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No. 27.

UNITED STATES.

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

The bubonic plague bacillus as studied at the Pasteur Institute.

[Continued.]

77-79 RUE NOTRE DAME DES CHAMPS, Paris, France, June 14, 1897.

SIR: I have the honor to submit the following for your consideration, concerning the epidemic of plague in Bombay and Kerachi, most of the information being derived from the reports of Dr. Yersin to the Institute Pasteur, and imparted by Professor Roux in an address delivered at

the weekly reunion of the workers at the institute:

Mortality.—From the most reliable information collected from all sources, it would seem that the average mortality in this epidemic in India has reached the appalling figure of 90 to 95 per cent of those attacked. This is open to some doubt, as the Hindoos have displayed an aversion to treatment in hospitals, and compulsory removal to these institutions having been adopted as a rule, many cases occurring among the native population have been concealed, and do not appear in the total of cases or deaths. The mortality as reported is, therefore, probably rather below than above the truth. It will also be understood that these figures do not include those subjected to serum therapy, of which special mention will be made in another portion of this summary.

Types of the disease.—For convenience of classification, and in accordance with the clinical symptoms presented, the disease in this epidemic has been classified as (a) bubonic, or ganglionic; (b) septicæmic; (c) pneumonic. Of these forms the bubonic has been the most common; the pneumonic the most fatal. The method of infection, that is to say the point of entrance of the specific microbe, is a point still under active discussion, and is different not only for the various types and forms

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given, but also varies in different countries and in different sections of the same country. For example, in Hongkong, where the natives as a rule go barefooted, infection in a large number of cases has been traced to abrasions and wounds of the lower extremities; in India, some covering or protection for the foot is usually worn, but the natives suffer from the bites of insects and vermin, consequently the point of entrance of the infection has been largely upon the hands and arms. Infection through the intestinal or respiratory tract, while admitted, is as yet largely unexplained, for, in spite of the assertions of Wilm, some breach of continuity would seem to be necessary for the entrance of the micro-As a rule, a small red spot marks the point of infection: this becomes successively a vesicle and a pustule, and in the ganglionic form, and in a large proportion of cases a general redness or a series of vesicles marks the passage of the infection along a lymphatic tract or channel. These vesicles have been of very frequent occurrence in the Bombay epidemic.

Symptoms and course.—In the bubonic form the victim is seized with a chill, followed by a fever of greater or less intensity, sometimes reaching 41° to 42° C.; there is an overwhelming prostration; nausea and vomiting and the rapid formation of a glandular enlargement, surrounded by an extensive edema, forming the bubo which has given the most common name to the disease. The bubo may or may not break down and go on to suppuration. If it does the ganglionic form merges into the septicæmic, without any distinct line of demarkation between the two types. Early in the disease stupor, delirium, and a more or less profound unconsciousness mark the existence of an intoxi-

cation or general systemic infection.

In the septicæmic form it would seem that the infection has taken place through the intestinal, digestive, or respiratory passages, or has been secondary to the suppuration of a bubo. These cases are as a rule not as violent in their course as the other types, and furnish the larger portion of the small number of recoveries. The pneumonic form is at once the most insidious in its onset, the most difficult of diagnosis, and the most fatal in its results. It is usually ushered in by a pain in the side, which becomes more pronounced as the disease progresses; the respiration becomes difficult and embarrassed, and there is cough with a tenacious, dark colored, or bloody expectoration. It is through the examination of this expectoration that the diagnosis is most easily made, as, spread upon a slide, stained and examined under the microscope, the presence of the plague bacillus in large numbers is at once established. The bacillus is not in pure culture, but is accompanied by diplococci, staphylococci, and streptococci, and in making the diagnosis by this method the property of the plague bacillus of completely decolorizing by the method of Gram must be borne in mind.

Post-mortem, the pneumonia is found to be generally lobular or disseminated in character, though it is sometimes lobar, sometimes involves

a whole lung, or may indeed involve both lungs.

The general characteristic of the lesions of plague is a tendency to hemorrhages, either into the parenchyma of the spleen or kidneys, the subdural and arachnoid spaces, the spinal cord, or into the loose connective tissue of various regions of the body.

This tendency to hemorrhages would seem to be a manifestation of the peculiar properties of the toxines formed by the plague bacillus in the process of growth, as it has been observed alike in animals subjected to inoculations with the culture of the bacillus and its isolated toxines.

Among the sequelæ of the plague may be mentioned as most frequent,

long continued suppuration of glands, boils, and carbuncles, and eruptive diseases of the skin, and paralyses, sometimes of a particular set of muscles, sometimes of the lower and sometimes of the upper extremities. These manifestations may persist, or the affected muscles may gradually acquire strength and tone. These manifestations may be accounted for as to the suppurations by the fact that the plague bacillus is usually accompanied by the organisms of suppuration; as to the paralyses by the above-mentioned tendency to hemorrhages into the meninges and spinal cord.

Viability of the plague bacillus.—It would seem that the bacillus of plague, while not as sensitive to desiccation as the cholera spirillum, still loses its virulence by drying, and that to retain its virulence it requires the action of both heat and moisture. In ordinary water it will retain its activity for some time, but its existence in sterilized water seems to be limited to a period of from twenty-four to forty-eight hours. The presence of organic matter, animal or vegetable, and in a state of decomposition, would seem to furnish the most favorable nidus for its growth, which will account for its more or less prolonged existence in Oriental countries, and the comparative rarity of its appearance in Europe since the existence of modern and improved hygienic conditions. This does not mean, however, as was maintained by some at the Venice conference, that filth and crowding are alone responsible for the disease. The malady is preeminently of bacterial origin, and wherever the microbe is found, there the plague is likely to develop.

Serum therapy and preventive inoculation.—This branch of the subject I approach with considerable reluctance, for the reason that the serum therapy has not in the Bombay epidemic given results as brilliant as were hoped for from the eminently successful experiments made upon a very small scale by Yersin in the epidemic at Hongkong. For this there are good and sufficient reasons, well understood by those best acquainted with the manufacture and preparation of the antipest serum. The figures will first be given, and explanations entered into afterwards. In the Bombay epidemic there have been used serums from two sources. the one prepared by Yersin at the Pasteur Institute at Saigon, the other prepared at the Pasteur Institute at Paris and forwarded to Yersin at With the former serum the mortality of all cases treated amounted to 33 per cent; with the latter the mortality has been approximately 50 per cent. The total mortality of all cases in which the serum therapy was inaugurated prior to the systemic intoxication—that is to say, on the first or second day of the disease—is 12 per cent.

