do	Steamship La Gascogne	Havre	403
July 23	Steamship Ethiopia	Glasgow	119
July 24	Steamship Southwark	Antwerp	488
Do	Steamship Kaiser Wilh. der Grosse	Bremen	576
July 25	Steamship Mongolian	Glasgow	25
Do	Steamship Teutonic	Liverpool and Queenstown	206
July 26	Steamship H. H. Meier	Bremen	1,193
July 27	Steamship Milano	Hamburg	221
Do	Steamship Fürst Bismarck	do	194
Do	Steamship Bulgaria	do	536
Do	Steamship Nord America	Genoa and Naples	959
	Total		5,675

THOMAS FITCHIE.
Commissioner.

Report of immigration at Philadelphia for the week ended July 27, 1901.

OFFICE OF U. S. COMMISSIONER OF IMMIGRATION,
Port of Philadelphia, July 27, 1901.

Number of alien immigrants who arrived at this port during the week ended July 27, 1901; also names of vessels and ports from which they came.

Date.	Vessel.	Where from.	No. of immigrants.
July 22	Steamship Barnstable	Jamaica	6
Do...	Steamship Rhynland	Liverpool and Queenstown	170
July 23	Steamship Mexicano	Vera Cruz	4
	Total		180

J. L. HUGHES,
Acting Commissioner.

Report of immigrants inspected at the port of Baltimore, Md., during the month of July, 1901.

Total number of immigrants inspected, 1,488; number passed, 1,488.

H. R. CARTER,
Surgeon, U. S. M. H. S.

Report of immigrants inspected at the port of Boston, Mass., during the month of July, 1901.

Total number of immigrants inspected, 1,591; number passed, 1,588; number certified for deportation on account of dangerous contagious or loathsome diseases, or for other physical causes, 3.

Disposition of immigrants certified for deportation.—Number cases pending at beginning of month, none; number cases certified for deportation during month, 3; total to be accounted for, 3; number cases deported, 1; number of cases admitted, none; number cases pending at the close of month, 2.

FAIRFAX IRWIN,
Surgeon, U. S. M. H. S.

Report of immigrants inspected at the port of Laredo, Tex., during the month of May, 1901.

Total number of immigrants inspected, 144; number passed, 139; number certified for deportation on account of dangerous contagious or loathsome diseases, or for other physical causes, 5.

Disposition of immigrants certified for deportation.—Number cases pending at beginning of month, none; number cases certified for deportation during month, 5; total to be accounted for, 5; number cases deported, 5; number cases admitted, none; number cases pending at close of month, none.

H. J. HAMILTON,
Acting Assistant Surgeon, U. S. M. H. S.

Report of immigrants inspected at the port of Laredo, Tex., during the month of June, 1901.

Total number of immigrants inspected, 196; number passed, 196.

H. J. HAMILTON,
Acting Assistant Surgeon, U. S. M. H. S.

Number.	Name of station.	Week ended.	Name of vessel.	Date of arrival.	Port of departure.
	UNITED STATES:				
1	Alexandria, Va.	Aug. 3			
2	Beaufort, N. C.	do.			
3	Brunswick, Ga.	do.			
4	Cape Charles Quarantine, Va.	do.			
5	Cape Fear, N. C.	July 27			
6	Columbia River, Oreg.	do.			
7	Delaware Breakwater Quarantine, Lewis, Del	do.			
8	Dutch Harbor, Alaska				
9	Eureka, Cal.	July 27			
10	Grays Harbor, Wash.	do.			
11	Gulf Quarantine, Ship Island, Miss.	do.	Mex. sc. Tres Hermanos	July 21	Campeche
			Nor. ship America	July 24	Cape Town
			Am. sc. Olive	July 26	Colon
			Am. sc. Flora Morang	July 27	Progreso
			Prov. flag bk. Mabel	do.	Havana
12	Los Angeles, Cal.	do.			
13	Newbern, N. C.	do.			
14	Nome, Alaska				
15	Pascagoula, Miss.	July 27			
16	Port Angeles, Wash.	July 20			
17	Port Townsend, Wash.	do.	Ger. bk. Gustav and Oscar.	July 19	Cape Town
18	Reedy Island, Del	July 27			
19	San Diego, Cal	do.			
20	San Francisco, Cal.	do.	Br. ss. Carlisle City (a)	July 10	Hongkong via San Diego.
21	San Pedro, Cal.	July 20			
22	Savannah, Ga.	July 27	Br. bgtn. Alice Bradshaw	July 22	Havana
23	South Atlantic Quarantine, Blackbeard Island, Ga.	do.			
24	Washington, N. C.	do.			
	CUBA:				
25	Baracoa	July 10			
		July 20			
26	Batabano	do.			
		July 27			
27	Caibarien	July 20			
28	Cardenas	do.			
29	Casilda	July 13			
		July 20			
		July 27			
30	Cienfuegos	do.	Br. ss. Comino	July 21	Liverpool
31	Daiquiri	July 6			
		July 13			
32	Gibara	do.			
		July 20			

a Previously reported.

and inspection stations.

Number.	Destination.	Treatment of vessel, passengers, and cargo.	Date of departure.	Remarks.	Vessels inspected and passed.
1				No transactions	
2				No report	
3				do	
4					5
5					2
6				Oriental crew and passengers on Br. ss. Indravelli, from Hongkong, examined.	2
7					2
8				No report	
9				No transactions	
10				do	
11	Pascagoula	Disinfected and held	July 27		1
	Ship Island	Held for disinfection			
	do	Disinfected and held		3 cases malarial fever at sea and in quarantine.	
	do	do		1 case malarial fever at sea and in quarantine	
	Pascagoula	do			
12					1
13				No transactions	
14				No report	
15					3
16				No transactions	
17	Port Townsend	Being disinfected		2 packages and baskets on Am. ss. City of Topeka, from Juneau, disinfected.	23
18				5 pieces of unlabeled dunnage on Am. bk. Matanzas, from Havana, disinfected.	19
19					3
20	San Francisco	Disinfected	July 21	Preliminary disinfection with sulphur dioxide; cargo discharged on to lighters; dead rats destroyed by burning; crew and passengers bathed and effects disinfected; 6 deaths en route from bubonic plague. Physical examination of oriental crew and passengers on ss. Coptic from Hongkong.	13
21				No report	
22	Savannah	Disinfected and held for observation.		Ballast removed	2
23				No transactions	
24				do	
25					6
					5
26					4
					4
27				7 vessels passed without inspection.	
28				14 vessels passed without inspection.	9
29					11
					9
					14
30	New Orleans	Disinfected		2 vessels passed without inspection.	9
31					1
					1
32					14
					11

Number.	Name of station.	Week ended.	Name of vessel.	Date of arrival.	Port of departure
	CUBA—*Continued.*				
33	Guantanamo	July 6			
		July 13			
34	Havana	July 20	Prov. flag tug Humberto Rodriguez.	July 11	Cardenas
			Prov. flag barge Sn. Fernando.	do	do
			Ss. Chalmette	July 12	New Orleans
			Prov. flag tug Dauntless	July 15	Cardenas
			Nor. ss. Tjomo	July 16	Mobile
			Prov. flag tug Guillermo Lopez.	July 19	Punta Gorda
			Prov. flag barge Tinina	do	do
			Am. sc. Dr. Lykes	do	Key West
35	Isabela de Sagua	do			
36	Manzanillo	July 6			
		July 13			
37	Matanzas	July 20			
		July 27			
38	Nuevitas	July 20			
39	Puerto Padre	do			
40	Santa Cruz	July 27			
41	Santiago de Cuba	July 6			
		July 13			
	HAWAII:				
42	Hilo	do			
43	Honolulu	July 20			
44	Kahului	do			
45	Kihei	July 13			
	PHILIPPINES:				
46	Cebu	May 18			
47	Iloilo	June 22			
48	Manila	do	Br. ss. Loongsang	June 16	Hongkong
	PORTO RICO:				
49	Ponce	July 20			
50	San Juan	do	Fr. ss. St. Simon	July 16	St. Marc
	Subports—				
51	Aguadilla	do			
52	Arecibo	do			
53	Arroyo	do			
54	Fajardo	do			
55	Humacao	do			
56	Mayaguez	do	Ss. St. Domingue	July 16	Port au Prince
			Prov. flag ss. Julia	July 18	Havana

and inspection stations—Continued.

Number.	Destination.	Treatment of vessel, passengers, and cargo.	Date of departure.	Remarks.	Vessels inspected and passed.
33				3 vessels passed without inspection.	
				2 vessels passed without inspection.	3
				1 case leprosy on Sp. ss. Miguel Gallart, from Barcelona, returned.	
34	Tampa	Disinfected	July 14		23
	do	do	do		
	New Orleans	do	July 16		
	Jacksonville	do	do		
	Mobile	do	July 18		
	Tampa	Partially disinfected	July 19		
	do	do	do		
	Key West	do	do		
35				9 vessels passed without inspection.	2
36				5 vessels passed without inspection.	7
				do	3
37				2 vessels passed without inspection.	5
				3 vessels passed without inspection.	2
38					2
39					5
40					3
				3 vessels passed without inspection.	4
41				4 vessels passed without inspection.	10
				1 case leprosy on ss. Miguel Gallart, from Barcelona, not allowed to land at Havana, returning to Spain.	
42				No report	
43				do	
44				do	
45				do	
46					23
47					6
48	Manila	Held for observation	June 18	1 case fever quarantined for observation two days; patient allowed to remain on board.	59
49				No report	
50	St. Thomas	Held in quarantine	July 16	1 case yellow fever on board in a passenger from Port au Prince; vessel declined removal of case; 19 local passengers detained to complete period; baggage disinfected.	3
				7 local nonimmune passengers on prov. flag ss. Julia, from Havana, held; baggage and mail from Puerto Plata disinfected.	
51				No transactions	
52					1
53				No transactions	
54				do	
55					3
56	Ponce	Held in quarantine	July 16	Baggage and mail disinfected.	1
	San Juan	do	July 18	Mail and baggage from Puerto Plata disinfected.	

Reports from State and

Number.	Name of station.	Week ended.	Name of vessel.	Date of arrival.	Port of departure.
1	Anclote, Fla	Aug. 3			
2	Baltimore, Md	do			
3	Bangor, Me	do			
4	Boston, Mass	do			
5	Carrabelle, Fla	do			
6	Cedar Keys, Fla	July 20			
7	Charleston, S. C	July 27			
8	Charlotte Harbor, Fla	Aug. 3			
9	Elizabeth River, Va	do			
10	Galveston, Tex	July 27	Ss Corindra	July 22	Vera Cruz
			Nor. ss. Gyller	July 25	Coatzacoalcos
11	Gardiner, Oreg	do			
12	Key West, Fla	do			
13	Marcus Hook, Pa	Aug. 3			
14	Mayport, Fla	do			
15	Mobile Bay, Ala	July 27	Nor. ss. Tjomo	July 21	Havana
			Br. ss. Pensacola	July 23	Tampico
			Nor. ss. Banes	do	Bocas del Toro
			Sc. Gertrude A. Bartlett	July 27	San Juan
16	New Bedford, Mass	Aug. 3			
17	New Orleans, La	do			
18	Newport News, Va	do			
19	Newport, R. I	do			
20	New York, N. Y	do			
21	Pass Cavallo, Tex	July 6			
		July 13			
		July 20			
		July 31			
22	Pensacola, Fla	Aug. 3			
23	Port Royal, S. C	do			
24	Providence, R. I	do			
25	Quintana, Tex	July 27			
26	Sabine Pass, Tex	do			
27	St. Helena Entrance, S. C	Aug. 3			
28	Tampa Bay, Fla	do			

municipal quarantine stations.

Number.	Destination.	Treatment of vessel, passengers, and cargo.	Date of departure.	Remarks.	Vessels inspected and passed
1				No report	
2				do	
3				do	
4				do	
5				do	
6				10 small fish and turtle boats passed in on special permits.	10
7					2
8				No report	
9				do	
10	Galveston	Fumigated and held	July 27		6
	do	do.		To be discharged August 1.	
11				No report	
12				do	
13				do	
14				do	
15	Mobile	Held	July 23		7
	do	Disinfected and held	July 26		
	do	Disinfected	July 23		
	do	Disinfected and held			
16					3
17				No report	
18				do	
19				do	
20				do	
21					1
					1
					1
					2
22				No report	
23				do	
24				do	
25					4
26				No report	
27				do	
28				do	

Smallpox in the United States as reported to the Surgeon-General United States Marine-Hospital Service, June 28, 1901, to August 9, 1901.

[For reports received from December 28, 1900, to June 28, 1901, see PUBLIC HEALTH REPORTS for June 28, 1901.]

Place.	Date.	Cases.	Deaths.	Remarks.
Alabama:				
Mobile County	July 8	6		
Total for State, same period, 1900.		0		
Alaska:				
Kluckwan	July 26			Smallpox reported.
California:				
Los Angeles	June 2–July 20	12		
San Francisco	July 1–July 28	5		
Total for State		17		
Total for State, same period, 1900.		0		
District of Columbia:				
Washington	June 16–July 13	2		
Total for District, same period, 1900.		24		
Illinois:				
Chicago	June 23–July 27	13		
Peoria	June 1–June 30	25		
Springfield	do	6		
Total for State		44		
Total for State, same period, 1900.		6		
Indiana:				
Adams County	June 1–June 30	32		
Allen County	do	12	1	
Cass County	do	3		
Clinton County	do	20	1	
Jay County	do	1		
Kosciusko County	do	11		
Laporte County	do	6	1	
Montgomery County	do	1		
Owen County	do	1		
Posey County	do	4		
Tippecanoe County	do	32		
Total for State		123	3	
Total for State, same period, 1900.		106	3	
Iowa:				
Clinton	June 16–June 22	1		
Ottumwa	June 2–June 29	8		
Total for State		9		
Total for State, same period, 1900.		3		
Kansas:				
Allen County	June 1–June 30	23		
Anderson County	do	1		
Barber County	do	2		
Barton County	do	43	1	
Bourbon County (Fort Scott)	do	26		
Cherokee County	do	31	1	
Clark County	do	4		
Clay County	do	3		
Cloud County	do	1		
Crawford County	do	60		
Douglas County	do	4		
Greenwood County	do	4	1	
Hamilton County	do	1		
Jefferson County	do	27		
Labette County	do	25		
Lane County	do	2		
Leavenworth County	do	4		
Meade County	do	5		
Montgomery County	do	2		
Ness County	do	11		
Ottawa County	do	5		
Pottawattomie County	do	2		
Reno County	do	1		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Kansas—*Continued.*				
Stevens County	June 1–June 30	8		
Sumner County	do	10		
Sedgwick County (Wichita)	do	13	1	
Washington County	do	1		
Total for State		319	4	
Total for State, same period, 1900.		24	1	
Kentucky:				
Lexington	June 23–June 29	1		
Total for State, same period, 1900.		32		
Louisiana:				
New Orleans	June 16–July 20	9	1	
Shreveport	July 14–July 24	1	1	
Total for State		10	2	
Total for State, same period, 1900.		110	27	
Massachusetts:				
Boston	July 7–July 20	2	1	
Fall River	June 23–July 13	14	1	
Fitchburg	June 2–June 8	1		
Gloucester	July 17	1		
Holyoke	July 7–July 13	1		
New Bedford	July 1–July 13	1	1	
Quincy	June 16–June 22	1		
Waltham	June 23–June 29	1		
Worcester	June 15–July 5	5	3	
Total for State		27	6	
Total for State, same period, 1900.		19		
Michigan:				
Houghton County	July 1–July 13			Smallpox present.
Isabella County	do			Do.
Kent County (Grand Rapids)	do			Do.
Mackinac County	do			Do.
Mason County	do			Do.
Osceola County	do			Do.
Saginaw County	do			Do.
Van Buren County	do			Do.
Wayne County (Detroit)	do			Do.
Total for State				
Total for State, same period, 1900.		6	1	
Minnesota:				
Aitkin County	June 17–July 15	16		
Anoka County	do	16		
Becker County	do	5		
Beltrami County	do	41		
Benton County	do	24		
Big Stone County	do	4		
Brown County	do	15		
Carlton County	do	27		
Carver County	do	5		
Cass County	do	15	2	
Chippewa County	do	3		
Clay County	do	6	1	
Cook County	do	26		
Cottonwood County	do	2		
Crow Wing County	do	50		
Dakota County	do	2		
Dodge County	do	2		
Douglas County	do	16		
Fillmore County	do	9		
Freeborn County	do	4		
Hennepin County (Minneapolis).	do	26		
Houston County	do	7		
Hubbard County	do	1		
Isanti County	do	1		
Itasca County	do	8		
Jackson County	do	1		
Kanabec County	do	2		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Minnesota—*Continued.*				
Kittson County	June 17–July 15	12		
Lesueur County	do	8		
Lyon County	do	10		
Martin County	do	1		
Meeker County	do	3		
Millelacs County	do	2		
Morrison County	do	11		
Murray County	do	1		
Nicollet County	do	3		
Norman County	do	2		
Olmsted County (Rochester)	do	25		
Ottertail County	do	39		
Pine County	do	46	1	
Pipestone County	do	1		
Polk County	do	70		
Pope County	do	13	1	
Ramsey County (St. Paul)	do	13		
Red Lake County	do	9		
Red Wood County	do	18	2	
Renville County	do	7		
Rice County	do	32		
Rock County	do	1		
Roseau County	do	1		
St. Louis County (Duluth)	do	96		
Sherburne County	do	3		
Sibley County	do	27		
Stearns County	do	45		
Steele County	do	14		
Stevens County	do	3		
Traverse County	do	10		
Wabasha County	do	8	1	
Wadena County	do	8		
Waseca County	do	4		
Washington County	do	11		
Winona County (Winona)	do	19	1	
Total for State		910	9	
Total for State, same period, 1900.		120		
Missouri:				
St. Louis	June 17–July 28	79		
Nebraska:				
Omaha	June 16–July 27	23		
South Omaha	June 25–July 31	19		
Total for State		42		
Total for State, same period, 1900.		5		
New Hampshire:				
Manchester	June 16–July 13	3		
Nashua	July 21–July 27	1		
Total for State		4		
Total for State, same period, 1900.		10		
New Jersey:				
Jersey City	June 17–July 27	10		
Newark	July 1–July 27	18	2	
Total for State		28	2	
Total for State, same period, 1900.		5		
New York:				
Buffalo	June 25–July 27	8		
Dunkirk	July 1–July 6	1		
Elmira	June 16–July 13	3		
Gowanda	July 29	7		
New York	June 23–July 27	335	94	
Total for State		354	94	
Total for State, same period, 1900.		5		
North Carolina:				
Buncombe County	May 1–May 31	17		
Cabarrus County	do	7		
Caswell County	do	12		

Smallpox in the United States—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
North Carolina—*Continued.*				
Chatham County	May 1-May 31	4		
Cleveland County	do	8		
Cumberland County	do	20		
Durham County	do	10		
Gaston County	do	6		
Greene County	do	2		
Guilford County	do	4		
Johnston County	do	19		
Mecklenburg County	do	15		
Orange County	do	10		
Person County	do	29		
Polk County	do	2		
Robeson County	do	2		
Rockingham County	do	2		
Rowan County	do	2		
Stanly County	do	2		
Wake County	do	12		
Wayne County	do			Several cases.
Total for State		185		
Total for State, same period, 1900.		315		
North Dakota:				
Bismarck	July 14-July 20	1		
Buffalo	July 1-July 6	2		
Fargo	July 7-July 13	1		
Fisher	do	1		
Glaston	July 1-July 6	5		
Kensal	July 7-July 13	1		
Lakota	July 1-July 6	2		
Lidgerwood	do	2		
Mayville	July 14-July 20	1		
Valley City	July 1-July 6	12		
Total for State		28		
Total for State, same period, 1900.		0		
Ohio:				
Adams County	Jan. 1-June 1	27	1	
Allen County	do	8		
Ashland County	do	10		
Ashtabula County	do	31		
Athens County	do	19		
Auglaize County	do	5		
Belmont County	do	44		
Brown County	do	7		
Carroll County	do	1		
Champaign County	do	1	1	
Clark County	do	6		
Columbiana County	do	2		
Coshocton County	do	7		
Crawford County	do	14		
Cuyahoga County (Cleveland)	Jan. 1-July 27	1,307	18	
Defiance County	Jan. 1-June 1	21		
Delaware County	do	4		
Erie County	do	2		
Fairfield County	do	1		
Franklin County	do	45		
Gallia County	do	62	1	
Geauga County	do	29		
Greene County	do	2		
Guernsey County	do	13		
Hamilton County (Cincinnati)	Jan. 1-Aug. 2	82	1	
Hancock County	Jan. 1-June 1	6		
Hardin County	do	166		
Harrison County	do	9		
Henry County	do	6		
Hocking County	do	5	2	
Huron County	do	44	1	
Jackson County	do	3		
Jefferson County	do	32	1	
Knox County	do	1		
Lake County	do	17	1	
Lawrence County	do	80		
Lorain County	do	75	2	
Lucas County (Toledo)	Jan. 1-July 13	16		
Mahoning County	Jan. 1-June 1	6		
Marion County	do	1		
Mercer County	do	1		

Smallpox in the United States—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Ohio—*Continued.*				
Montgomery County	Jan. 1–June 1	5		
Morgan County	do	1		
Ottawa County	do	34	1	
Paulding County	do	38		
Perry County	do	57		
Pike County	do	2		
Portage County	do	23		
Putnam County	do	9		
Richland County	do	67	1	
Scioto County	do	168	2	
Seneca County	do	3		
Shelby County	do	43		
Stark County	do	1		
Summit County	do	2	1	
Trumbull County	do	15	1	
Tuscarawas County	do	1		
Van Wert County	do	15		
Vinton County	do	32	1	
Washington County	do	57	1	
Williams County	do	90		
Wood County	do	128	1	
Wyandot County	do	1		
Total for State		3,010	38	
Total for State, same period, 1900.		1,324	17	
Oregon:				
Portland	June 1–June 30	8		
Total for State, same period, 1900.		10		
Pennsylvania:				
Allegheny County (including Pittsburg).	Feb. 1–July 27	101		
Armstrong County	do	1		
Bedford County	do	25		
Blair County	do	2		
Butler County	do	2		
Cumberland County	do	16		
Dauphin County (including Harrisburg).	do	248		
Delaware County	do	32		
Erie County	do	31		
Fayette County	do	3		
Franklin County	do	51		
Greene County	do	2		
Lancaster County	do	3		
Lawrence County	do	1		
Lebanon County	do	146	2	
Luzerne County	do	42	3	
Lycoming County (including Williamsport).	do	101		
McKean County	do	8		
Mercer County	do	13	2	
Perry County	do	17		
Philadelphia County (including Philadelphia).	do	44		
Tioga County	do	5		
Venango County	do	1		
Warren County	do	1		
Washington County	do	12		
Westmoreland County	do	26		
York County	do	12		
Total for State		946	7	
Total for State, same period, 1900.		10		
Rhode Island:				
Providence	June 23–July 6	3		
Total for State, same period, 1900.		0		
Tennessee:				
Knoxville	June 1–June 30	8	1	
Memphis	June 23–Aug. 3	11		
Nashville	July 1–July 6	3		
Total for State		22	1	
Total for State, same period, 1900.		0		

Smallpox in the United States—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Texas:				
Jasper County	June 17–July 17		2	
Total for State, same period, 1900.		409	2	
Utah:				
Salt Lake City	June 16–July 27	19		
Total for State, same period, 1900.		16		
Virginia:				
Roanoke	June 1–June 30	1		
Total for State, same period, 1900.		25	1	
Washington:				
Clallam County	June 18	3		
Seattle	June 1–June 30	13	1	
Tacoma	June 18–July 28	11		
Total for State		27	1	
Total for State, same period, 1900.		25		
West Virginia:				
Berkeley County	July 21	9		
Wheeling	June 16–June 29	2		
Total for State		11		
Total for State, same period, 1900.		0		
Wisconsin:				
Green Bay	June 24–July 7	9		
Milwaukee	July 14–July 20	1		
Total for State		10		
Grand total		6,245	169	
Grand total, same period, 1900.		2,705	57	

Plague in the United States as reported to the Surgeon-General, United States Marine-Hospital Service, from June 28, 1901, to August 9, 1901.

[For reports received from January 1, 1901 to June 28, 1901, see PUBLIC HEALTH REPORTS for June 28, 1901.]

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
California:				
an Francisco	July 6	1	1	
Do	July 9	3	2	
Do	July 11	1	1	

Weekly mortality table, cities of the United States.

Cities.	Week ended.	Population, U. S. census of 1900.	Total deaths from all causes.	Deaths from— Tuberculosis.	Yellow fever.	Smallpox.	Varioloid.	Cholera.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Ashtabula, Ohio	July 27	12,949	4											
Do	Aug. 3	12,949	2	1										
Baltimore, Md	do	508,957	235	19						3		1		
Baton Rouge, La	July 27	11,269	4	1										1
Binghamton, N. Y	do	38,647	6	1										
Do	Aug. 3	38,647	9	2										
Bismark, N. Dak	July 20	3,319	0											
Boston, Mass	July 27	560,892	208	18						2	2	3		2
Do	Aug. 3	560,892	210	31						1	4	1	1	
Brockton, Mass	July 27	40,063	10											
Burlington, Vt	do	18,641	2											
Cambridge, Mass	do	91,886	19	2									1	
Camden, N. J	Aug. 3	75,935	21									1		
Carbondale, Pa	July 31	13,536	6											
Chelsea, Mass	July 27	34,072	16											
Cincinnati, Ohio	July 26	325,902	134	15						4		2	2	
Do	Aug. 2	325,902	179	8						9	1	1	1	
Cleveland, Ohio	Aug. 3	381,766	134	7						2	2		2	1
Clinton, Iowa	July 27	22,698	10	2										
Clinton, Mass	do	13,667	4											
Do	Aug. 3	13,667	6											
Concord, N. H	July 27	19,632	4											
Dayton, Ohio	Aug. 3	85,333	25	2										
Detroit, Mich	do	285,704	111	6						3				
Dunkirk, N. Y	July 27	11,616	4											
Elmira, N. Y	do	35,672	14	2										1
Erie, Pa	do	52,733	20	2										1
Evansville, Ind	do	59,007	27	4						1				
Everett, Mass	do	24,336	7	2										
Fall River, Mass	Aug. 3	104,863	59	4						2				
Fargo, N. Dak	July 13	9,589	0											
Fisher, N. Dak	do		0											
Fitchburg, Mass	July 20	31,531	7											
Do	July 27	31,531	8											
Freeport, Ill	do	13,258	5	2										
Galesburg, Ill	do	18,607	6											
Gloucester, Mass	July 13	26,121	5											
Do	July 20	26,121	6									1		
Do	July 27	26,121	7											
Do	Aug. 3	26,121	4											
Grand Rapids, Mich	July 13	87,565	14	1										
Do	July 20	87,565	14							1				
Do	July 27	87,565	24	2						1				
Do	Aug. 3	87,565	13	1										
Green Bay, Wis	July 27	18,684	3											
Greenville, S. C	do	11,860	2	2										
Haverhill, Mass	Aug. 3	37,175	14									1		
Holyoke, Mass	do	45,712	17											
Jersey City, N. J	July 28	206,433	99	5							2	5		1
Johnstown, Pa	July 27	35,936	12	1										
Kensal, N. Dak	July 13		0											
Lawrence, Mass	July 27	62,559	27	1						1				
Lexington, Ky	do	26,369	14											
Do	Aug. 3	26,369	14	2										
Los Angeles, Cal	July 27	102,479	21	11						1				
Lowell, Mass	Aug. 3	94,969	39	3										
Lynchburg, Va	do	18,891	10											
McKeesport, Pa	July 27	34,227	20	1						1				
Malden, Mass	do	33,664	10	1						1				
Manchester, N. H	do	56,987	23	2										1
Marlboro, Mass	do	13,609	3											
Massillon, Ohio	do	11,944	2	1										
Mayville, N. Dak	July 20	1,006		1								2		
Medford, Mass	Aug. 3	18,244	2											
Memphis, Tenn	July 27	102,320	34	1						1				
Do	Aug. 3	102,320	28	4										
Michigan City, Ind	July 29	14,850	8											
Milwaukee, Wis	July 27	285,315	81	10						2	2	1	1	1
Do	Aug. 3	285,315	80							1	1	1		7
Minneapolis, Minn	July 27	202,718	61	2						2		5		
Mobile, Ala	do	38,469	19	8						1				1
Do	Aug. 3	38,469	11											
Nashua, N. H	July 27	23,898	14	2										
Nashville, Tenn	do	80,865	33	3										
Do	Aug. 3	80,865	32	4						3				

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

Cities.	Week ended.	Population, U.S. census of 1900.	Total deaths from all causes.	Deaths from— Tuberculosis.	Yellow fever.	Smallpox.	Varioloid.	Cholera.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Newark, N. J.	July 27	246,070	108	7		1					1		2	
New Bedford, Mass	Aug. 3	62,442	32	1						2				
Newburyport, Mass	July 13	14,478	2											
Do	July 20	14,478	4											
Do	July 27	14,478	4											
New Orleans, La	do	287,104	108	13						2	1			
Newport, R. I.	do	22,034	3											
Newton, Mass	Aug. 3	33,587	5	2										
New York, N. Y.	July 27	3,437,202	1,644	153		9				13	16	16	10	6
Norristown, Pa	do	22,265	5											
North Adams, Mass	Aug. 3	24,200	7	1										
Northampton, Mass	July 27	18,643	5											
Omaha, Nebr.	July 13	102,555	26											
Do	July 20	102,555	40											
Do	July 27	102,555	43											
Oneonta, N. Y.	do	7,147	0											
Ottumwa, Iowa	July 6	18,197	7	1										
Do	July 13	18,197	8											
Do	July 20	18,197	5	2										
Do	July 27	18,197	10											
Philadelphia, Pa	Aug. 3	1,293,697	474	61						11	2	7		15
Pittsburg, Pa	July 27	321,616	157	11						11	4	2	1	2
Plainfield, N. J.	do	15,369	4											
Portland, Me	do	50,145	13	3										
Providence, R. I.	Aug 3	175,597	72	5										
Quincy, Mass	July 20	23,899	7											
Do	July 27	23,899	4											
Salt Lake City, Utah	do	53,531	11	1						1				
San Diego, Cal	do	17,700	3											
Santa Barbara, Cal	July 20	6,587	2	1										
Scranton, Pa	July 27	102,026								1				
Shreveport, La	do	16,013	3											
Somerville, Mass	Aug. 3	61,643	13	1										
South Bend, Ind.	July 27	35,999	22	2										
Springfield, Mass	do	62,059	17	4										
Steelton, Pa	Aug. 3	12,068	0											
Tacoma, Wash	July 28	37,714	6	1										
Taunton, Mass	July 27	31,036	11											
Toledo, Ohio	do	131,822	34	3								1		
Do	Aug. 3	131,822	38											
Waltham, Mass	July 27	23,481	8											
Warren, Ohio	do	8,529	2											
Washington, D. C.	do	278,718	137	15						8			1	3
Weymouth, Mass	do	11,324	2	1										
Wheeling, W. Va	do	38,878	14	2						2				
Wichita, Kans	do	24,671	20	2						1	1			
Williamsport, Pa	Aug. 3	28,757	8											
Winona, Minn	July 27	19,714	5											
Youngstown, Ohio	do	44,885	19									1		

Table of temperature and rainfall, week ended August 5, 1901.