Compared with the mortality without the serum treatment, 90 to 95 per cent, there is nothing to be ashamed of even in these figures, but it is not the result that was hoped for. As a prophylactic measure the results have been much more favorable. It has proved in this respect eminently successful, but a point involved in some doubt is the length of the immunity conferred. In one case the disease manifested itself in a person constantly exposed forty-two days after the preventive inoculation. This would point to a desirability of inoculations for those exposed, as physicians and attendants, at intervals not exceeding thirty to thirty-

five days.

Fortunately we are able to cite cases where the inoculation was instrumental in preventing the disease, and this, I think, should establish the principle that in future epidemics it will be just as rational and scientific to practice preventive inoculation as it is now customary to vaccinate those exposed to an infection of smallpox, with a view of preventing the spread of the disease.

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I would beg to relate the following incident: The Bombay manager of the local branch of the Credit Lyonnaise resided with his wife, children, and a numerous retinue of native servants in a dwelling in an infected portion of the city. His little daughter was stricken with the pest in a virulent form; was treated with the serum, and made a rapid and uneventful recovery. As a precautionary measure the whole family were subjected to inoculation, and the same measure of treatment was offered to the native domestics. Some accepted and escaped infection, while 6 who declined on the ground of religious scruples were all stricken, and 5 died. It seems that a more crucial test could not have been devised, or a more triumphant vindication obtained.

I will endeavor now to briefly explain why the therapeutic results obtained have not been more brilliant and the success more uniform.

In the first place, the epidemic has been largely confined to the natives, a class notoriously suspicious and superstitious. It has been only with the greatest difficulty that they have been persuaded to accept the protective inoculation, and when stricken with the pest, their religious scruples have often led them to decline the serum therapy until almost moribund. These cases have, of course, only served to reduce the ratio of recoveries to treatments, and to bring the method into disrepute among those prone to criticise and sneer, of whom unfortunately

there have been too many in high places during this epidemic.

Secondly, to be perfectly frank, the fault has been in the serum itself. as can thus be explained: The serum prepared by Yersin at Saigon had not only a strong immunizing power, but also very high antitoxic or curative powers, as is conclusively proved by the results in his 23 cases treated at Hongkong. Unfortunately, the supply was small; Yersin departed for Bombay and an unfortunate accident in his laboratory prevented the continuance of this supply and the further treatment and preparation of his already immunized and seasoned horses. Recourse, therefore, had to be had to serum prepared in the Pasteur Institute in Paris. A large demand had not been anticipated here, and the supply on hand was also small, but in the belief that even a weak serum was better than none, there was issued to Dr. Yersin a quantity of serum which was known to have a high immunizing, but a comparatively low antitoxic or curative power. This is, in brief, the whole explanation. Every nerve is being strained to produce a stronger serum, but it is a matter which, in the very nature of things, takes a long time, and with a demand constantly exceeding the supply, it is impossible at this time to do better, though, if only sufficient time is allowed, there is no shadow of a doubt that a product will be reached whose potency will be a perfect vindication of the faith of such men as Professor Roux and his assistants. The technical reason in brief is the following: If a horse is injected intra-peritoneally with a culture of the plague bacillus, killed by exposure to heat, the animal in time acquires a certain immunity to these injections, and his serum is found to have certain preventive properties, viz, it will protect an animal into which it is injected against a culture of the plague bacillus; in other words it is preventive or prophylactic. This result has been arrived at by the action of the toxines contained in the killed culture, but it is to be borne in mind that the toxine is not in a soluble condition, but it is largely held enveloped in the bodies of the dead microbes. contrary, if the horse is injected with a live culture of plague, or a soluble toxine, and intravenously instead of intra-peritoneally, an immunity will be established, and the serum of the animal will be found to have not only an immunizing power as before, but in addi-

tion an antitoxic or curative power, that is to say, it will protect an animal against the toxines of plague, or the animal having been inoculated with plague, it will exert its curative or antitoxic influence. The difference is one of degree and not of kind. Every antitoxic serum is immunizing to a high degree, but the reverse does not hold good. It can therefore be laid down as a general rule that to prepare an immunizing serum the injection of killed culture or enveloped toxine is sufficient, while to prepare an antitoxic one, either the culture must be living, or the toxines in a soluble form and injected into a vein. Hence the difficulty; it is a most complex problem to dissolve the cellulose envelope of the microbe and set free its toxine without producing a chemical change in the product, and the matter is under continual experiment. That it will be solved eventually there is no doubt, but in the meantime the horses have to be treated with live culture, and the process is one requiring great caution and care, as accidents not infrequently happen, and the treatment of the horse has to be suspended. It will thus be seen that the whole matter is one involved in a great deal of difficulty, and requiring much earnest thought and work for its solution.

Nevertheless, I do not think it possible at this time to overrate the importance of the study of the toxines and antitoxines of the infectious and contagious diseases, as, to my mind, upon its development rests the whole future of preventive medicine. The study is at once fascinating and discouraging, for new difficulties constantly arise to take the place of those which have been overcome by laborious effort.

I have the honor, sir, to remain, very respectfully, yours,

H. D. GEDDINGS, Passed Assistant Surgeon, U. S. M. H. S.

Yellow fever on the German bark Zion.

[Telegram.]

LEWES, DEL., June 24, 1897.

German bark Zion, forty days from Rio, in ballast, 15 crew, all well, arrived this afternoon. Had 2 cases yellow at Rio and 2 en route. Ordered to New York and proceeded without pratique; quarantined while here.

WERTENBAKER,
Passed Assistant Surgeon, U. S. M. H. S.

Plague at Jedda and Mecca.

77-79 RUE NOTRE DAME DES CHAMPS, Paris, France, June 15, 1897.