[Received from Department of Agriculture, Weather Bureau.]

Locality.	Temperature in degrees Fahrenheit.			Rainfall in inches and hundredths.		
	Normal.	a Excess.	a Defic'ncy.	Normal.	Excess.	Deficiency.
Atlantic Coast:						
Eastport, Me	62		2	.84		.54
Portland, Me	68		2	.84		.04
Northfield, Vt	66	0		.91	.09	
Boston, Mass	70	2		.95		.75
New Haven, Conn	71	1		1.21		1.01
Albany, N. Y	72	2		.96		.56
New York, N. Y	73	3		1.05	.15	
Harrisburg, Pa	73	3		.98		.88
Philadelphia, Pa	75	3		.98		.88
New Brunswick, N. J	74	2		1.19	.81	
Atlantic City, N. J	72	4		.90		.50
Baltimore, Md	76	4		.95		.95
Washington, D. C	76	3		.98		.85
Lynchburg, Va	77	1		.91		.71
Cape Henry, Va	77	5		1.35	.65	
Norfolk, Va	78	2		1.40		.10
Charlotte, N. C	77	3		1.26		.66
Raleigh, N. C	77	5		1.31		1.01
Kittyhawk, N. C	78	4		1.53		.53
Hatteras, N. C	79	1		1.49		.99
Wilmington, N. C	80	0		1.75		.05
Columbia, S. C	80	2		1.53		1.33
Charleston, S. C	82	0		1.82		1.32
Augusta, Ga	80	2		1.19		.99
Savannah, Ga	81	1		1.62		1.02
Jacksonville, Fla	82	0		1.45		.85
Jupiter, Fla	81	3		1.05	1.45	
Key West, Fla	84		2	.91	1.59	
Gulf States:						
Atlanta, Ga	78	2		1.12		.92
Tampa, Fla	81		1	2.27		1.12
Pensacola, Fla	81	1		1.90		.80
Mobile, Ala	81	1		1.56		1.56
Montgomery, Ala	80	2		.98		.98
Meridian, Miss	78	4		1.05		.05
Vicksburg, Miss	81	3		.88		.78
New Orleans, La	82	2		1.40		1.30
Shreveport, La	83	1		.56	1.64	
Fort Smith, Ark	79	3		.89	1.11	
Little Rock, Ark	80	2		.93	.87	
Palestine, Tex	82	2		.54	3.06	
Galveston, Tex	84	0		.99		.79
San Antonio, Tex	84	0		.69		.29
Corpus Christi, Tex	82	0		.47		.27
Ohio Valley and Tennessee:						
Memphis, Tenn	79	5		.77		.47
Nashville, Tenn	78	2		.85	.95	
Chattanooga, Tenn	77	3		.91		.61
Knoxville, Tenn	76	4		.96		.56
Lexington, Ky	75	1		1.00	.20	
Louisville, Ky	77	3		.84		.34
Indianapolis, Ind	75	1		.86		.86
Cincinnati, Ohio	76	2		.82	.38	
Columbus, Ohio	74	2		.70		.60
Parkersburg, W. Va	75	1		.98		.88
Pittsburg, Pa	74	0		.85		.05
Lake Region:						
Oswego, N. Y	70	0		.65		.55
Rochester, N. Y	70	0		.68		.48
Buffalo, N. Y	70	0		.70		.70
Erie, Pa	71	1		.68		.08
Cleveland, Ohio	71	1		.72		.32
Sandusky, Ohio	73	1		.74		.34
Toledo, Ohio	72	0		.63		.63
Detroit, Mich	71		1	.65		.45
Lansing, Mich	70		4	.65		.25
Port Huron, Mich	68	0		.56		.56
Alpena, Mich	65		1	.75		.35
Sault Ste. Marie, Mich	61		3	.60		.60
Marquette, Mich	64	0		.63		.13
Escanaba, Mich	66		2	.81		.51
Green Bay, Wis	68	0		.63		.43

a The figures in this column represent the average daily departure.

Table of temperature and rainfall, week ended August 5, 1901—Cont'd.

Locality.	Temperature in degrees Fahrenheit.			Rainfall in inches and hundredths.		
	Normal.	a Excess.	a Defic'ncy.	Normal.	Excess.	Deficiency.
Lake Region—*Continued.*						
Grand Haven, Mich	68		2	.56		.46
Milwaukee, Wis	69	3		.63		.63
Chicago, Ill	71	1		.72		.72
Duluth, Minn	66	0		.77		.77
Upper Mississippi Valley:						
St. Paul, Minn	71		1	.75		.75
La Crosse, Wis	71		1	.79		.79
Dubuque, Iowa	73	1		.79		.79
Davenport, Iowa	74	0		.82		.82
Des Moines, Iowa	73	1		.77		.67
Keokuk, Iowa	75	1		.79		.79
Springfield, Ill	75	1		.51		.41
Cairo, Ill	78	0		.70	3.40	
St. Louis, Mo	77	5		.84		.74
Missouri Valley:						
Columbia, Mo	77	1		.83	1.07	
Springfield, Mo	75	5		1.00		.20
Kansas City, Mo	77	3		.91	1.39	
Topeka, Kans	76	4		1 05	.05	
Wichita, Kans	78	2		.69		.49
Concordia, Kans	76	3		.70	.00	
Lincoln, Nebr	76	0		.77		.77
Omaha, Nebr	75	1		.86		.56
Sioux City, Iowa	73	1		.82		.12
Yankton, S. Dak	73	1		.72	.08	
Valentine, Nebr	71		1	.49	.21	
Huron, S. Dak	69	1		.65		.35
Pierre, S. Dak	75		3	.42		.02
Moorhead, Minn	66	2		.72	.72	
Bismarck, N. Dak	70		2	.49		.49
Williston, N. Dak	68	0		.33		.33
Rocky Mountain Region:						
Havre, Mont.	69	1		.37	.03	
Helena, Mont	69	3		.14	.06	
Miles City, Mont	75		1	.28	.42	
Rapid City, S. Dak	72		4	.35	.45	
Spokane, Wash	72	2		.02		.02
Walla Walla, Wash	77	3		.00	.00	
Baker City, Oreg	70			.07		
Winnemucca, Nev	73	7		.00	.20	
Pocatello, Idaho	71	9		.07		.07
Boise, Idaho	74	6		.00	.00	
Salt Lake City, Utah	77	5		.14		
Lander, Wyo	66	6		.14		.04
Cheyenne, Wyo	67	1		.42		.32
North Platte, Nebr	72	2		.56		.56
Denver, Colo	71	3		.35	.15	
Pueblo, Colo	74	0		.49		.29
Dodge City, Kans	76	2		.70		.70
Oklahoma, Okla	79	3		.77		.67
Amarillo, Tex	75	1		.54		.44
Abilene, Tex	82	2		.48		.48
Santa Fe, N. Mex	68			.79	.65	
El Paso, Tex	81	1		.44		.44
Phœnix, Ariz	89	1		.23	.37	
Yuma, Ariz	92		2	.07	.03	
Pacific Coast:						
Seattle, Wash	66	0		.13		.13
Tacoma, Wash	62	4		.14		.14
Portland, Oreg	6	4		.07		.07
Roseburg, Oreg	67	5		.02		.02
Eureka, Cal	56			.00		
Redbluff, Cal	83	7		.00	.00	
Carson City, Nev	68	8		.00	.20	
Sacramento, Cal	74	6		.00	.00	
San Francisco, Cal	59		1	.00	.00	
Fresno, Cal	84	6		.00	.00	
San Luis Obispo, Cal	65	5		.00	.00	
Los Angeles, Cal	70	4		.00	.10	
San Diego, Cal	68	2		.06		.06

a The figures in this column represent the average daily departure.

FOREIGN AND INSULAR.

BRAZIL.

Report from Rio de Janeiro.

RIO DE JANEIRO, *June 25, 1901.*

SIR: I have the honor to transmit to you the official sanitary report for June 1 to June 15, inclusive.

There were 596 deaths from all causes, a decrease of 87 as compared with the last sixteen days of May, being at the rate of 39.73 per diem, and corresponding to an annual death rate of 18.28 per 1,000 against 42.56 and 19.59 per 1,000 during the previous period.

The number of deaths from infectious and contagious diseases was as follows: Tuberculosis, 104 against 119; yellow fever, 13 against 23; smallpox, 20 against 26; measles, 0 against 2; beriberi, 2 against 12; dysentery, 1 against 6; typhoid fever, 3 against 2, and malarious fever, 35 against 42.

There were 642 births—that is, an average of 42.8 per diem, corresponding to an annual birth rate of 19.69 per 1,000.

Respectfully, W. HAVELBURG, M. D.,
Acting Assistant Surgeon, U. S. M. H. S.

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

BRITISH HONDURAS.

Report from Belize—Fruit port.

BELIZE, BRITISH HONDURAS, *July 21, 1901.*

SIR: I have to make the following report of the conditions and transactions at this port during the week ended July 20, 1901:

Population according to census of 1901, 9,114; present officially estimated population, 9,114. Number of cases and deaths from yellow fever during the week, none; number of cases and deaths from smallpox during the week, none; number of cases and deaths from typhus fever during the week, none; number of cases and deaths from cholera during the week, none; number of cases and deaths from plague during the week, none; number of deaths from other causes during the week, 3. Prevailing diseases, malarial in character. General sanitary condition of this port and the surrounding country during the week, good.

Bills of health were issued to the following vessels: July 19, steamship *S. Oteri;* crew, 35; passengers from this port, 2; passengers in transit, 9; pieces of baggage disinfected, 4. July 20, steamship *Managua;* crew, 16; passengers from this port, none; passengers in transit, none; pieces of baggage disinfected, none. Steamship *Bergenseren;* crew, 16; passengers from this port, none; passengers in transit, none; pieces of baggage disinfected, none.

Respectfully, J. GREY THOMAS,
Acting Assistant Surgeon, U. S. M. H. S.

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

CANADA.

Inspection of immigrants at Quebec.

QUEBEC, CANADA, *July 27, 1901.*

SIR: I have the honor to report that for the week ended July 27, there were inspected 293 immigrants; passed, 287; detained, 6; cause of detention, favus, 1; hernia, 1; kyphosis, 2; paralysis of left arm, 1; tinea sycosis, 1.

Respectfully,

VICTOR G. HEISER,
Assistant Surgeon, U. S. M. H. S.

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

COLOMBIA.

Report from Bocas del Toro—Fruit port.

BOCAS DEL TORO, COLOMBIA, *July 24, 1901.*

SIR: I have to make the following report of the conditions and transactions at this port during the week ended July 23, 1901:

Number of cases and deaths from yellow fever during the week, 1 case; deaths, none; number of cases and deaths from smallpox during the week, none; number of cases and deaths from typhus fever during the week, none; number of cases and deaths from cholera during the week, none; number of cases and deaths from plague during the week, none; number of deaths from other causes during the week, 1 infant; prevailing diseases, malaria and yellow fever. The only death I heard of was the infant of 3 weeks of age; cause of death, infantile diarrhea. General sanitary condition of this port and the surrounding country during the week was increase in malarial fever.

Bills of health were issued to the following vessels: July 17, steamship *Stillwater;* crew, 27; passengers from this port, none; passengers in transit, none; pieces of baggage disinfected, none; steamship *Banes;* crew, 17; passengers from this port, none; passengers in transit, none; pieces of baggage disinfected, none. July 20, steamship *Colombia;* crew, 20; passengers from this port, none; passengers in transit, none; pieces of baggage disinfected, none.

Respectfully,

PAUL OSTERHOUT,
Acting Assistant Surgeon, U. S. M. H. S.

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

CUBA.

Reports from Cienfuegos, Casilda, and Santa Cruz del Sur.

CIENFUEGOS, CUBA, *July 29, 1901.*

SIR: Through the chief quarantine officer for the island of Cuba, I have the honor to transmit the following report for the district under my command for the week ended July 27, 1901:

Twelve deaths have occurred in this city, of which 4 occurred in the civil hospital. No contagious diseases reported. Causes of death were as follows: Tuberculosis, 3; enteritis, 2; insufficiency, mitral, 2; hemorrhage, post partum, 1; paludism, 1; tetanus, infantile, 1; pernicious fever, 1; sclerosis, arterial, 1. Death rate per 1,000 inhabitants, 15.64.

Of the 2 cases of yellow fever reported from this city, July 15 and

July 18, respectively, the first case has recovered; the second is still under treatment, but in a fair way to recovery. No new cases have been reported.

Nine vessels have been inspected and passed, granted pratique; 3 vessels have been admitted without inspection, and 15 bills of health were issued to vessels leaving this port. July 24 the steamship *Comino* was disinfected prior to departure.

Casilda.—Acting Asst. Surg. Alejandro Cantero reports 6 deaths in the city of Trinidad during the week; no contagious diseases; 12 vessels inspected and passed, granted pratique, and no bills of health issued during the week.

Santa Cruz del Sur.—Acting Asst. Surg. Juan R. Xiques reports no deaths at that port during the week; no contagious diseases; 3 vessels were inspected and passed, granted pratique, and no bills of health issued vessels during the week.

Respectfully, EDWARD F. NUNEZ,
Acting Assistant Surgeon, U. S. M. H. S.,
In Temporary Charge.

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

Report from Casilda.

CIENFUEGOS, CUBA, *July 24, 1901.*

SIR: Through the chief quarantine officer for the island of Cuba, I have the honor to transmit the following report received, from the substation at Casilda, Acting Asst. Surg. Alejandro Cantero, for the week ended July 19, 1901, too late to be included in the weekly report from this station: Six deaths have occurred in the city of Trinidad during the week. No contagious diseases reported. Health of city and vicinity good. Nine vessels have been inspected and passed during the week.

Respectfully, EDWARD F. NUNEZ,
Acting Assistant Surgeon, U. S. M. H. S.,
In Temporary Charge.

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

Reports from Gibara.

GIBARA, CUBA, *July 13, 1901.*

SIR: Through the chief quarantine officer for the island of Cuba, I have the honor to inclose herewith the quarantine and abstract of bills of health reports for the week ended July 13, 1901. Fourteen vessels were inspected and passed on arrival and 16 bills of health issued vessels leaving the port. Three deaths occurred in the city during the week, the cause of the same being as follows: Athrepsia, 1; pernicious malarial fever, 1; rhachitis, 1. The health of the city and adjacent country continues good. No cases of quarantinable disease have been reported.

Respectfully, S. GOMEZ,
Acting Assistant Surgeon, U. S. M. H. S.

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

GIBARA, CUBA, *July 25, 1901.*

SIR: Through the chief quarantine officer for the island of Cuba, I have the honor to inclose herewith the quarantine and abstract of bills

of health reports for the week ended July 20, 1901. Eleven vessels were inspected and passed on arrival and 8 bills of health issued vessels leaving the port. Three deaths occurred during the week. The causes of the same were as follows: Gastro-enteritis, 1; ophthalmia, 1; atrophy of the liver, 1. Sanitary conditions continue good.

Respectfully, S. GOMEZ,
Acting Assistant Surgeon, U. S. M. H. S.

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

Report from Havana—A case of yellow fever in Havana.

HAVANA, CUBA, *July 27, 1901.*

SIR: I have the honor to submit the following report of the transactions at this station for the week ended July 27, 1901:

During the week 3 cases of yellow fever, with no deaths, have been reported by the sanitary officer of the city. One of the cases originated in the city of Havana, while the remaining 2 received the infection at Santiago de las Vegas. During the month of July to date there have been 6 cases of yellow fever in Santiago de las Vegas, with no deaths.

On the 23d instant Acting Asst. Surg. Jose M. Campos reported from Batabano that a case of smallpox had occurred in that town. The patient, a woman who was born and had resided there all her life, was removed and isolated outside of the town and the premises she had occupied were disinfected.

One of the 2 cases of yellow fever reported last week from Cienfuegos has recovered and the other is now convalescent.

I inclose the usual mortuary and other statistics for the week.

Respectfully, A. H. GLENNAN,
Surgeon, U. S. M. H. S.,
Chief Quarantine Officer for the Island of Cuba.

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

Summary of transactions at Havana for week ended July 27, 1901.

PASSENGER DEPARTMENT.

Passengers inspected	297
Passengers vaccinated	1
Persons examined for immunity and accepted	135
Persons examined for immunity and rejected	12

HARBOR DEPARTMENT.

Crews of incoming vessels inspected	746
Crews of outgoing vessels inspected	1,002
Passengers of outgoing vessels inspected	354
Passengers of incoming vessels inspected	437
Total	2,539
Vaccination certificates issued	10

SHORE-DISINFECTING PLANT.

Baggage disinfected	429
Express disinfected	0
Freight disinfected	18
Total	447

SHORE-DISINFECTING PLANT—Continued.

Baggage inspected and passed	839
Express inspected and passed	32
Freight inspected and passed	2,623
Total number of pieces handled	3,941

DISINFECTING STEAMER SANATOR.

Vessels disinfected	3
Vessels partially disinfected	4
Vessels undergoing disinfection	1
Viveros disinfected	12
Parcels of clothing and dunnage disinfected	824
Passengers and members of crews inspected	196

MORTUARY REPORT.

Tuberculosis	23	Dysentery	2
Pneumonia	4	Enteric fever	1
Enteritis	17	Total number deaths from all causes	120
Scarlet fever	1		

TRISCORNIA DETENTION CAMP.

Passengers arriving from Vera Cruz and Progreso	55
Immune passengers released	20
Nonimmunes, taken to detention camp to complete five days from port of departure	35

Reports from Matanzas, Cardenas, Isabela de Sagua, and Caibarien.

MATANZAS, CUBA, *July 24, 1901.*

SIR: Through the chief quarantine officer, I have the honor to submit herewith the following sanitary report of the quarantine district under my command for the week ended July 20, 1901:

Matanzas.—Seventeen deaths occurred in the city of Matanzas during the period covered by this report, showing a mortality of 19.59 per 1,000. The principal causes of death were as follows: Enteritis, 3; gastro-enteritis, 4; tuberculosis, 2; typhoid fever, 1; "fiebre de borras," 1; malarial fever, 1; gangrene, senile, 1; other causes, 4. One case of typhoid fever was reported. On investigation, the case of "fiebre de borras," which is noted in the above mortality list, does not appear to have been a case of yellow fever. The diagnosis of the case seems to have been made by the attending physician solely on the presence of epistaxis and the height and short duration of the fever. There was no jaundice. The urine and the blood were not examined. Although the case was reported too late for me to see it, the history of the case seems to indicate hemorrhagic malarial fever, instead of yellow fever. Five vessels were inspected and passed on arrival and 2 vessels passed without inspection. Eight bills of health were issued to vessels leaving this port. Fifty-one health certificates were issued to persons leaving the island. Forty-nine pieces of baggage were inspected and passed and 7 pieces were disinfected. The American schooner *Wave*, bound for Key West, Fla., was disinfected at this port July 19, 1901.

Cardenas.—Acting Asst. Surg. Enrique Saez reports that 7 deaths occurred in Cardenas during the week of the following causes: Tuberculosis, 1; dysentery, 1; nephritis, 1; cerebral hemorrhage, 1; tetanus, 1; infectious enteritis, 1; typhoid fever, 1. No case of an infectious or contagious character was reported. The death rate during the week was 14.70 per 1,000. Nine vessels were inspected and passed on arrival

and 14 vessels passed without inspection. Nineteen bills of health were issued to vessels leaving the port.

Isabela de Sagua.—Acting Asst. Surg. Felix Garcia reports that 11 deaths occurred in the municipal district of Sagua la Grande of the following causes: Gastro-enteritis, 2; infectious enteritis, 2; infectious fever, 2; enteritis, 2; enterocolitis, 1; cyanosis, 1; tetanus, infantile, 1. No case of infectious or contagious character was reported. The death rate during the week was 26.90 per 1,000. Two vessels were inspected and passed on arrival and 9 vessels passed without inspection. Twelve bills of health were issued to vessels leaving the port.

Caibarien.—Acting Asst. Surg. Felix Geralt reports that the sanitary condition of port and town is good. Seven deaths have occurred during the week of the following causes: Gastro-enteritis, 2; cancer, 1; cirrhosis, atrophic, 1; heart disease, 2; hemorrhage, 1. No case of an infectious or contagious character was reported. The death rate during the week was 4.22 per 1,000. Seven vessels arrived and were passed without inspection. Six bills of health were issued to vessels leaving the port; 17 passengers and 117 crew were inspected and passed on arrival and 117 crew outgoing were inspected. One vaccination certificate and 6 immune certificates were issued during the week.

Respectfully, G. M. GUITÉRAS,
Passed Assistant Surgeon, U. S. M. H. S.

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

Inspection of immigrants at Guantanamo during the week ended July 13, 1901.

GUANTANAMO, CUBA, *July 13, 1901.*

SIR: I herewith submit the report of alien steerage passengers at this port during the week ended July 13, 1901: July 9, Spanish steamship *Miguel Gallart*, from Barcelona, Spain, with 1 immigrant.

Respectfully, LUIS ESPIN,
Acting Assistant Surgeon, U. S. M. H. S.

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

Inspection of immigrants at Nuevitas during the week ended July 13, 1901.

NUEVITAS, CUBA, *July 15, 1901.*

SIR: I herewith submit report of alien steerage passengers at this port during the week ended July 13, 1901: July 10, steamship *Maria Herrera*, from Porto Rico, with 11 immigrants.

Respectfully, OWEN W. STONE,
Acting Assistant Surgeon, U. S. M. H. S.

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

Inspection of immigrants at Santiago for the week ended July 13, 1901.

SANTIAGO DE CUBA, *July 13, 1901.*

SIR: I herewith submit report of alien steerage passengers at this port during the week ended July 13, 1901: July 10, Spanish steamship *Miguel Gallart*, from Barcelona, Spain, via other Spanish ports, with 21

immigrants. July 12, provisional flag steamship *Tomas Brooks*, from Kingston, Jamaica, with 17 immigrants.

Respectfully, R. H. VON EZDORF,
Assistant Surgeon, U. S. M. H. S.

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

ENGLAND.

Report from London—Plague at Cape Town and other places.

LONDON, ENGLAND, *July 20, 1901.*

SIR: I have the honor to report that for the week ended Saturday, July 13, the death rate of the city of London was 14.2 per 1,000. There were no deaths from any quarantinable disease, but on the preceding Saturday there were 12 cases of smallpox and 1 of typhus fever under treatment in the hospitals. For the same period there was 1 death from smallpox in Glasgow and 1 also in Liverpool.

The report of plague from Cape Colony continues encouraging. Up to July 6 there had been a total of 727 cases with 330 deaths in Cape Town; in Port Elizabeth 20 cases and 9 deaths, and in all other ports of the colony 10 cases and 2 deaths.

In Mauritius, for the week ended July 11, there were 2 fatal cases of plague.

For the week ended July 7, there were in Egypt 14 cases of plague and 7 deaths. Of these, 9 cases and 6 deaths occurred at Zagazig, 3 cases and 1 death at Alexandria, and 2 cases at Port Said.

In Hongkong, for the week ended July 13, there were 26 cases and 21 deaths from plague, showing a great reduction in the number of cases.

Respectfully, A. R. THOMAS,
Passed Assistant Surgeon, U. S. M. H. S.

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

Report from Liverpool.

LIVERPOOL, ENGLAND, *July 23, 1901.*

SIR: I have the honor to make the usual report for the week ended July 20, 1901. During the week I inspected 750 passengers for Canadian ports. I advised the rejection of 8 for favus, 2 for trachoma, and 1 for Pott's disease.

Respectfully, JOHN F. ANDERSON,
Assistant Surgeon, U. S. M. H. S.

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

GERMANY.

On the diagnostic and therapeutic value of tuberculin.

[By Prof. ROBERT KOCH—Read at the British Tuberculosis Congress, London, July 23, 1901.]

When in the year 1890 I made my first exact communications regarding tuberculin, I was able to point to two important properties of this

medicament, namely, its power to produce specific reactions in persons suffering from tubercular disease and its therapeutic efficacy if used for a length of time.

With reference to the former property, I expressed myself in the following words: "I believe I do not go too far when I assume that the medicament will in future be an indispensable aid to diagnosis. It will enable one to diagnose doubtful cases of incipient phthisis even when one fails to obtain certain knowledge of the nature of the disease by finding bacilli or elastic fibers in the sputum or by the physical examination."

As to the therapeutic effect of tuberculin I said on that occasion: "The main thing in the new treatment is that it begin as early as possible. The incipient stage of phthisis is to be its proper aim, because it is against that it can fully develop all its power." And in another place, "After this experience I am disposed to believe that incipient phthisis can be cured by the medicament with certainty." Since that time, I have had very frequent opportunities of testing the efficacy of tuberculin, and have invariably been able to convince myself anew of the correctness of the statements I made then. I therefore still adhere to the opinion that tuberculin is an indispensable aid to diagnosis and a very effective remedy for incipient phthisis. In proof of the diagnostic value of tuberculin I point to its extensive use as a means of ascertaining tuberculosis in cattle. According to the calculations which Voges had collated from numerous reports, and according to the careful investigations of Eber, it gives, if properly applied, correct diagnoses in 97 to 98 cases in 100. Considering that the diagnosis is made by a single injection of tuberculin, and that errors caused by accidental rise of temperature due to other causes are not entirely excluded, this is a splendid result. Moreover, the injection of tuberculin into cattle, of which we may safely say that it has now been performed in millions of cases, has shown that it is absolutely free of danger; at least, not a single case of its having caused any injury to health has ever come to my knowledge. In the case of human beings, however, the conditions of the diagnostic use of tuberculin are considerably more favorable, for it is not necessary to extort the diagnosis by a single injection, and, therefore, we need not give so large a dose, or produce a strong reaction. On the contrary, we may rest content with a quite slight reaction, but must then repeat the test, in order to exclude the possibility of error. For this purpose I use the following method: In the first place the patient's temperature is observed for at least one day, or better, two, in order to ascertain whether the temperature is below 37° C. Patients whose temperature is above 37° C. are unsuited for the diagnostic application of tuberculin, and ought not under any circumstances to be subjected to the tuberculin test. If a patient is found suitable, he receives an injection of tuberculin under the skin of the back in the forenoon. With weak patients one begins with one-tenth of a milligram; with robust ones whose tubercular alterations are probably very slight, one may begin with 1 milligram. If there is no rise of temperature at all, one gives a dose double as large as the first, not on the next day, but on the day after the next. But if there is a slight rise of temperature, only a quarter of a degree for instance, the dose is not raised, but repeated as soon as the temperature has gone down to its normal level. It very often happens that, though the same dose has been given, the second reaction is stronger than the first. This is quite specially characteristic of the effect of tuberculin, and may be

regarded as a quite infallible sign of the presence of tuberculosis. But if the first small doses produce no reaction, one gives 5 and finally even 10 milligrams. For certainty's sake, I am accustomed to give this latter dose twice, and only when no reaction occurs, even then do I feel justified in assuming that the case is not one of fresh or progressive tuberculosis demanding specific treatment.

If one adopt this method, one will never expose a patient to danger, nor even cause him any serious discomfort, for, as I have already said, slight rises of temperature, up to 38° C., which give most patients hardly any disagreeable sensation whatever, suffice.

In course of time, I have had a large number of diagnostic tuberculin injections performed in my sick ward on the principles just stated. By the end of the year 1900 the number amounted to 2,890. If I add to these the other cases personally observed by me elsewhere, I get a total of considerably more than 3,000. This is the material from which I derive my experience of the diagnostic value of tuberculin; and I have found that the cases in which, owing to indistinct reactions, a sure diognosis is impossible are quite exceptional. As a rule, one succeeds either in obtaining distinct reactions or in ascertaining their absolute nonoccurrence. In the former case one may, as is generally known, conclude with certainty that there is a tubercular focus, and unmistakable locally limited symptoms very often indicate its position. The tuberculin test is of special value in judging of catarrh of the apex pulmonis without tubercle bacilli in the sputum, especially when influenza is prevalent, because then cases pretty often occur which, to the eye of the clinical observer, exactly resemble incipient tuberculosis, but are not that. Among our numerous patients suffering from catarrh of the apex pulmonis there were almost 15 per cent in whom no reaction took place; and in all the cases that could be observed long enough the further course of the disease confirmed our opinion that they were not cases of tuberculosis.

Every case of pleurisy, too, as soon as the fever is completely gone and when there is no sputum containing tubercle bacilli, ought to be tested with tuberculin. Of our pleurisy patients, 73.2 per cent reacted. I wish expressly to add that I have never seen any disadvantageous effect of tuberculin when it was used in the way I have described. The conviction that pulmonary tuberculosis in its earliest stages is curable, and that it is, therefore, specially necessary to recognize tuberculosis with certainty in its first beginnings, has been continually gaining ground of late, and the use of tuberculin as a means of diagnosis has again become more and more frequent. In several German sanatoria, for instance, its application has been introduced, and I believe that just these establishments, to which it must be a matter of very great importance to get their tubercular patients in as curable a condition as possible, will find the tuberculin test to be an aid of quite special value.

I come now to the therapeutic value of tuberculin and of this too I maintain that it is completely proved, provided—and on this I have insisted from the first—that its application be restricted to still curable cases—i. e., to those which are not yet too far advanced and not complicated with other morbid processes caused by streptococci, staphylococci, pneumococci, influenza bacteria, etc. As these processes are almost always accompanied by rises of temperature, the best way of guarding against the misapplication of tuberculin is to use it only in cases in which the temperature of the body does not exceed 37° C. That tuberculin exercises an exceedingly favorable influence on all such cases, and even completely cures them as a rule, is a fact of which I

have repeatedly convinced myself, and a number of other medical men who have studied the therapeutic value of tuberculin for years, and have either published their experience of it themselves or communicated it to me privately, have arrived at the same result. As such I name Spengler. Turban, Petruschky, Krause, Thorner, Heron, Rembold, Bandelier, Goetsch, Kirchner, and Kartulis, to whose publications I beg to refer you.

With regard to the therapeutic application of tuberculin, however, it is a fact of special importance that the producing of strong reactions, such as were deemed necessary at first, is now generally abandoned. On the contrary, physicians endeavor to keep the reactions as slight as possible, and not to repeat an injection of tuberculin until the preceding reaction has completely passed off, and the temperature has been normal again for one or even several days. One can even, as Goetsch has shown, carry out the treatment without any reaction at all. It is also very expedient to repeat the treatment with tuberculin, with intervals of three to four months, till the capability of reaction is permanently extinct. Petruschky, who has given this method the name of "stage treatment," has effected by it cures whose permanence has stood the test of years of observation.

The rules which experience has prescribed for the treatment with tuberculin may, therefore, be briefly summarized as follows:

(1) Only patients that have no fever, and in whom the process has not advanced too far, are suited for the treatment. (2) One begins with a very small dose, and increases it so slowly that only very slight reactions, or even none, take place. (3) If reactions take place, tuberculin must not be injected again till the temperature has been normal for one or several days. (4) The treatment with tuberculin must be repeated until, after an interval of three or four months, the capability of reaction is permanently extinct.