SIR: In confirmation of my cablegram of the 9th instant announcing rumors of the existence of the plague at Jedda and Mecca, I have the honor to inform you that the news of the existence of plague at Jedda has been officially confirmed. Mecca is still in doubt, though there is little hope that, having reached the seaport, Mecca will escape a visitation. News has also been received here of the appearance of the plague in certain places upon the Chinese frontier, and ere this, I suppose, you have the information as to the outbreak in Formosa. The disease, therefore, appears to be making rapid extensions.

Very respectfully,

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

Smallpox in the United States as reported to the Supervising Surgeon-General United States
Marine-Hospital Service, December 29, 1896, to July 2, 1897.*

Places.	Date.	Cases.	Deaths.	Remarks.
Alabama:				
Birmingham	M 0		ι	
Makila Makila				ł
Mobile				1
	Mar. 28		l	
	Apr. 17	. 1	l	
	May 21	. 1	l	
	May 31	. 1	l 	
Union Springs				
Connecticut:	1 -2 1 -2	1	-	
New Haven	Feb. 17	1 1		
Florida :	Feb. 17	1		1
Pensacola	7 10 77 1 00		. 1	1
rensacora	Jan. 19-Feb. 20			
	Feb. 28-Mar. 10			12 varioloid.
	Mar. 27-Apr. 3			Varioloid.
	Apr. 10-May 1	10		Do.
	May 2-May 22	7		Do.
	May 29-June 5			Do.
Escambia County (not in-	1111 25 5 tille 5	_		<i>D</i> 0.
cluding Pensacola)	Dec. 2-Jan. 19	18		
Illinois:	Dec. 2-Jan. 19	18		
	35 00		1 1	
Chicago	Mar. 25			Smallpox reported
				brought from Mexico.
	Mar. 27-Apr. 3		. 1	and and another interaction,
Į.	Apr. 10-Apr. 17	2		
	May 8-May 15		1	
Indiana:		••••••	- 1	
Greenwood	Feb. 12		1 !	
Massachusetts:	r GD. 12	Ţ		
	35 1 35		1	
	May 1-May 8			
Combaidas	May 22-May 29	1		
Cambridge	June 6-June 26	3		Varioloid. 1 smallpox.
	June 19	i	1	tarioloid. I smanipox.
New Begiord	Apr. 10-Apr. 17			
uichigan :		•	***************************************	
Blissfield Township	Mar. 27-Apr. 10	1	1	a
	Apr 17 Mor. 1	••••••	••••••	Smallpox reported.
	Apr. 17-May 1	••••••	•••••	Do.
C1 = .	4	1	i	
DV. DOUIS	April 29	2		
lew York:	May 1-May 22	2	3	
D 11	-	- 1	•	
Brooklyn	Apr. 24-June 26	5	2	
New York	Mar. 1-Mar. 31	0	2	
17	pr. 17-May 15	•••••		Do.
	une 13-June 19	••••••	10	
	due 19-3 due 19	•••••	3	
Toledo	1 35 01			
ennsvivania ·	Apr. 1-May 31	14	2	
D-24		1	1	
ennessee:	Apr. 6	1 .		
Monarh'		- 1.		
Memphis	Apr. 1-June 26	21 .		
asnington ·		41 .	•••••	
Tacoma	reh 6	. 1		
Olympia	far. 1	1		

^{*}For table of smallpox in the United States, etc., May 9, 1896, to December 29, 1896, see Public Health Reports, Vol. XII, No. 1.

Report of immigration at Boston for the week ended June 26, 1897.

Office of U. S. Commissioner of Immigration, Port of Boston, June 26, 1897.

Number of alien immigrants who arrived at this port during the week ended June 26, 1897; also names of vessels and ports from which they arrived.

No. of in migrants	Where from.	Vessel.	Date.
28	Liverpool, England, and Queens- town, Ireland.	Steamship Cephalonia	June 20
		Steamship Belvidere	June 21
			Do
	St. Pierre, Miquelon	Steamship Pro Patria	June 24
	Halifax, Nova Scotia	Steamship Olivette	
			Do
!			Do
		Schooner Myosotis	June 25
	London, England	Steamship St. Ronans	June 26
1	Yarmouth, Nova Scotia		Do
56		Total	i

THOMAS F. DELHANTY, U. S. Commissioner of Immigration.

Report of immigration at New York for the week ended June 26, 1897.

OFFICE OF U. S. COMMISSIONER OF IMMIGRATION, Port of New York, June 27, 1897.

Number of alien immigrants who arrived at this port during the week ended June 26, 1897; also names of vessels and ports from which they arrived.

Date.	Vessel.	Where from.	No. of im- migrants.
June 20 Do Do June 21 Do June 22 Do Do	Steamship La Gascogne	Bremen Lisbon and The Azores. Rio de Janeiro. Glasgow	196 70 56 24 49
Do June 23 June 24 Do Do June 25	Steamship MajesticSteamship Prinz Regent Luitpold	Glasgow	603 962 173
Do June 26 Do Do	Steamship Normannia Steamship Paris Steamship Lucania		105
	Total		3, 65

Dr. J. H. SENNER, U. S. Commissioner of Immigration. July 2, 1897 638

Report of immigration at Philadelphia for the week ended June 26, 1897.

OFFICE OF U. S. COMMISSIONEE OF IMMIGRATION, Port of Philadelphia, June 26, 1897.

Number of alien immigrants who arrived at this port during the week ended June 26, 1897; also names of vessels and ports from which they arrived.

Date.	Vessel.	Where from.	No. of im- migrants.
June 22 June 23 Do June 24 Do	Steamship Scotia	Liverpool	71 97 1 . 55 1

J. L. HUGHES, Acting Commissioner.

guarantine reports.

National quarantine and inspection stations.