Malaria.

[By Prof. ROBERT KOCH—Read at the British tuberculosis congress in London July 23, 1901.]

When I was a student of medicine, we were taught that malaria was not an infectious disease—i. e., not transmissible from person to person, and that it was regarded as the type of the miasmatic as contrasted with the contagious diseases.

What a change has taken place since then! Now we know that malaria can be transmitted when one injects the blood of a malaria patient into the body of a healthy person, a case, indeed, which does not occur under natural circumstances. We know, too, that malaria is not caused by gaseous substances, but by micro organisms, which belong to the category of the animal parasites, are imbibed by gnats with the blood they suck, further developed in the bodies of the gnats, and, finally, inoculated into healthy human beings again. So, according to the views now prevalent, malaria can not possibly be produced without the cooperation of two factors, namely, the malaria parasites and the gnats. It is a matter of course that so complete a transformation of our views as to the nature of malaria has led to a corresponding transformation of opinion regarding the measures to be taken against it. In former times they knew only one means of getting rid of malaria, namely, the drying up of swamps, a means which unfortunately admits of application only to a comparatively small extent. Attempts were,

therefore, made to support this measure by planting certain plants, such as the eucalyptus and the helianthemum, of which it was believed that by their large consumption of water they could deprive the soil of its swampy character. Now a number of other measures, based on better knowledge of the etiology of malaria, have been proposed, of which the following are the most important: First, people are advised to avoid the neighborhood of malaria patients, and to fix their abodes at least 5 miles from places where malaria prevails; second, it is proposed to exterminate the malaria-transmitting gnats by destroying their larvæ at the easily accessible breeding places; third, human beings are to be protected against the gnats by wire nets for their dwellings and by gloves and veils for their hands and faces; fourth, efforts should be made to exterminate the malaria parasites by the rational use of quinine. It is obvious that these four proposals are theoretically of equal value. If one never has occasion to go near people suffering from malaria, or if one is never stung by gnats, one can not get malaria; and if either the gnats or the malaria parasites are exterminated, malaria must vanish forever, because one of the factors absolutely necessary for its production has ceased to exist. How these proposals will stand the test of practice, however, whether it is possible to carry them out to so general an extent as we had to suppose in estimating their theoretical value, is quite another question. The discussion of this question is of special interest at present, because experiments are now being made everywhere with a view to proving the practicability of the measures I have mentioned. I believe, therefore, that I may count on your assent, if I choose the said measures for the theme of this lecture, and take the liberty to discuss the measure proposed by myself in somewhat fuller detail.

If we begin with the removal of swamps, a measure which has been known from of old, we must regard its efficacy as confirmed by manifold experience, and, consequently, as proved. Now, indeed, we know that the effect is not due, as was formerly supposed, to the prevention of the rotting of vegetable matter which was supposed to emit the gases that caused the disease, but to the destruction of the breeding places for the gnats. So, strictly speaking, this measure coincides with that aimed directly against the larvæ of the gnats, of which I shall speak later on. Formerly, attention was paid almost exclusively to extensive swamps, which could be dried up by regulating rivers and by means of deep ditches through which the water could flow off. In this way, districts have not infrequently been freed of malaria. In those cases, however, the purpose was always gained by very expensive works, of which it can not even always be said that they were necessary, for it has been discovered that the anopheles gnats, which are the chief transmitters of malaria, have their breeding places much more frequently in little puddles and pools than in great swamps. Several times in New Guinea I saw many larvæ of anopheles gnats in quite small gatherings of water in wheel marks or even in water butts. In Italy I repeatedly found them in water vessels which were placed in gardens for the purpose of watering the plants. In future, then, it will be necessary to pay attention to the small and even smallest gatherings of water, which can generally be rendered harmless by covering them with earth or by frequent emptying rather than to large swamps, which can not, as a rule, be easily got rid of. Where such easily remedied conditions exist, it is certainly advantageous to remedy them. But in by far the majority of cases, especially in the tropics, comparatively little can be done against swamps. In tropical regions it will not be possible in the rainy season

even to get rid of all the little puddles that keep continually forming and re-forming. In many districts the gnats find many opportunities of laying their eggs not only in the swamps but also in hollows in the trees, axils, etc., so that they are not exclusively dependent upon the swamps at all. On the tobacco plantation of Stephansort in New Guinea, for instance, there were very many anopheles gnats and also a great deal of malaria, though the whole territory was most carefully drained for the tobacco's sake, and swamps were, therefore, impossible.

In general, then, one may say of this measure that it is in itself a useful one, but that the extent to which it can be applied is but limited. Of the direct extermination of the larvæ of the gnats by destroying the breeding places, pouring petroleum into the water, or other larvicidal means the same may be said. Wherever it is possible it ought to be effected, but that will be only where the gnats have but few, easily accessible, and not too large gatherings of water to lay their eggs in. Such attempts have already been made by Fermi in the island of Asinara, off the north coast of Sardinia, and by Kerschbaumer at Rovigno, in Istria. I suppose you know also that Ross has gone to the west coast of Africa again, to try on a large scale to get rid of and destroy the breeding places of the anopheles. Before the end of this year, perhaps, we shall learn the results of these experiments. I am convinced that they will succeed wherever the conditions I have mentioned exist; but wherever there is tropical vegetation, and especially where rice, which requires permanent irrigation, is grown, I consider it impossible to gain any advantage by this measure.

The proposal to run away from malaria, so to speak, by living at least 5 miles away from all native settlements where malaria prevails, is one with which I have very little sympathy. If the pestilence in question were of short duration, like cholera, plague, typhus, and the like, compliance with such advice might be of use. But flight from so stationary a disease as malaria is equivalent to final renunciation of the most fertile regions in the tropics. For this reason, too, the merchants have already declared against it, because it would intolerably hamper all intercourse with the native population. The missionaries, too, are against it, because, if they lived far away from the natives, they would lose their influence over them. And yet this proposal, too, may be advantageously complied with when contact with a malarial native settlement is temporary, on expeditions for instance. In such cases it will always be very expedient to encamp for the night not in or beside the dwellings of natives, but at a suitable distance from them. In permanent settlements, however, only a few individuals will be able to comply with this proposal. Nor has hitherto, so far as I am aware, any use been made of this measure.

The proposal to protect the inhabitants of malarial districts at night against the gnat's stings by nets, veils, and gloves sounds very plausible at first. It has been received with great enthusiasm, and has been acted upon in Italy at many places, and, to all appearances, with good success. But in the case of this measure, too, reasonable as it looks from the theoretical point of view, it was soon found that it admits of but very limited application in practice. In Italy, at least, the arrangements for securing houses against malaria seem not to have been resorted to yet, except in the case of the railway signalmen's cottages and some small railway stations; and as to the wearing of veils and gloves, it may, perhaps, be practicable in the Italian climate, but in the tropics the number of people that will willingly adopt this measure is not likly to be great. The few experiments that have hitherto been made in the tropics with

metal nets for the protection of houses against gnats have, so far as my information goes, given little satisfaction. But even if they should work perfectly at first, I fear they will soon share the fate of the well known mosquito nets, which, in the hands of the native servants, almost always become so defective that they afford but a partial protection against the gnats, if any. For these reasons, and because it certainly can not be made available for the native population, and therefore can not effect a real stamping out of malaria at all, I expect less of this measure than of all the rest.

I come now to the measure proposed by myself, which aims at exterminating the malaria parasites in man by means of quinine. In making this proposal I presuppose two things—first, that the malaria parasites are restricted to man, and, second, that we can destroy them, or at least render them harmless, by means of quinine. As to the first of these two presuppositions, I regard it as adequately proved by the fact that nobody has yet succeeded in finding parasites identical with the human malaria parasites in the blood of any animal. Just as little has anyone succeeded in artificially transmitting human malaria parasites to animals. The second presupposition is proved by the observation that may be made in medical practice every day, that when quinine is properly used the malaria parasites disappear from the blood of the patient. This fact, it is true, does not afford certainty that they really are destroyed; they may only have disappeared from the circulating blood, but remained in the internal organs, especially in the spleen and the bone marrow. And in fact this is mostly the case after a single treatment with quinine, as the extreme frequency of relapses proves; the malaria parasites are not got rid of till after the treatment with quinine has been continued for a length of time. But as soon as one knows this effect of quinine on malaria parasites one will, of course, not restrict oneself to a single application of quinine, but will continue to give it in suitable doses till the parasites are really killed or have died. For our preventive purposes, however, the banishing of the malaria parasites from the circulating blood suffices, because it is only with the blood that the gnats can suck them in.

The first part of the measure, accordingly, is that an opportunity must be given to every person attacked by malaria to get rid of the parasites by means of quinine. In the case of educated and well-to-do people this will be no difficult task, especially when medical aid is to be had. But the treatment of the poor, and especially the natives in the colonies, will not be so simple a matter. If the treatment of quinine entail trouble, still more if it entail expense, those people will rather endure malaria than comply with our demands as to the use of quinine. So the only way is to make the acquisition of quinine as convenient and cheap for them as possible. For this purpose many quinine dispensaries should be established in all malarial districts and in the colonies, especially in the immediate vicinity of the European settlements, where they could get quinine at a very low price, or, much better still, for nothing.

Such dispensaries already exist in British India, where quinine is to be had at a low price at the post-offices. In Dutch India, quinine is given in great quantities gratis to natives and Europeans alike. In Italy a law was enacted lately prescribing the gratuitous dispensing of quinine to workmen attacked by malaria. In this way care is taken not only that the poor get quinine, but also that they get it in a pure and reliably effective form, whereas hitherto, as has been repeatedly proved, it is just into the hands of poor people that quinine has got, by the illicit trade carried on by druggists, in an adulterated condition.

If, however, we should confine ourselves to the gratuitous dispensing of quinine on as wide a scale as possible, we should gain our end only very slowly and perhaps not completely. Only a part of the malaria parasites would be destroyed in this way, for not only persons evidently suffering from the well-known fever attacks which are characteristic of malaria have the parasites in their blood, but also those who suffer from the chronic forms of malaria, with very indistinct and often hardly perceptible symptoms. I have proved, moreover, by very comprehensive investigations, that in the malarial districts proper hardly any of the inhabitants have malaria parasites except the children and those who have immigrated from unmalarial districts. Hitherto, however, the malaria of children, and especially of the native children, has had hardly any attention paid to it; at any rate, nobody has attempted to free the children of their parasites, though, as regards the dissemination of malaria, they are just as dangerous as adult patients with clinically recognizable symptoms.

If, therefore, we wish to render all, or as nearly as possible all, parasites innocuous by quinine, we must take chronic sufferers from malaria and also the children into account. But the only way to gain this end is to examine the blood of all persons suspected of malaria with the microscope. In all the attempts I have hitherto made to exterminate the malaria parasites, I have acted on this principle, and have been able to convince myself that the execution of this measure is not so difficult as it may at first sight appear. Medical men who have evidently never made any attempts of this kind have reproached my method with being too expensive and troublesome, on the ground that the continual examination of the blood and treatment of patients would require too many doctors. But this is by no means the case.

Experience has shown that my method can be carried out even by a very small number of doctors. The taking of blood for examination is so simple and purely mechanical a matter that no doctor is needed for it. In many cases I had the blood preparations made by sick nurses of both sexes and other nonmedical persons, and the results were very satisfactory. I intend to go even a step further and have the microscopic examination of the preparations done by nonmedical people. I have already done so several times with very good results. A female sick nurse, a missionary, and a hospital orderly have been instructed in the microscopic investigation of blood for malaria parasites, and have learned the work so well in a short time that one can perfectly rely on their diagnosis. So it is not at all necessary for a doctor to do all the work himself; he can employ cheap and sometimes volunteer assistants, whom he has only to supervise and inspect. With a sufficient staff of such assistants a single doctor will be able to rule a pretty large malarial district and rid it of the parasites. Nor need the apparatus requisite for the diagnosis of malaria be at all expensive. The well-known optical workshops of Zeiss and Leitz have recently produced small microscopes, perfectly sufficient for this purpose, costing £15 to £20. The cost of the other utensils, such as cover glasses, object glasses, coloring matter, etc., is also very small.

Apart altogether from the measure proposed by me I regard such thorough investigations of the population in malarial districts as absolutely necessary. There is no other way of getting a sure knowledge of the state of malaria there. I had an opportunity of convincing myself of this once more lately in investigating several places in Istria. They were small places, two of which, Punta Croce and Ossero, lie at the

southern end of the island of Cherso; two others, Stignano and Fasana, are near the town of Pola; a quite new settlement is in the Brioni Islands. Now in these different places the malaria corresponds exactly to the traffic that goes on in them. At Punta Croce and Ossero, which lie at a distance from all traffic, only the children have malaria parasites in their blood—i. e., the state of malaria was exactly the same as I found it in the coast villages of New Guinea and in remote places in Java. This proves that, in a temperate climate too, malaria, if left entirely to itself, becomes a children's disease; people get over it in childhood, become immune after some years, and never suffer from it again.

At Stignano, too, it was mainly among the children that malaria was found, but the parasites were detected in the blood of older people, though in small numbers. This is evidently connected with the circumstance that, owing to the nearness of Pola, the population of this place is not so entirely cut off from all traffic as those of Punta Croce and Ossero. The population of Fasana is still more fluctuating, and consequently malaria is still more frequent among the older people. This is most strikingly the case, however, at Brioni, where the population consists almost entirely of workmen who are employed in making the land arable, tending the vineyards, and building harbor works and houses, and who come to the place and leave it again in swarms. They come from the most different parts of Dalmatia and from the mountainous districts of Istria, which are free of malaria, as well as from the coasts of that country, where it prevails. Those that come from unmalarial places almost all get malaria at Brioni, the consequence of which is that the majority of the malaria patients there are adults. To these examples I may add that of Peroi, a coast village north of Fasana. Among 219 inhabitants there only 3 malarial patients were found, and they had evidently been infected elsewhere. This marks it as a place free of endemic malaria. Among the places just enumerated, then, we find all the main types of the varied behavior of malaria: Peroi, without endemic malaria, has only introduced cases; Brioni, with a strongly fluctuating population, has malaria mainly among the adults; Fasana and Stignano show the transitions to the purely endemic behavior of malaria at Ossero and Punta Croce, where it is exclusively a children's disease.

A very interesting and practically important fact was strikingly observable at Fasana and partly at Stignano too; the malaria cases were specially numerous in certain houses and groups of houses, and these were in the periphery of the place, whereas, the center was almost free. I had had occasion to make the same observation before at the town of Grosseto in Italy. From this we may conclude that the infecting mosquitoes do not fly anywhere and everywhere or disperse equally over a place, but have certain predilections. Now, in combating malaria, it will be very advantageous to find out what places they prefer and to pay special attention to such. From this focal behavior of malaria, I drew the practical conclusion that it is not necessary at the outset to free whole places or extensive regions of the malaria parasites. It will be perfectly practicable to advance step by step, in exact accordance with the number of assistants at disposal, without having to fear that the ground just freed of malaria will be at once reinundated by infected mosquitoes from the still malarial neighboring districts.