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

Name of station.	Week ended.	Name of vessel.	Date of arrival.	Port of departure.	Destination.	Treatment of vessel, passengers, and cargo.	Date of depar- ture.	Remarks.	Vessels inspected and passed.
Alexandria, Va Brunswick, Ga	June 26	Dan, bk. Esmeralda* Am. sc. Warwick * Am. bkn. Daisy Read *	June 10 June 15 June 17	Guadaloupe Martinique Santos	Guadaloupe Brunswick Martinique	Guadaloupe Brunswick Disinfected and held June 21 Martinique do do do June 22 Santos.	June 21 June 28	999	ବାଶ :
Cape Charles, Vado	qo	Dutch bk. Cornelia*. Sp. bk. Maria Sp. bg. Fe	June 19 June 25 do June 17		do do Norfolk	Held for disinfection		Cook taken off in Rio 3 with diagnosis remit-	
Cape Fear, N. C	do	do Ger. bk. Zion June 24	June 24	Rio	Waiting or- ders.	Inspected and allowed to proceed to New York without pratique.	June 24	tent fever. I death from yellow fever; 2 cases yellow fever each to hospital at Rio; 2 cases at sea.	⊢ છ
Eureka, Cal	June 16 June 23 June 19	An. sc. Oscar G* June 11 Habana	June 11	Habana		Pascagoula Disinfected and held June 16		master did not know trouble, probably yellow fever. No transactions.	•
istand, Miss.		Am. sc. Eleanor	June 12 June 14	dodododo	Ship Island Pascagoula Ship Island	Ship Island do June 19 1 care yellow fever	June 19 do	1 case yellow fover 5 cases interm ittent fever.	
Newbern, N. C	qo	lisms.				Newbern, N. C. Liams. Li		No transactions	
San Diego, Cal	. June 19		<u> </u>	# Drong	# Decarlossely worked	San Diego, Cal			
				LIGAT	ousiy reported.				

QUARANTINE REPORTS-Continued.

National quarantine and inspection stations—Continued.

Parthenope* May 27do Savannah	nope* Ma
Montevideo Sapelo	Warrior*

* Previously reported.

QUARANTINE REPORTS-Continued.

State and municipal quarantine stations.

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

Name of station.	Week ended.	Name of vessel.	Date of arrival.	Port of departure.	Destination.	Treatment of vessel, passengers, and cargo.	Date of depar- ture.	Remarks.	Vessels inspected and passed.
Anclote, Va. Apalachicola, Fla. Bangor, Me.	June 29	June 29				June 29		No report.	*
Boston, Mass. Carrabelle, Fla Cedar Keys, Fla	June 26 June 12 June 19	Nor. bk. Justo			Carrabelle	Barbados Carrabelle Disinfected and held			11 20
Charletto Harbor, Fla Elizabeth River, Va Galveston, Tex		June 26 June 26 June 26 June 26				No report.			-867
Gardiner, Oreg						<u>op</u>			1 1
Mayport, Fla June 19 Mobile Bay, Ala June 19	June 19	Br. 88. Acme* Br. 88. Velleda * Br. 8c. Gov. Bake * Br. 8s. Kennett	June 10 June 11 June 12 June 13	Santos Vera Cruz Montego Bay. Progreso,	Mobiledododododo	Disinfected and held	June 15 June 16 June 15 June 15	10	10
		Nor. bk. Zippora Nor. bk. Gilmt Grk. bk. Agias Trias Nor. bk. Marion Am. bk. Jno. R. Stan	do June 14 June 15 June 17	Montevideo Barbados Montevideo Demerara Port au Prince	dodododo	Disinfected and helddo Wating			
New Bedford, Mass Newport News, Va Newport, R. I. Perth Amboy N. I.		hope.				New Bedford, Mass No report Newport News, Va 40 Perth Ambrox N. I 40		No reportdo	
Portland, Me. Port Royal, 8, C. Providence, R. I. Sabine Pass, Tex. June 19	June 26 June 19	June 26 June 19				Portland Me. Done 26 do d		No transactions No report.	14

* Previously reported.

QUARANTINE REPORTS-Continued.

State and municipal quarantine stations—Continued.

897	1	642
Vessels inspected and passed.	60	ε
Remarks.		June 26 2 cases yellow fever and 2 deaths at Rio.
Date of depar- ture.	June 19 June 17	June 26 June 25
Treatment of vessel, passensengers, and cargo.	Biland* June 4 Haiti, via Balaet being discharged	
Destination.	k. Biland* June 4 Halti, via Savannah bk. Cornelia* June 7 Rio	do do Port Tampa
Port of departure.	Haiti, via Rotterdam. Bahis	Haiti, via Kotterdam. Barbados, via Sapelo. Tampico, Mex
Date of arrival.	June 4 June 7 June 13	June 4 June 25 June 18 June 23
Name of vessel.	Nor. bk. Bliand* June 4 Duch bk. Cornelia*. June 7 Nor. bk. Spes June 13	June 26 Nor. bk. Biland * June 4 Halti, viado Rotterdam. Hotterdam. Hotterdam. Br. 8. Parthenope June 25 Barbados, viado Sappelo. Sappel
Week ended.	June 19	June 26
Name of station.	St. Helena Entrance,	June 26 Nor. bk Br. s. P Tampa Bay, Flado Am. sc. Br. ss. I

* Previously reported.

Reports of States and yearly and monthly reports of cities.

CALIFORNIA—Los Angeles.—Month of May, 1897. Estimated population, 103,000. Total deaths, 116, including diphtheria, 6; enteric fever, 2; phthisis pulmonalis, 22, and whooping cough, 1.

FLORIDA—Pensacola.—Month of May, 1897. Estimated population, 15,000. Total deaths, 19, including diphtheria, 1; leprosy, 1, and phthisis pulmonalis, 1.

ILLINOIS—Chicago.—Month of May, 1897. Estimated population, 1,619,226—white, 1,596,484; colored, 22,742. Total deaths, 1,702—white, 1,655; colored, 47, including diphtheria, 63; enteric fever, 13; measles, 11; scarlet fever, 10; smallpox, 1; phthisis pulmonalis, 212, and whooping cough, 9.

INDIANA—Evansville.—Month of May, 1897. Estimated population, 65,000. Total deaths, 59.

LOUISIANA—City of New Orleans and suburbs.—Month of April, 1897. Estimated population, 275,000—white, 177,376; colored, 64,663. Total deaths, 498—white, 287; colored, 211, including diphtheria, 5; enteric fever, 5, and phthisis pulmonalis, 73.

Month of May, 1897. Total deaths, 590—white, 376; colored, 214, including diphtheria, 3, and phthisis pulmonalis, 75.

MAINE—Portland.—Four weeks ended June 12, 1897. Estimated population, 41,500. Total deaths, 42, including diphtheria, 1; enteric fever, 2, and phthisis pulmonalis, 4.

MASSACHUSETTS—North Attleboro.—Month of May, 1897. Population, 6,727. Total deaths, 2.

Worcester.—Month of May, 1897. Estimated population, 103,086. Total deaths, 117, including scarlet fever, 1, and phthisis pulmonalis, 24.

MICHIGAN.—Reports to the State board of health, Lansing, from 62 observers, for the week ended June 12, show that diarrhea, pleuritis, tonsilitis, intermittent fever, inflammation of kidney, and neuralgia increased in area of prevalence. Phthisis pulmonalis was reported present at 181 places, measles at 80, diphtheria at 29, scarlet fever at 26, enteric fever at 13, and whooping cough at 5.

Reports to the State board of health for the week ended June 19, from 62 observers, indicate that pneumonia and remittent fever increased and influenza and tonsilitis decreased in area of prevalence. Phthisis pulmonalis was reported present at 183 places, measles at 69, diphtheria at 27, scarlet fever at 24, enteric fever at 12, and whooping cough at 8.

MISSOURI—Kansas City.—Month of May, 1897. Estimated population, 105,000. Total deaths, 180, including diphtheria, 1; enteric fever, 1; phthisis pulmonalis, 7, and whooping cough, 4.

NEW JERSEY—Hudson County.—Month of May, 1897. Estimated population, 355,231. Total deaths, 476, including diphtheria, 18; enteric fever, 2; measles, 1; scarlet fever, 7; phthisis pulmonalis, 62, and whooping cough, 4.

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NEW YORK.—Reports to the State board of health, Albany, N. Y., for the month of May, 1897, from 159 towns and villages show a total of 9,266 deaths, including diphtheria, 368; enteric fever, 65; measles, 119; phthisis pulmonalis, 1,054; scarlet fever, 98; smallpox, 7, and whooping cough, 62.

The Monthly Bulletin says:

There were 1,000 fewer deaths reported during the month than in the month preceding, the total number for the State being 9,266, a daily average of 300, against 344 in April and 373 in March. The death rate has decreased from 19 per thousand population to 17. This decrease is almost identical with that of the corresponding months of 1896, and also of 1895, and for the past ten years the average diminution in mortality from April to May has been not less than 800. death rate in May, 1896, was 17.50. The zymotic mortality is the same as that of the preceding month, with no material variation in any of the respective zymotic diseases; it is less than that of a year ago. number of deaths under five years of age (2,470) is less by 350 than either of the months compared, and is unusually small, constituting 27 per cent of the total mortality and an annual death rate of 4.5 per 1,000 population. Acute respiratory diseases caused 500 fewer deaths than in April, and there was a lessened mortality from nervous diseases, old age, and from unclassified causes. Grippe is estimated not to have materially impressed the mortality of the month. Smallpox does not exist in the State outside the metropolis, where, as in April, 7 deaths occurred from it. Scarlet fever caused 1.6 per cent of the deaths of the maritime district and 1 per cent of the entire mortality. Diphtheria caused 4 per cent of all deaths and nearly 6 per cent of those in the maritime district, in rural parts of the State causing about 1 per cent. One death from rabies is reported from Long Island City. The relative mortality from acute respiratory diseases in rural districts to the rest of the State was as 12 to 15, and of consumption as 9 to 12, while from zymotic diseases it was as 6 to 12.

OHIO.—Reports to State board of health from 56 places, having an aggregate population of 1,234,477, for the four weeks ended April 24, 1897, show a total of 38 deaths from infectious diseases, including diphtheria, 19; enteric fever, 19; measles, 2, and whooping cough, 2.

Columbus.—Month of May, 1897. Estimated population, 100,000. Total deaths, 79, including phthisis pulmonalis, 17.

Toledo.—Month of May, 1897. Estimated population, 137,780. Total deaths, 15, including enteric fever, 4; measles, 2; phthisis pulmonalis, 14, and smallpox, 2.

PENNSYLVANIA—Pottsville.—Two weeks ended June 17, 1897. Estimated population, 14,117. Total deaths, 13.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

		U. S.	from					Dea	ths f	rom	_			
Cities.	Week ended.	Population, U	Total deaths from all causes.	Plithisis pul- monalis.	Yellow fever.	Smallpox.	Varioloid.	Cholera.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Ashtabula, Ohio Baltimore, Md	do	434, 439	4 205	18	 1		4	ī	4
Bennington, Vt Binghamton, N. Y Boston, Mass	do	35,005 448,477	17 197	3 23							2	9	1	1
Bristol, R.I Do Brooklyn, N.Y	June 26		3 390	1 36								20	5	1
Brownsville, Tex Bucyrus, Ohio	June 19 June 12	6, 134 5, 974	3 1	î										
Do Butler, Pa Cambridge, Mass	June 26	5, 974 8, 734 70, 028	1 3 23	3		1			·					1
Carlisle, Pa Charleston, S. C	do June 19	7,620 * 54,955	3 †35	4						1				
Chicago, Ill Cincinnati, Ohio Columbus, Ind	June 26 June 25	1,099,850 296,908 6,719	342 113 0	30 12								13	1	1
Columbus, Ohio Dayton, Ohio	June 26 June 24	88, 150 61, 220 106, 713	19 18	3 2										
Denver, Col Dunkirk, N. Y Elizabeth City, N. J	June 19 June 26 do	106, 713 9, 416 37, 764	35 1 0	10										
Do	June 18 June 26	11,068 11,068	3 5	i	·····									
Fall River, Mass Fitchburg, Mass Flint, Mich	June 19	74, 398 22, 037 9, 803	40 9 4										•••••	
Do Do	Apr. 17 Apr. 24	9, 803 9, 803	0 7	2	. .								. 	
Do Do Grand Rapids, Mich	June 26	9, 803 9, 803 60, 278	1 1 12									•••••		i
Green Bay, Wis Haverhill, Mass	do	9,069 27,412	3 8		•••••					1				
Hoboken, N. J Indianapolis, Ind Do	do June 26	43, 648 105, 436 105, 436	22 42 44	2	•••••								•••••	
Jacksonville, Fla	do June 19	10,939 17,201	5 17					•••••		•••••				
Jersey City, N. J Do Johnstown, Pa	June 27 June 26	163,003 163,003 21,805	64 77 5	8 7 1		•••••				•••••	2	5	1	•••••
Lawrence, Mass Lebanon, Pa	June 19 June 20	44, 654 14, 664	14 2					•••••		1				1
Lowell, Mass Lynchburg, Va	June 26	14, 664 77, 696 19, 709	30 7	1 2						•••••		•••••		•••••
Manchester, N. H. Massillon, Ohio Medford, Mass	do June 19 June 26	44, 126 10, 092 11, 079	14 1 6	1								•••••		•••••
Michigan City, Ind Middletown, N. Y	do June 23	10,776 11,977	6	1	- 1	- 1	- 1		i			1		•••••
Middletown, Ohio Do	June 12	7, 681 7, 681 7, 681	3 3	2					•••••					•••••
Milwaukee, Wis	June 26 June 19	7, 681 204, 468	2 71	5								3		
Mobile, Ala Nashville, Tenn	June 26 do	204, 468 31, 076 76, 168	52 17 36	5 3 6						1			1	
New Brighton, N. Y	do June 5	40, 733 16, 423	19 13								ï	1	1	•••••
Newburyport, Mass	do	16, 423 16, 423 13, 947		1										•••••
New Orleans, La Newport, R. I	do June 26	242, 039 19, 457	146	13							1			
New York, N. Y Norristown, Pa North Adams, Mass	do	1,515,301 19,791 16,074	717 7 3	3						1			8	4
Omaha, Nebr	June 19	140, 452												••••