I now come to the question as to the best method of removing the parasites permanently from the blood of malaria patients by treatment

with quinine. With a view to deciding this question I have made very many experiments, and have arrived at the following results, which, for the rest, every observing physician who has frequent opportunities of treating malaria patients will find confirmed by his own experience. Doses of quinine of less than 1 gram are insufficient for adults. The effect of the quinine is very greatly strengthened by giving full doses several days running. Considering these two facts, and in order to minimize the use of quinine, I order 1 gram of quinine to be given two mornings running, which is repeated after an interval of nine days. This treatment must be continued for at least two months, or better, three, because one is not safe till then against relapses. In obstinate cases one gives 1 gram of quinine three days running, and reduces the interval, if necessary, to seven days. In quartan, which is well known to be the most obstinate form of malaria, quinine must be given three days running from the first. There are people with whom quinine does not agree if taken through the mouth; in such cases it must be given under the skin. The patient must be observed for a length of time after the treatment, and his blood must be examined from time to time, in order that one may be quite sure that he is permanently cured and free of malaria parasites.

In severely malarial districts the combating of malaria will restrict itself in the main to the treatment of the children and of the persons who have immigrated in the immediately preceding years. To children under 6 months one generally gives one-tenth of a gram, to older ones, more, according to their age. They generally stand quinine very well, even in comparatively larger doses than adults, so that one need not hesitate to give children of 5 to 6 years half a gram. They do not dislike it either, if given as a powder mixed with raspberry sirup, or if sweet tea or the like is given after it. If necessary, one can give enquinine, which, however, unfortunately can not be used much, owing to its high price. For the rest, the treatment of children suffering from malaria is one of the most grateful tasks for a physician. When I arrived at Stephansort in New Guinea, there were no children there. They had always died of malaria. I took special pains to protect the children that were born during my stay there, and those that came to the place with their parents, against the pernicious influence of malaria. They were all examined from time to time for malaria parasites, and treated with quinine, if any were found. Under such treatment those children, whose number amounted at last to about a dozen, throve splendidly; not one of them died.

The practicability of my method was proved by an experiment I made at Stephansort in New Guinea. It is a settlement of the New Guinea Company, with 734 inhabitants. Of these, 157—i. e., 21.4 per cent, were suffering from malaria. This figure was soon reduced to a small remainder, consisting exclusively of quartan cases, and this favorable result was not a merely temporary one, but lasted until the date of the last news I received.

Further experiments testing the practical efficiency of my method are going on at this moment in German Southwest Africa, and in the Brioni Islands, and experiments are to be begun soon in East Africa, and the former ones continued in New Guinea.

At bottom, however, no further proofs of the value of my method are at all necessary, for the results of the extensive and successful attempts to stamp out malaria are already at our disposal. You are well aware that malaria was very prevalent in most European countries only thirty to forty years ago. Since then it has very rapidly dimin-

ished, and now it has nearly everywhere wholly or almost wholly disappeared. What I have just said is especially true of England, France, Belgium, Holland, and Germany. Attempts have been made to explain this very striking decrease of malaria by the drying up of the swamps, but this explanation is by no means admissible. There still are swamps enough everywhere, and the transmitters of malaria, the anopheles gnats, are still to be found in large numbers wherever malaria used to be. So there must be some other reason, and the only other reason discoverable is the much more general use of quinine, which is the only deadly weapon we have against the malaria parasites. Quinine used to be so dear that only well-to-do people could get it. Moreover, since its use became more frequent, the doctors have learned to use it more rationally. So the number of malaria cases that were properly treated and permanently cured became greater and greater, whereas, formerly every case was followed by endless relapses. Consequently the infectious matter has become very rare, and the anopheles gnats, which are probably just as numerous as they used to be, no longer find any malaria parasites to transmit.

The prevalence of malaria in Germany only thirty years ago, and the extent to which it has diminished since then, is best shown by the statistics of the German army. In 1869, the number of cases still amounted to 54.5 per 1,000; now it is .45 per 1,000—that is, it is more than 100 times rarer now than then. In 1874, the garrison of Spandau, a fortress near Berlin, surrounded by swampy meadows, had 664 cases of malaria per 1,000 men; now, though the swamps are just as they were, the figure is one-half to 1 per 1,000.

In Batavia and other towns in Dutch India, which used to be notorious for their malaria death rate and were called "the European's grave," a considerable improvement has taken place since the gratuitous dispensing of quinine was introduced.

A very interesting illustration of what I am now saying came to my knowledge lately at Pola, the principal seaport of Istria. Being also a war port, it has a larger garrison, and it has from of old had the reputation of being severely infected with malaria. In 1864 the marines there had 887 cases of malaria per 1,000 men. But the state of things gradually improved, and malaria has considerably diminished since then. In the last few years the number of malaria cases in the same part of the garrison has been only about 30 per 1,000—that is, only one thirtieth of what it used to be. In this case, also, people were disposed to ascribe the improvement to the drying up of two swampy meadows near the town, which was effected in the years 1868 to 1870. But apart from the fact that the decrease of the malaria was not simultaneous with the draining of the swampy meadows, but took place quite gradually and equably in the course of the last thirty years, at about the same rate as in the German army, there is another circumstance which speaks very decidedly against the casual connection between the decrease of the malaria and the draining of the meadows, namely, the following: While malaria has been diminishing in the garrison it has been increasing among the civil population, which is no more and no less exposed to the influences of the climate and the soil, including the swamps near the town, than the garrison. In 1890 the number of malaria cases in Pola and its suburbs was 24.8 per 1,000; since then it has risen to 132.5 in the year 1900—that is, more than fivefold, and that not suddenly but quite gradually. In the same period the number of cases in the garrison has gone down to one-third. So here we have the striking phenomenon of an increase of the number of

cases in one part of the population and a decrease in another in one and the same place. This can be due only to some difference in the circumstances of these two parts of the population, and the difference is that the garrison is under continual medical supervision, so that every case of malaria is at once properly treated, whereas among the civil population, for which medical assistance and quinine are too expensive, this is not the case.

Of reasons, then, that speak for the practicability of the measure proposed by me in different climates, under different social circumstances, and on whatever scale one likes, there is certainly no lack. Nevertheless, I do not ask you to come to a decision just at this moment when, as already stated, experiments testing the value of the various methods proposed are everywhere being made. In a few years the practical results of these experiments will be known to us, and then you may act on the good old saying: "Prove all things; hold fast that which is good."

GUATEMALA.

Report from Livingston—Fruit port.

LIVINGSTON, GUATEMALA, *July 22, 1901.*

SIR: I have to make the following report of the conditions and transactions at this port during the week ended July 22, 1901:

Present officially estimated population, 3,000.

Number of cases and deaths from yellow fever during the week, none; number of cases and deaths from smallpox during the week, none; number of cases and deaths from typhus fever during the week, none; number of cases and deaths from cholera during the week, none; number of cases and deaths from plague during the week, none; number of deaths from other causes during the week, 1. Prevailing diseases, bilious-intermittent fever of mild form. General sanitary condition of this port and the surrounding country during the week, good. Temperature, 80° to 90° F. Rainfall is abundant.

Bills of health were issued to the following vessels: July 8, steamship *Managua;* crew, 16; number of passengers from this port, none; number of passengers in transit, none; pieces of baggage disinfected, none. July 18, steamship *Bergenseren;* crew, 17; number of passengers from this port, none; number of passengers in transit, none; pieces of baggage disinfected, none.

Respectfully, W. K. FORT,
Acting Assistant Surgeon, U. S. M. H. S.

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

HONDURAS.

Report from La Ceiba—Fruit port.

LA CEIBA, HONDURAS, *July 21, 1901.*

SIR: I have to make the following report of the conditions and transactions at this port during the week ended July 20, 1901:

Present officially estimated population, about 3,000.

Number of cases and deaths from yellow fever during the week, none; number of cases and deaths from smallpox during the week, none; number of cases and deaths from typhus fever during the week, none; number of cases and deaths from cholera during the week, none; number of cases and deaths from plague during the week, none. Prevailing dis-

ease, malarial fever, mild. General sanitary condition of this port and the surrounding country during the week was good.

Bills of health were issued to the following vessels: July 15, steamship *Breifond;* crew, 15; number of passengers from this port, none; number of passengers in transit, none; pieces of baggage disinfected, none. July 16, steamship *Usk;* crew, 20; number of passengers from this port, none; number of passengers in transit, none; pieces of baggage disinfected, none.

Respectfully,

R. H. PETERS,
Acting Assistant Surgeon, U. S. M. H. S.

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

Report from Puerto Cortez—Fruit port.

PUERTO CORTEZ, HONDURAS, *July 23, 1901.*

SIR: I have to make the following report of the conditions and transactions at this port during the week ended July 23, 1901:

Population according to census of 1896, 1,856; present officially estimated population, 2,000.

Number of cases and deaths from yellow fever during the week, none; number of cases and deaths from smallpox during the week, none; number of cases and deaths from typhus fever during the week, none; number of cases and deaths from cholera during the week, none; number of cases and deaths from plague during the week, none; number of deaths from other causes during the week, 1. Prevailing diseases, malarial fever. General sanitary condition of this port and the surrounding country during the week was very good. Proper ship and passenger certificates inclosed.

Bills of health were issued to the following vessels: July 17, steamship *Oteri;* crew, 35; passengers from this port, 7; passengers in transit, terminus; pieces of baggage disinfected, 12. July 19, steamship *Bratten;* crew, 15; passengers from this port, none; passengers in transit, none; pieces of baggage disinfected, none. July 20, steamship *Adria;* crew, 15; passengers from this port, none; passengers in transit, none; pieces of baggage disinfected, none.

Respectfully,

SAMUEL HARRIS BACKUS,
Acting Assistant Surgeon, U. S. M. H. S.

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

MEXICO.

Report from Vera Cruz.

VERA CRUZ, MEXICO, *July 23, 1901.*

SIR: I have the honor to submit the following report of the transactions at this station during the week ended July 20, 1901:

The rainfall has been very heavy, creating a state of things extremely disagreeable. During the week 29 deaths were reported, 1 being from yellow fever. Notwithstanding the unfavorable weather conditions, the city's mortality has considerably decreased. Passenger baggage is now receiving attention here. That of the first-class passengers from the City of Mexico, if not opened in Vera Cruz, is labeled "Inspected and passed." The baggage of other first-class passengers is inspected, and if found to be clean and from a locality free of infection, is also passed.

Baggage of all passengers from Coatzacoalcos, of second-cabin and steerage passengers, and all bedding is labeled for disinfection. The inspection of baggage is conducted on board as it is received. Seven vessels were cleared and given bills of health; 199 passengers inspected, and 179 pieces of baggage labeled.

I inclose the mortality report for the week.

Respectfully, D. E. DUDLEY,
Acting Assistant Surgeon, U. S. M. H. S.

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

[Inclosure.]

Vera Cruz, Mexico—Mortality report for the week ended July 20, 1901.

Yellow fever	1	Dysentery	2
Pneumonia	1	Tuberculosis	2
Malaria	2	Tetanus	1
Enteritis	5	Total deaths from all causes	29
Measles	1		

VERA CRUZ, MEXICO, *July 29, 1901.*

SIR: I have the honor to submit the following report of the week ended July 27, 1901:

It has rained nearly all of the time, causing much delay to the shipping in the harbor. The Ward liner steamship *Seguranca* was so much delayed by the rains in shipping her freight that she was obliged to sail nearly twenty-four hours later than her schedule time.

Only 3 vessels were cleared for United States ports during the week.

As was stated in a previous report, the Ward Line has 3 vessels engaged in the coast trade, picking up passengers and freight at various ports along the Mexican coast, then transshipping directly to their New York passenger boats in Vera Cruz.

Yellow fever has prevailed at some of these ports this year, and on this account it was deemed advisable to inspect these vessels during the time they were lying alongside the passenger boats.

The sanitary condition of the vessels in question is not always of the best, and sickness, should it occur on board during this transfer of cargo, might go undetected unless such inspections were made.

I communicated with the agents of the line relative to this matter, and advised them of the danger from infection to their passenger steamers in the event of sickness occurring on board one of their coasters. In case of sickness the patient could be promptly removed and the living quarters easily disinfected, if necessary, without much delay to their work.

The agents here object to the inspections and have appealed to their New York office. The masters of the vessels rather favor the idea, and and I have no doubt but that the New York office of the Ward Line will also appreciate the efforts made in their behalf for the protection to their vessels.

There has been no death from yellow fever during the past week. There were 44 deaths reported—a considerable increase over the previous week.

Respectfully, D. E. DUDLEY,
Acting Assistant Surgeon, U. S. M. H. S.

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

[Inclosure.]

Vera Cruz, Mexico—Mortality report for the week ended July 27, 1901.

Tuberculosis	16	Meningitis	3
Dysentery	2	Malaria	2
Enteritis	4	Alcoholism	1
Pernicious fever	3	Total deaths from all causes	44

Vessels of the American Smelting and Refining Company to be disinfected at Tampico.

TAMPICO, MEXICO, *July 24, 1901.*

SIR: I have the honor to acknowledge receipt of your letter dated July 13, 1901, instructing me to disinfect vessels of the American Smelting and Refining Company.

Respectfully, V. B. GREGORY,
Acting Assistant Surgeon, U. S. M. H. S.

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

Mortality of Tampico for the three weeks ended July 21, 1901.

TAMPICO, MEXICO, *July 24, 1901.*

SIR: I have the honor to submit the following report of deaths in this municipality for the three weeks ended July 21, 1901: Congenital debility, 1; abscess of liver, 1; syphilitic cachexia, 1; whooping cough, 2; malarial cachexia, 3; phthisis, 8; malaria, 3; gastro-enteritis, 2; dysentery (chronic), 2; erysipelas, 1; chronic alcoholism, 1; pernicious malarial fever, 2. Total, 27.

Respectfully, V. B. GREGORY,
Acting Assistant Surgeon, U. S. M. H. S.

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

NICARAGUA.

Reports from Bluefields—Fruit port.

BLUEFIELDS, NICARAGUA, *July 18, 1901.*

SIR: I have to make the following report of the conditions and transactions at this port during the week ended July 17, 1901:

Population according to census of 1894, 3,000. Present officially estimated population, 4,000.

Number of cases and deaths from yellow fever during the week, none; number of cases and deaths from smallpox during the week, none; number of cases and deaths from typhus fever during the week, none; number of cases and deaths from cholera during the week, none; number of cases and deaths from plague during the week, none; number of deaths from other causes during the week, 3. Prevailing diseases, malarial fever and enteric disorders. General sanitary condition of this port and the surrounding country during the week has been generally good. The 3 deaths noted herein occurred at this port and were all due to malarial fever—July 12, a native male, aged 8 years; July 16, a native female (negro), aged 15 years; July 17, a native male (negro), aged 13 months.

Bills of health were issued to the following vessel: July 17, steam-

ship *Utstein;* crew, 16; passengers from this port, none; passengers in transit, none; pieces of baggage disinfected, none.

Respectfully, WM. H. CARSON,
Acting Assistant Surgeon, U. S. M. H. S.

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

BLUEFIELDS, NICARAGUA, *July 25, 1901.*

SIR: I have to make the following report of the conditions and transactions at this port during the week ended July 24, 1901:

Population according to census of 1894, 3,000; present officially estimated population, 4,000.

Number of cases and deaths from yellow fever during the week, none; number of cases and deaths from smallpox during the week, none; number of cases and deaths from typhus fever during the week, none; number of cases and deaths from cholera during the week, none; number of cases and deaths from plague during the week, none; number of deaths from other causes during the week, 3; prevailing diseases, malarial fever and dysentery. General sanitary condition of this port and the surrounding country during the week has been fairly good. There has been a slight increase in the number as well as the severity of the cases of malarial fever in this port. Three deaths occurred in this town, viz., July 19, Indian, male, age, 35; from chronic dysentery; July 23, colored, female, age, 40; chronic dysentery; July 24, a Spaniard, male, age, 80; malarial fever.

Bills of health were issued to the following vessel: July 24, steamship *Hiram;* crew, 15; number of passengers from this port, 5; number of passengers in transit, none; pieces of baggage disinfected, 3.