^{*}Estimated population, 65,105; white, 28,870; colored, 36,295. †White, 13; colored, 22.

MORTALITY TABLE, CITIES OF THE UNITED STATES—Continued.

		U. S. 1890.	from				:	Deat	hs fi	rom-	_			
Cities.	Week ended.	Population, U Census of 18	Total deaths f	Phthisis pul- monalis.	Yellow fever.	Smallpox.	Varioloid.	Cholera.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping
Oneonta, N. Y	June 26	6, 272	2	1			l					1		
Pensacola, Fla	do	11,750	4	1								-	•••••	
Petersburg, Va	June 27	22,680	18						•••••	•••••			•••••	
Philadelphia, Pa	June 19	1,046,964	394	45							6	19	2	4
Do	June 26	1,046,964	428	33					•••••	6	11	32	3	1
Pittsfield, Mass	do	17, 281	8	33					•••••	U	11	32		1
Detteteren De								•••••		•••••	•••••		•••••	
Pottstown, Pa	May 15	13, 284	2	******			•••••		•••••			•••••	•••••	ļ
Do	May 22	13, 284	2	••••			•••••							· • • • • • • • • • • • • • • • • • • •
<u>D</u> o	May 29	13, 284	2	1				•••••					• • • • • • • • • • • • • • • • • • • •	
Do	June 5	13, 284	3	1										
Do	June 12	13, 284	2	;										
Do	June 19	13, 284	4							1				
Do	June 26	13, 284	3	l										
Providence, R. I	do	132, 146	47	4								3		
Pueblo, Colo	June 19	24, 558	6											
Salt Lake City, Utah	do	44, 843	ă	1										
San Diego, Cal	June 12	16, 159	4											
Do	June 19	16, 159	3		•••••					•••••		•••••	•••••	•••••
Santa Barbara, Cal	do	5, 864	ő						•••••		•••••	•••••	•••••	•••••
	June 12	5, 864	2	1						••••	•••••	•••••		•••••
Do Spokane, Wash	do	19, 922	4	1	•••••					1	••••	•••••	•••••	•••••
										•••••	1	••••	•••••	•••••
Do	June 19	19, 922	5	1	•••••		•••••		•••••	•••••	•••••	2	•••••	•••••
Faunton, Mass	June 26	25, 448	9	3							•••••	••••		•••••
Utica, N. Y	June 19	44,007	16	2										••••
Warren, Ohio	June 26	5, 973	0											
Washington, D. C	June 19	230, 392	107	9						1		5		2
West Newton, Mass	June 26	24, 379	3											
Winona, Minn	June 17	18, 208	6											
Worcester, Mass	June 18	84, 655	34	5							1			
Yonkers, N. Y	June 25	32,033	15	2							-	2		

Tuble of temperature and rainfall, week ended June 28, 1897. [Received from Department of Agriculture, Weather Bureau.]