Respectfully, WM. H. CARSON,
Acting Assistant Surgeon, U. S. M. H. S.

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

PHILIPPINE ISLANDS.

Report from Manila—Plague and smallpox.

MANILA. P. I., *July 26, 1901.*

SIR: I have the honor to state that only 9 new cases of plague (3 Chinese and 6 Filipinos) occurred in Manila during the week ended June 22, 1901, although 13 deaths resulted from the disease. During the same period there was 1 case of smallpox and there were 174 deaths from all causes.

Respectfully, J. C. PERRY,
Passed Assistant Surgeon, U. S. M. H. S.,
Chief Quarantine Officer for the Philippine Islands.

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

Quarantine transactions of outgoing vessels at Manila for the two weeks ended June 29, 1901.

MANILA, P. I., *June 26, 1901.*

SIR: I have the honor to submit report of quarantine transactions of outgoing boats for the week ended June 22, 1901, as follows:

Number of vessels inspected	46
Number of pieces of baggage disinfected	616
Number of crew inspected	1,300
Number of passengers inspected	1,053

FERRIES.

Number of ferryboats inspected	66
Number of crew inspected	693
Number of passengers inspected	7,101

VACCINATIONS (BOATS ARRIVING).

Number of vaccinations, crew	14
Number of vaccinations, passengers	369

Respectfully, J. C. PERRY,
Passed Assistant Surgeon, U. S. M. H. S.,
Chief Quarantine Officer for the Philippine Islands.

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

MANILA, P. I., *July 1, 1901.*

SIR: I have the honor to submit report of quarantine transactions of outgoing boats for the week ended June 29, 1901, as follows:

Number of vessels inspected	48
Number of pieces of baggage disinfected	288
Number of crew inspected	1,295
Number of passengers inspected	1,156
Number of rejections (smallpox, 1)	1

FERRIES.

Number of ferryboats inspected	68
Number of crew inspected	748
Number of passengers inspected	8,050

VACCINATIONS (BOATS ARRIVING).

Number of vaccinations, crew	13
Number of vaccinations, passengers	469

Respectfully, J. C. PERRY,
Passed Assistant Surgeon, U. S. M. H. S.,
Chief Quarantine Officer for the Philippine Islands.

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

Early diagnosis of plague.

WAR DEPARTMENT,
OFFICE OF THE SECRETARY,
DIVISION OF INSULAR AFFAIRS,
Washington, D. C., August 1, 1901.

SIR: I have the honor to inclose herewith for your information a copy each of circulars Nos. 3, 5, and 9, office of the board of health, Manila, P. I., relating to the bubonic plague and typhoid fever.

Respectfully, CLARENCE R. EDWARDS,
Chief of Division.

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

[Circular letter No. 3.]

A brief synopsis of bubonic plague for early diagnosis.

OFFICE OF THE BOARD OF HEALTH,
Manila, P. I., March 7, 1901.

Three varieties: (1) With bubo; (2) without bubo; (3) pneumonic.

1. With bubo. These constitute one-half the cases and vary in severity from comparatively mild to severe.

2. Without bubo. This class is more uncommon and includes those cases in which, either from an overwhelming dose of the poison or from a weak resisting power, death occurs before bubo formation in twelve to twenty-four hours from onset of disease.

3. Pneumonic. This type has been rare in Manila, not above 2 per cent of the total number of cases. These cases all die very early, but they do not have bubos but a broncho-pneumonia.

Any of the three varieties may be hemorrhagic, hemorrhages indicating always a severe infection.

The symptoms to be carefully looked for are outlined below.

NERVOUS SYSTEM.

Headache: Usually early severe, frontal.
Delirium: Often early, may be low, muttering, or maniacal.
Coma: In bad cases early.
Muscular prostration: Usually early from severe toxæmia.

DIGESTIVE SYSTEM.

Tongue: Usually dry with thick gray coating.
Pharynx: Commonly congested.
Enlarged tonsils: Rare.
Nausea: Common.
Vomiting: More often nausea, but also common, either green, brown, or bright red.
Diarrhea, constipation: Either.
Involuntary stools: Not uncommon.
Abdominal pain: Occasional from involvement mesenteric glands.
Hemorrhage from mouth or intestines: In hemorrhagic case only.

RESPIRATORY SYSTEM.

Epistaxis: Common in all varieties.
Lung involvement: In pneumonic variety, a veritable broncho-pneumonia.
Respiratory rate: Usually rapid, often 40–50, from pulmonary congestion, characteristic in typical cases.
Cough: Common.
Hemorrhage: Hemorrhagic cases.
Character sputum: In pneumonic cases usually like broncho-pneumonia, blood streaked.

CIRCULATORY SYSTEM.

Condition of heart: As in other severe fevers.
Character of pulse: Early, weak, and dicrotic.
Rate of pulse: 110 – 180.
Dilatation superficial veins: Very common.

CUTANEOUS SYSTEM.

Hemorrhages: In hemorrhagic cases, usual site, face, hands, and over shoulders; size, petechiæ to ½ c. m.; character, usually look like mosquito bite, but may be dark purple; any scratch in those cases shows hemorrhages in edges.
Pustules: Rare, any site, may be multiple.
Carbuncle: Very rare, any site, may be multiple.
Conjunctivæ: Injected.

LYMPHATIC SYSTEM.

Primary glands affected: Usually single gland, or single group; most common, femoral or inguinal; next axillary; then anterior-cervical.
Associated glands: Rarely several.
Character of skin over infected bubo: Rarely reddened.
Suppurating bubo: Very rare till late in the disease.
Lymphangitis: Rare.
Involved glands are always very painful and tender, and often have a surrounding œdema. In femoral glands this may extend from knee to lower ribs.

TEMPERATURE.

May be elevated to 105° F. or even 107° F. May or may not be initial chill or chills, or chills may continue at intervals throughout disease. Temperature not infrequently shows an intermittent or remittent character.

FACIAL EXPRESSION.

Usually curious, mixed fear, dread, and suffering.

MICROSCOPE.

Early leucocytosis.

In Manila the organism has been found in 90 per cent of bloods examined; use any common stain, methyl blue, gentian violet.

Plague in an atypical case is extremely difficult to diagnose, and in the presence of the disease any fever should be looked upon with suspicion. The certainty of other disease existing does not in any way negative plague as it may engraft itself on any of the common diseases, as typhoid, tuberculosis, malaria, etc. It is important to remember that the absence of bubo does not exclude plague.

[Circular Letter No. 5.]

The ambulatory type of plague.

OFFICE OF THE BOARD OF HEALTH,
Manila, P. I., April 8, 1901.

The attention of all physicians is called to the necessity for extreme caution in the differentiation of cases of ambulatory plague; this type is frequently encountered, especially among the Chinese, who keep up much longer in severe illness than the other races here. Cases running their course within six hours are not uncommon, and a much less period before death may elapse after the severity of this disease is manifest. Deaths even occur absolutely without antecedent symptoms, the person falling dead while at work, possibly without apparent cause, or it may be from a trivial injury, which, though unimportant, proves too much for a heart degenerated by the powerful toxines of plague. That these cases are true plague is borne out by the recent investigations of the board of health, autopsies resulting in the finding of the plague bacillus and the characteristic pathological changes.

Enteric fever.

The fecal matter and urine of a typhoid patient are the principal, if not the only, foci of infection, and this infection may be propagated in the house of the patient by the waste pipe, cesspool, latrine, or by filtrations, and may infect the well, cistern, or other source of drinking water; also food, especially milk, fruit, vegetables, thereby producing the disease in other persons.

When a case of typhoid fever occurs in a family the sick person should be placed in a room apart from others and should be cared for as far as possible by one person. The room of the patient should be well ventilated, its furniture should be such as permits cleaning without injury, and all unnecessary objects should be removed from the room. In every doubtful case the laboratory of the department of health should be consulted for the diagnosis.

No person who is in contact with a typhoid fever patient, such as nurse or servant, or who has to handle anything whatever which may have come in contact with the fecal matter of the patient, should touch any sort of food or water or any sort of receptacle for such food or water which is to be used by other persons.

A solution of the best fresh chloride of lime (500 grams to 4 liters of water) in a well-closed jar, should be kept at hand, and 250 c. c. of this solution should be placed in the urinal or basin, immediately after it has been used by the patient. Fecal matter should always be well mixed and covered with the disinfecting solution, and should be so left a half hour before emptying.

The same disinfectant should be used freely in the vessels, sinks, and latrines. If the patient makes use of the water-closet this should be disinfected with large quantities of chloride of lime.

The clothing, pillowcases, sheets, etc., which have been in contact with the patient, should be soaked in a solution of corrosive sublimate (8 grams of corrosive sublimate and 60 grams of common salt in a gallon of water, 1–2000) mixed in a wooden vessel, having a label indicating that it contains poison, and should be boiled in the solution for half an hour.

This disinfecting solution may be used with all nonmetallic articles—for metallic articles a 5 per cent solution of carbolic acid. Everything which might contaminate the house or its surroundings should be removed. Disinfectants should be used freely, and the waste pipes should be kept in good condition.

At the termination of the disease the house, room, pillow cases, sheets, and clothing of the patient should be disinfected as recommended in this circular.

Typhoid fever patients may be a source of danger until the urine of the same is free from the typhoid bacillus. This dangerous condition of the urine may last several weeks after the patient is convalescent, and during this period the urine should be disinfected. The presence of the bacillus in the urine and its subsequent disappearance may be verified, if desired, in the laboratory of the department of health.

TURKEY.

Confirming the reports of plague in Constantinople.

CONSTANTINOPLE, TURKEY, *July 8, 1901.*

SIR: I have the honor to transmit to you herewith a copy of the official report from the board of health of the Ottoman Empire, in regard to the cases of bubonic plague which are now being treated at the Monastir Aghzy Hospital. You will observe that the epidemic made its appearance here between the 18th and the 23d of last month, and that since that time 3 cases have been discovered by the authorities. Owing to the absence of the regular physician of this legation, this official bulletin is sent in place of the report which Dr. Zavitziano would otherwise have made to this legation.

Respectfully, JOHN G. A. LEISHMAN.

HON. SECRETARY OF STATE.

Foreign and insular statistical reports of countries and cities—Yearly and monthly.

ARGENTINA—*Buenos Ayres.*—Month of May, 1901. Estimated population, 800,000. Total number of deaths, 1,419, including diphtheria, 19; enteric fever, 29; measles, 3; scarlet fever, 53; smallpox, 247, and 160 from tuberculosis.

AUSTRIA—*Brunn.*—Month of April, 1901. Estimated population, 95,342. Total number of deaths, 263, including diphtheria, 2; enteric fever, 15; measles, 4; whooping cough, 1, and 73 from tuberculosis.

Month of May, 1901. Total number of deaths, 238, including enteric fever, 6; measles, 1, and 66 from tuberculosis.

BAHAMAS—*Dunmore Town.*—Two weeks ended July 19, 1901. Estimated population, 1,472. Two deaths and no contagious diseases.

Governors Harbor.—Two weeks ended July 20, 1901. Estimated population, 1,375. One death and no contagious diseases reported.

Green Turtle Cay—Abaco.—Two weeks ended July 18, 1901. Estimated population, 3,900. No deaths and no contagious diseases reported.

Nassau.—Two weeks ended July 22, 1901. Estimated population, 12,000. No deaths and no contagious diseases reported.

BERMUDA—*Hamilton.*—Two weeks ended July 2, 1901. Estimated population, 2,000. Total number of deaths, 4. No contagious diseases reported. Two weeks ended July 20, 1901. One death and no contagious diseases reported.

BRAZIL—*Ceara.*—Month of May, 1901. Estimated population, 50,000. Total number of deaths, 117, including 15 from enteric fever.

Month of June, 1901. Total number of deaths, 100, including enteric fever, 11; measles, 2, and 1 from smallpox.

BRITISH GUIANA—*Demerara.*—Month of June, 1901. Estimated population, 36,567. Total number of deaths, 165, including diphtheria, 1, and 6 from phthisis pulmonalis.

DUTCH GUIANA—*Paramaribo.*—Month of June, 1901. Estimated population, 31,427. Total number of deaths, 58. No deaths from contagious diseases reported.

FRANCE—*Rouen.*—Month of June, 1901. Estimated population, 112,657. Total number of deaths, 248, including measles, 4; scarlet fever, 1, and 60 from tuberculosis.

GERMANY—*Dresden.*—Month of May, 1901. Estimated population, 404,580. Total number of deaths, 623, including diphtheria, 2; enteric fever, 2; measles, 3; scarlet fever, 5; whooping cough, 6, and 99 from phthisis pulmonalis.

Hanover.—Month of March, 1901. Estimated population, 237,439. Total number of deaths, 274, including 22 from infectious diseases.

Month of April, 1901. Total number of deaths, 324, including 21 from infectious diseases.

Weimar.—Month of June, 1901. Estimated population, 29,633. Total number of deaths, 28, including 1 from diphtheria.

GREAT BRITAIN—*England and Wales.*—The deaths registered in 33 great towns in England and Wales during the week ended July 13, 1901, correspond to an annual rate of 15.6 per 1,000 of the aggregate population, which is estimated at 11,463,026. The highest rate was recorded in Birkenhead, viz, 26.7, and the lowest in Halifax, viz, 9.4.

Bradford—Two weeks ended July 13, 1901. Estimated population, 279,809. Total number of deaths, 163, including enteric fever, 1; whooping cough, 14, and 18 from phthisis pulmonalis.

London.—One thousand two hundred and thirty-seven deaths were registered during the week, including measles, 37; scarlet fever, 17; diphtheria, 24; whooping cough, 15; enteric fever, 2; and diarrhea and dysentery, 71. The deaths from all causes correspond to an annual rate of 14.2 per 1,000. In Greater London 1,671 deaths were registered, corresponding to an annual rate of 13.2 per 1,000 of the population. In the "outer ring" the deaths included 8 from diphtheria, 13 from measles, 4 from scarlet fever, and 14 from whooping cough.

Ireland.—The average annual death rate represented by the deaths registered during the week ended July 13, 1901, in the 21 principal town districts of Ireland was 19.4 per 1,000 of the population, which is estimated at 1,079,708. The lowest rate was recorded in Portadown, viz, 0.0, and the highest in Drogheda, viz, 28.6 per 1,000. In Dublin and suburbs 157 deaths were registered, including diphtheria, 1; scarlet fever, 1, and 4 from whooping cough.

Scotland.—The deaths registered in 8 principal towns during the week ended July 13, 1901, correspond to an annual rate of 17.2 per 1,000 of the population, which is estimated at 1,656,525. The lowest mortality was recorded in Aberdeen, viz, 11.5, and the highest in Dundee, viz, 24.2

per 1,000. The aggregate number of deaths registered from all causes was 549, including diphtheria, 2; measles, 22; scarlet fever, 7; smallpox, 1, and 22 from whooping cough.

HONDURAS—*Tegucigalpa.*—Month of June, 1901. Estimated population, 12,500. Total number of deaths, 21. No contagious diseases.

ITALY—*Genoa.*—Month of May, 1901. Estimated population, 230,969. Total number of deaths, 331, including diphtheria, 2; enteric fever, 1; measles, 1; whooping cough, 8; smallpox, 2, and 55 from tuberculosis.

JAMAICA—*Port Antonio.*—Week ended June 22 and two weeks ended July 20, 1901. Estimated population not reported. No deaths and no contagious diseases.

JAPAN—*Nagasaki.*—Ten days ended June 30, 1901. Estimated population, 131,701. Number of deaths not reported. No mortality from contagious diseases.

JAVA—*Batavia.*—Two weeks ended June 22, 1901. Estimated population, 150,000. Number of deaths not reported. Twenty-seven deaths from cholera reported.