Locality,	Temp	erature in Fahrenhe		Rainfa	ll in inche dredthe	s and hun-
iscany.	Normal.	Excess.	Defic'ncy.	Normal.	Excess.	Deficiency.
Atlantic Coast:						
Eastport. Me	57	l	. 1	.84	l	. 84
Portland, Me	66		. 2	.77		.77
Eastport, MePortland, MeNorthfield, Vt	65		. 5	.82		. 82
Roston Mass	69		. 1	.72		. 72
			. 2	.51		.54
Vineyard Haven, mass Nantucket, Mass Woods Hole, Mass Block Island, R. I New Haven, Conn Albany, N. Y New York, N. Y Harrisburg, Pa	63	1		.63		. 63
Woods Hole, Mass	65 65		1 =	.53		
Now Horon Conn	70			. 59 . 7.5		.59
Albany N V	71		5	87		.75 .57 .78
New York N. Y	71		3	.87 .78		78
Harrisburg, Pa	72			.98		.98
Philadelphia, Pa	74		2	.77		. 47
New Brunswick, N. J	71		. 3	. 90		.90
Atlantic City, N. J	70			. 77	ļ	.90 .57
New York, N. Y	76		4	.94		.64
Washington, D. C	76			.98		.91
Lynchburg, Va	77		3 2	83		.63
No-folk Vo	76 78		4	.94 .99	······	.54
Norfolk, Va	127	1	*	1.10		.89 .70
Raleigh N C	78	ò		1, 25	. 45	.10
Kittyhawk, N. C	76		2	1.16	. 20	.46
Hatteras, N. C	76		2	1.16		.86
Wilmington, N. C. Columbia, S. C.	79	1		1.40		1.00
Columbia, S. C	79	1		1.04		.51
Charleston, S. C	81	1		1.43	.07	
Charleston, S. C. Augusta, Ga.	80	4		1.12		.92
Savannan. Ga	81	3		1.56		1.36
Jacksonville, Fla	81	5		1.37	·····	1.07
Jupiter, FlaKey West, Fla	31	1	2	1.42	•••••	.12
Gulf States:	84	••••••	2	.91	•••••	.53
Atlanta Ga	77	3	1	1.05		.85
Atlanta, Ga	ši l	ĭ		2.25		1.25
Pensacola, Fla	80	4		1.3;		1.13
Mobile Ale	81	3		1.46		.76
Montgomery, Ala	81	3		1.09	.01	
Montgomery, Ala Vicksburg, Miss	80	4		.98		.88
	81	3		1.60	.30	
Shreveport, La	82	2		.81	•••••	.14
Fort Smith, Ark	78	6 6		.98 .91	.19	.58
Polostino Tow	78 80	4		.83	.19	. 63
Palestine, Tex	83	i		1.00	·····	1.00
San Antonio, Tex	82	ó		.56		.36
Corpus Christi, Tex	81	ĭ		.51		.41
Ohio Valley and Tennessee:	!					
Memphis, Tenn	80	2		1.03	.07	
Nashville, Tenn	79		1	1.05		. 45
Chattanooga, Tenn	77	3		1.10		1.10
Knoxville, TennLouisville, Ky	75	1		.98	. 32	
Louisville, Ky	77	••••••	5 4	1.08		. 08 . 98
Indianapolis, Ind	76	••••••	4	.99		. 69
Columbus Ohio	73		3	.77		.77
Cincinnati, Ohio	74		4	.98		.98
Pittsburg, Pa	74		6	.87		. 67
Lake Perion			1			
Oswego, N. Y	67		5	.30	. 10	
Oswego, N. Y	68		2	.71		. <u>61</u>
Buffalo, N. Y	68		4	.77	•••••	.77
Krie Pe	70	·····	6	.85 .84		.85
Cleveland, Ohio	70 71		6 3			. 84 . 85
Sandusky, Ohio	72	····· ········	4	.75		.75
Toledo, Óhio Detroit, Mich	70	·····	4			.84
			6			. 95
Port Huron, Mich	67		3	.77		.77
Port Huron, Mich	63		1	. 82		. 62
	61		5	.77		.47
Marquette, Mich	62		4	. 82		. 22

Table of temperature and rainfall, week ended June 28, 1897—Continued.

en e	Tem	perature i Fahreni	n degrees eit.	Kainfa	ll in inche dredth	es and hun- s.
Locality.		, 	1		1	L
	Normal	*Excess	. *Defic'ncy.	Normal	. Excess	. Deficienc
ake Region-Continued.						
Green Bay, Wis	68	I	2	.70	.00	
Grand Haven, Mich	67		. 5	. 83		
Milwaukee, Wis	67	1	3	. 95	.15	
Chicago, Ill Duluth, Minn	70		4	.87		.:
Duluth, Minn	61		. 1	1.02		.:
pper Mississippi Valley:		l				1
St. Paul, Minn	70		6	. 96	.74	
La Crosse, Wis Dubuque, Iowa	71		. 5	1.05	.35	••••••
Dubuque, lowa	72		. 4	1.23		
Davenport, Iowa	74		. 4	. 93	47	.0
Des Moines, lowa	72 75	ļ	: 3	1.13 1.05	1.85	***************************************
Keokuk, Iowa Springfield, Ill	74 74	·····] 4	.93	1.47	***************************************
Cairo, Ill	77	ļ		1.05	1.7/	
Qt Tonia Mo	77		3	1.09	2.21	" "
issouri Valley: Columbia, Mo	••	ļ	. "	1.00	2.21	
Columbia Mo	76	0	1	1.03	3, 37	1
Springfield, Mo	74	ı ă		. 95	.75	
Kansas City, Mo	76	1 2		1, 12	4.18	
Wichita, Kans	78	5		1.14		1.0
Concordia, Kans	78	- 5		. 93		. -:
Concordia, KansLincoln, Nebr	74		2	. 83		
Umana. Nebr	74		4	1.34	l	
Sioux City, Iowa Yankton, S. Dak	73		5	.77		
Yankton, S. Dak	71		3	. 98		
Valentine, Nebr Huron, S. Dak	69		1	.78	2, 22	
Huron, S. Dak	69		3	.84	. 66	
Pierre, S. Dak	71		3	.76	1,14	
Moorhead, Minn	66		6	1.10	3.60	
Bismarck, N. Dak	67	•••••	5	. 75		. .1
Williston, N. Dak	66	·····	6	.82	••••••	5
cky Mountain Region:						1
Havre, Mont	64	•••••	2	.72	1.08	
Helena, Mont	63 (70)	•••••	3 4	.52	.78	
Renid City & Deb	67		5	. 58	.02 .73	
Snokene Wesh	64	2	9	.77 .30	.10	
Rapid City, S. Dak	68	2	2	.29	.51	
Baker City, Oreg	59	•••••	ĩ	.29	.11	
Winnemucca, Nev	67	•••••	9	.14	.16	
Sait Lake City, Utan	7i	•••••••	ĭ	.14	. 10	.1
Lander, Wyo	65		î	.25	••••••	.2
Cheyenne, Wyo	64	0	<u>-</u>	.83		.2
	71		1	.77	••••••••••••	.2
Denver, Colo	70	0		.35		.3
Pueblo, Colo	73 .		1	. 34	. 26	
Penver, Colo. Pueblo, Colo. Dodge City, Kans. Oklahoms, Okla. Amarillo, Tex. Abilene, Tex.	76	4		.77		.7
Oklahoma, Okla	78	4		.56		.3
Amarillo, Tex	75	3		. 75		.5
Abliene, Tex	81	3		.68		.6
Santa Fe, N. MexEl Paso, Tex	69	0	•••••	. 23	.02	
Dhonis Asia	83	3		.12		.1
Phœnix, Ariz	85 .	•••••	1	.05	••••••	00
Totoch Island Weeh	55	į				
Port Angeles Weeh	55 .	•••••	••••••	.88		• • • • • • • • • • • • • • • • • • • •
Tatoosh Island, Wash	56	2		.25		
Portland, Oreg	62	ő	••••••	.59	.91	•••••
Roseburg, Oreg	62	v	2	.36	. 64 . 53	
Eureka, Cal	55	3	4	.17	.33	
Redbluff, Cal	78		8	.07	.07	
Carson City, Nev	63		9	.07	.03	·····
Carson City, Nev Sacramento, Cal	70		6	.00	.00	
San Francisco, Cal	58	0		.03 .	.00	n:
Fresno, Cal	76		6	.00	.00	
					.00	
Los Angeles, Cal	67		as 1	. (8)	. (8)	
Los Angeles, Cal San Diego, Cal Yuma, Ariz	65		3	.00	.00	

^{*} The figures in these columns represent the average daily departure.