MALTA—*Valetta.*—Two weeks ended July 6, 1901. Estimated population, 208,113. Total number of deaths, 237, including diphtheria, 1; enteric fever, 1, and 1 from measles.

NORFOLK ISLAND.—Month of May, 1901. Estimated population, 854. No deaths and no contagious diseases.

SPAIN—*Cadiz.*—Month of June, 1901. Estimated population, 67,987. Total number of deaths, 203, including enteric fever, 2, and 27 from tuberculosis.

Malaga.—Month of June, 1901. Estimated population, 133,000. Total number of deaths, 396, including enteric fever, 14, and 3 from smallpox.

SWITZERLAND.—Reports for the 2 weeks ended July 6, 1901, from 18 cities and towns, show a total of 462 deaths, including diphtheria, 4; enteric fever, 5; whooping cough, 4, and 76 from phthisis pulmonalis.

Cholera, yellow fever, plague, and smallpox, June 28, 1901, to August 9, 1901.

[Reports received by the Surgeon-General United States Marine-Hospital Service from United States consuls through the Department of State and other sources.]

[For reports received from December 28, 1900, to June 28, 1901, see PUBLIC HEALTH REPORTS for June 28, 1901.]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Bombay	May 22-July 2		16	
Calcutta	May 19-June 29		308	
Madras	May 18-June 22		7	
Java:				
Batavia	June 2-June 22	58	33	
Straits Settlements:				
Singapore	May 23-May 29		1	

YELLOW FEVER.

Brazil:				
Pernambuco	May 17-May 31		1	
Rio de Janeiro	May 15-June 15		36	
Colombia:				
Bocas del Toro	June 26-July 20	6	1	
Costa Rica:				
Port Limon	July 4	1		
Cuba:				
Cienfuegos	July 15-July 18	2		
Havana	June 28-July 27	7		6 from Santiago de las Vegas.
Jamaica:				
Kingston	June 15		1	
Mexico:				
Merida	June 14-June 27	5	2	
Tampico	July 26	1		From steamship ——— from Progreso.
Vera Cruz	June 23-July 27	18	10	
Porto Rico:				
San Juan	July 16	1		On steamship Saint Simon from Cape Port au Prince and Santo Domingo.
Salvador:				
San Salvador	June 20			Several cases.

PLAGUE.

Africa:				
Cape Town	Feb. 16-June 29	749	351	
Maitland	June 9-June 15	2		
Port Elizabeth	June 9-July 6	20	9	
Simonstown	June 9-June 15	1		
Brazil:				
Rio de Janeiro	July 3-July 6	4	2	
China:				
Amoy	May 26-June 1		700	Estimated.
Canton	June 8			Prevailing.
Hongkong	May 19-June 22	882	852	
Shanghai	June 9		1	From steamship Empress of China.
Sheck Lung	June 8			Prevailing.
Tung Kun	do			Do.
Egypt:				
Alexandria	Apr. 7-July 10	10	6	
Mansura	do	1	1	
Minieh	do	5	1	
Port Said	do	3	1	
Zagazig	do	69	28	
France:				
Le Frioul	July 7	15		From steamship Laos from Port Said.
Hawaiian Islands:				
Honolulu	May 31-July 17	6	6	
India:				
Bombay Presidency and Sind:				
Northern Division—				
Bombay City	May 12-June 22	952	829	
Surat District	do	216	140	
Thana District	do	320	298	

Cholera, yellow fever, etc.—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India—*Continued:*				
Bombay Presidency and Sind—*Continued.*				
Central Division—				
Khandesh District	May 12-June 22	9	6	
Poona District	do	9	5	
Poona City	do	7	4	
Southern Division—				
Belgaum District	do	1,013	747	
Dharwar District	do	571	409	
Kanara District	do	12	4	
Kolaba District	do	27	25	
Ratnagiri District	do	89	75	
Sindh—				
Hyderabad District	do	1		
Karachi District	do	22	22	
Karachi City	do	368	345	
Political Charges—				
Baroda State	do	12	4	
Bhavnagar Town	do	1		
Cutch State	do	147	134	
Janjira State	do	14	12	
Kathiawar State	do	14	11	
Kolhapur and Southern Mahratta County.	do	392	284	
Outside Bombay Presidency and Sind:				
Madras Presidency—				
Salem District	do	30	21	
Bengal:				
Bhagalpur Division	do	25	24	
Burdwan Division	do	8	8	
Calcutta	do	244	238	
Chota Nagpur Division	do	3	1	
Orissa Division	do	0	0	
Patna	do	1,131	868	
Presidency	do	6	5	
Northwest Province and Oudh:				
Agra Division	do	3	2	
Allahabad	do	23	23	
Benares	do		241	
Punjab Province:				
Delhi Division	do	202	126	
Jullunder Division	do	842	531	
Lahore Division	do	264	90	
Rawalpindi	do	1,095	630	
Mysore State:				
Bangalore City	do	5	5	
Bangalore Civil and Military Station.	do	13	13	
Bangalore District	do	112	75	
Kolar District	do	18	13	
Mysore City	do	53	41	
Mysore District	do	105	66	
Shimoga	do	10	5	
Rajputana State	do	1		
Tumkur District	do	11	4	
Kashmir	do	88	49	
Japan:				
Nagasaki	June 3-June 12		2	On steamship Kintuck and on steamship Empress of China.
Yamanashi Ken	June 22	1	1	
Mauritius	June 7-July 11		5	
Paraguay:				
Asuncion	June 23	1		
Philippine Islands:				
Cavite	May 19-May 25	1	1	
Manila	May 11-June 22	121	104	
Santa Rosa	May 19-May 25	1		
Turkey:				
Constantinople	July 2-July 4	4		

Cholera, yellow fever, etc.—Continued.

SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
Arabia:				
Aden	May 1-May 31		4	
Argentina:				
Buenos Ayres	Apr. 1-May 31		387	
Austria-Hungary:				
Prague	June 2-July 13	18		
Belgium:				
Antwerp	do	16	7	
Brazil:				
Ceara	June 1-June 30		1	
Pernambuco	May 17-May 31		15	
Rio	May 9-June 15		58	
British Columbia:				
Victoria	June 16-June 30	2		
Canada:				
Quebec Province:				
Beauce County	May 30-June 16	7		
Beauharnois County	May 15-May 22	8		
Brome County	May 15	14		
Chateauguay County	Apr. 11	2		
Compton County	July 2-July 6	1		
Gaspe County	June 12	26		
Hochelaga County	May 24-June 24	2		
Huntingdon County	Apr. 4	8		
Iberville County	May 14	4		
Jac. Cartier County	May 18	1		
Joliette County	June 20-June 23	1		
La Prairie County	Mar. 2-June 10	133	1	
Matane County	Apr. 10	17		
Missisquoi County	June 10	77		
Montreal County	Apr. 20	5		
Napierville County	Feb. 19	22	1	
Ottawa County	Mar. 8-Apr. 2	19	1	
Pontiac County	Feb. 28-May 28	44		
Rimouski County	Feb. 12-July 10	5	1	
St. Hyacinthe	May 18	1		
Shefford County	May 20	3		
Stanstead County	June 10-June 25	2		
Temiscouata County	June 4-June 17	1		
Terrebonne County	Apr. 22-May 9	91		
China:				
Hongkong	May 19-June 15	7	5	
Colombia:				
Cartagena	July 1-July 7		1	
Panama	June 18-July 15	20		
Ecuador:				
Guayaquil	May 12-June 8	7		
Egypt:				
Cairo	June 11-June 24		3	
England:				
Liverpool	June 9-July 13	7	1	
London	do	19	2	
France:				
Marseilles	June 1-June 30		4	
Paris	June 7-July 20		61	
Germany:				
Berlin	June 18-June 29	3		
Gibraltar	June 3-July 14	5		
India:				
Bombay	May 22-July 2		26	
Calcutta	May 19-June 29		68	
Karachi	May 20-June 30	23	13	
Madras	May 18-June 28		35	
Italy:				
Milan	May 1-May 31	2		
Naples	June 10-July 14	496	103	
Japan:				
Nagasaki	June 11-June 30	2	1	
Mexico:				
City of Mexico	June 17-June 23	2	1	
Netherlands:				
Rotterdam	June 16-July 20	15	2	
Philippine Islands:				
Manila	May 12-June 22	22		
Russia:				
Moscow	May 26-July 13	63	25	
Odessa	June 2-July 13	7	1	
St. Petersburg	do	26	6	
Warsaw	May 26-June 22		23	
Scotland:				
Glasgow	June 15-July 19	40	4	

Cholera, yellow fever, etc.—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Sicily:				
Messina	June 9–July 13	74	11	
Spain:				
Corunna	June 23–July 6	.....	4	
Madrid	May 4–June 1	.....	11	
Switzerland:				
Geneva	June 2–June 29	5	.....	
Uruguay:				
Montevideo	May 11–June 22	119	8	
Wales:				
Cardiff	June 9–June 15	2	.....	

Weekly mortality table, foreign and insular cities.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from— Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Acapulco	July 13	6,000	9											
Do	July 20	6,000	6											
Alexandretta	July 6	8,000	3											
Amsterdam	July 20	525,636	156									2	1	2
Antwerp	July 13	299,346	83	5				1			1	2	3	
Athens	do	200,000		6								1	4	
Barmen	do	142,000	39	7										
Beirut	do	125,000	18											
Belfast	do	348,876	144							10			12	3
Belize	June 25	9,000	1											
Belleville	July 15	10,359	3											
Do	July 22	10,359	1											
Do	July 29	10,359	0											
Birmingham	July 13	523,284	163							2	2		9	4
Do	July 20	523,284	170							2	3		7	3
Bombay	July 2	770,843	667	97	65	3		4		1				
Bremen	July 6	160,823	58	9									2	
Do	July 13	160,823	46	6									1	
Bristol	do	329,086	67	9						1	2		1	1
Brussels	do	582,665	167							2			1	4
Budapest	July 9	729,383									5		2	
Do	July 15	729,383								2	5	3	1	3
Cairo	July 1	570,061	419	18					8	5			4	1
Calcutta	June 29	843,487	345		14	23		5						
Callao	June 23	30,000	20	3										
Do	June 30	30,000	27	5										
Cartagena	July 7	25,000	14	1				1						
Catania	July 18	151,180	73	2						7	1			
Christiania	July 13	225,800	67							1				1
Do	July 20	225,800	68											
Coburg	July 13	20,807	3											
Cognac	July 6	19,483	9								1		1	
Do	July 13	19,483	7											
Cologne	do	377,292	260	10						1		3	16	
Colon	July 23	8,000	8											
Copenhagen	July 13	476,876	119	21						2		2	1	5
Corunna	do	40,500	25	5							1			
Do	July 20	40,500	20	7										
Crefeld	July 13	106,887	32											
Curaçao	do	30,828	12											
Dresden	June 22	405,140	125	21								1	1	1
Do	June 29	405,140	137								1		3	2
Do	July 6	405,140	131	17						1	1			1
Dublin	July 13	373,179	157	25							1	1		4
Dundee	do	163,346	75										5	
Dusseldorf	do	212,334	130									1	1	1
Edinburgh	do	317,885	92							1			1	6
Flushing	June 20	18,992	2											
Frankfort-on-the-Main	July 13	290,500	94										3	1
Funchal	June 14	44,949	24	1										
Geneva	July 7	104,944	25	1										
Ghent	July 13	160,949	71	6										2
Gibraltar	July 7	24,701	8											
Do	July 14	24,701	5											
Girgenti	July 6	25,069	10											
Do	July 13	25,069	9											
Glasgow	July 19	764,423	253					1		2	5	2	14	14
Gothenburg	July 13	129,000	26							1				
Halifax	July 20	45,000	7											
Do	July 27	45,000	10											
Hamburg	July 13	705,738	216								3	1	6	5
Havre	do	130,196	47	8						2				
Karachi	June 16	108,808	90		12			2					1	
Do	June 23	108,808	57		9			3						
Do	June 30	108,808	49		2			1						
Kingston, Canada	July 26	18,300	4											
La Rochelle	June 30	31,553	8											
Do	July 8	31,553	10											
Lausanne	July 7	46,407	13											
Leeds	July 28	438,814	181							4	1	3	10	3
Leipzig	July 13	461,519	167							1	3		3	
Leith	do	77,670	19	5										
Licata	July 6	23,500	10							2				
Do	July 13	23,500	13											
Liege	July 6	173,289	53								3			

Weekly mortality table, foreign and insular cities—Continued.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from— Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Liverpool	July 13	686,669	349					1		1	2	6	5	3
London	do	6,604,287	1,671							5	21	32	50	29
Lyons	do	473,147	156							2		4		
Madras	June 28	452,518	336			2		4					2	
Mainz	July 13	84,335	40	4								1		1
Do	July 20	84,335	43	5										
Manchester	July 13	505,343	177	11							4	6	7	4
Mannheim	July 6	143,652	56										4	
Do	July 13	143,652	66								1		4	
Melbourne	June 1	477,000								1		2		
Do	June 8	477,000								2		2		
Do	June 15	477 000										1		
Do	June 22	477,000										1		
Messina	July 13	107,000	16	1				4						
Mexico	July 14	368,777	388	44					25		1		10	2
Do	July 21	368,777	362	36					31				3	2
Monrovia	June 15	10,000	3											
Do	June 22	10,000	0											
Do	June 29	10,000	1											
Moscow	July 6	1,000,000	874	8				3		1	8	6	7	3
Newcastle-on-Tyne	do	214,881	75								1		2	4
Do	July 13	214,881	78										1	2
Nottingham	do	239,753	70							1			4	
Nuremburg	July 6	262,000	123	22								1	10	1
Odessa	July 13	442,000	273	20				1		1	2	2	6	1
Palermo	July 6	330,000	128	12								1		
Do	July 13	330,000	104	2										
Paris	do	2,511,634	891					5		6	1	17	17	4
Plymouth	do	106,000	21	3						1				1
Do	July 20	106,000	31	2								1		1
Port au Prince	July 8	60,000	31											
Do	July 13	60,000	36											
Prague	do	205,855	114	20						2	2	1	2	
Puerto Cortez	July 25	2,000	1											
Quebec	July 27	75,000												
Rotterdam	July 20	335,632	137					1						
St. John, New Brunswick	July 27	45,000	16	2								1		
St. Petersburg	June 22	1,248,642	80					1		19	21	20	19	
Do	June 27	1,248,642	79							22	17	22	18	
Do	July 6	1,248,642	77						1	18	13	18	27	
St. Stephen, New Brunswick	July 27	3,000	0											
Santander	July 14	53,574	27											
Sheffield	July 13	400,000	106	15						1	2	3	1	2
Do	July 20	400,000	213	15						3		2	7	2
Smyrna	July 7	300,000	105	20						2			6	1
Do	July 14	300,000	66	9						1			4	1
Southampton	July 13	104,911	28	3										
Do	July 20	104,911	33	1										1
South Shields	July 6	97,800	25	2							1		1	
Do	July 13	97,800	15							1				
Stettin	do	210,000	192										2	
Stockholm	July 6	232,574	87	23								1	4	2
Sunderland	do	147,207	52										1	1
Trapani	do	61,437	15											
Do	July 13	61,437	15											
Tuxpam	July 15	13,000	9	1										
Do	July 22	13,000	5											
Utilla	July 20	800	0											
Venice	July 13	174,378	56	5						3				
Vera Cruz	July 20	32,000	29	2			1						1	
Do	July 27	32,000	44	16										
Vienna	July 13	1,691,996	625								10	2	12	2
Windsor, Nova Scotia	July 27	3,000	0											
Winnipeg	do	45,642								1				
Yokohama	June 29	189,455												
Do	July 6	189,455												

By authority of the Secretary of the Treasury:

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