FOREIGN.

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

Cholera, yellow fever, and plague as reported to the Supervising Surgeon-General United States
Marine-Hospital Service, December 29, 1896, to June 29, 1897.

CHOLERA.

Places.	Date.	Савев.	Deaths.	Remarks.						
India:										
Bombay	Dec. 8-Dec. 15		1							
	Dec. 22-Dec. 29 Mar. 23-Mar. 30		1 1							
	Mar. 3l-June 1		32							
Calcutta	Nov. 14-Jan. 30		267 311							
	Jan. 31-Feb. 27 Feb. 28-Mar. 6 Mar. 6-May 22 Nov. 21-Nov. 27		125							
	Mar. 6-May 22		1,271							
Madras	Nov. 21-Nov. 27 Nov. 28-Dec. 4		2							
	Dec. 12-Dec. 25		6							
	Dec. 26-Jan. 29		22 13							
	Jan. 30-Feb. 26 Feb. 27-Mar. 5 Mar. 6-Mar. 19 Mar. 20-Mar. 26		2							
	Mar. 6-Mar. 19		1							
Singapore	Mar. 20-Mar. 26 Nov. 1-Nov. 30		12							
omgapore	Dec. 1-Dec. 81		15							
Ceylon:	N		.,,							
Colombo	Nov. 28-Jan. 23 Jan. 23-Jan. 30		114							
England :		I	-							
Plymouth	Jan. 9	•	4	On steamship Nubia.	No cases in					
Japan :				city.						
M-1	Dec. 4-Dec. 29	8	7							
Tokyo										
·	Dec. 30-Jan. 18		8							
Yokohama	Dec. 30-Jan. 18 Dec. 4-Dec. 29 Dec. 30-Jan. 18	4	3 2							
·	Dec. 30-Jan. 18 Dec. 4-Dec. 29	4	3 2							
·	Dec. 30-Jan. 18 Dec. 4-Dec. 29 Dec. 30-Jan. 18	4	3 2							
Yokohama	Dec. 30-Jan. 18 Dec. 4-Dec. 29 Dec. 30-Jan. 18. YELLO	W FEVI	3 2 ER.							
Yokohama Brazil : Bahia	Dec. 30-Jan. 18 Dec. 30-Jan. 18 YELLO May 13-May 19.	4 2 W FEVI	3 2 ER.							
Yokohama	Dec. 30-Jan. 18 Dec. 30-Jan. 18 YELLO May 13-May 19 Dec. 12-Jan. 30 Jan. 31-Reb. 27	4 2 W FEVI	3 2 ER. 3 32 20							
Yokohama Brazil : Bahia	Dec. 30-Jan. 18 Dec. 30-Jan. 18 YELLO May 13-May 19 Dec. 12-Jan. 30 Jan. 31-Reb. 27	4 2 W FEVI	3 2 ER. 3 32 20 9							
Yokohama Brazil : Bahia	Dec. 30-Jan. 18 Dec. 30-Jan. 18 YELLO May 13-May 19. Dec. 12-Jan. 30. Jan. 31-Feb. 27-Mar. 6. Mar. 13-Mar. 20. Apr. 3-Apr. 10.	# 2 W FEVI	3 2 ER. 3 32 20							
Yokohama	Dec. 30-Jan. 18 Dec. 30-Jan. 18 YELLO May 13-May 19. Dec. 12-Jan. 30. Jan. 31-Feb. 27-Mar. 6. Mar. 13-Mar. 20. Apr. 3-Apr. 10.	# 2 W FEVI	3 2 ER. 3 32 20 9 9 3 3 4							
Yokohama Brazil : Bahia	Dec. 30-Jan. 18 Dec. 30-Jan. 18 YELLO May 13-May 19 Dec. 12-Jan. 30 Jan. 31-Feb. 27 Feb. 27-Mar. 6 Mar. 13-Mar. 20 Apr. 3-Apr. 10 May 30-June 5 Nov. 21-Dec. 26	# 2	3 3 3 3 2 20 9 3 3 4 10							
Yokohama	Dec. 30-Jan. 18 Dec. 4-Dec. 29 Dec. 30-Jan. 18. YELLO May 13-May 19. Dec. 12-Jan. 30. Jan. 31-Feb. 27. Feb. 27-Mar. 6. Mar. 13-Mar. 20. Apr. 3-Apr. 10. May 30-June 5. Nov. 21-Dec. 26. Dec. 26-Jan. 30.	W FEVI	3 3 2 20 9 9 3 3 4 10 28 5							
Yokohama	May 13-May 19. May 13-May 19. Dec. 12-Jan. 30. Jan. 31-Feb. 27. Feb. 27-Mar. 6. Mar. 13-Mar. 20. Apr. 3-Apr. 10. May 30-June 5. Nov. 21-Dec. 26. Dec. 26-Jan. 30. Jan. 31-Feb. 6. Feb. 13-Feb. 6.	4 2 W FEVI	3 32 20 9 3 3 4 10 28 5 6							
Yokohama	May 13-May 19. May 13-May 19. Dec. 12-Jan. 30. Jan. 31-Feb. 27. Feb. 27-Mar. 6. Mar. 13-Mar. 20. Apr. 3-Apr. 10. May 30-June 5. Nov. 21-Dec. 26. Dec. 26-Jan. 30. Jan. 31-Feb. 6. Feb. 13-Feb. 6.	4 2 W FEVI	3 32 20 9 9 3 3 4 10 28 5 6 6 16							
Brazil: Bahia Para Rio de Janeiro	Dec. 30-Jan. 18 Dec. 4-Dec. 29 Dec. 30-Jan. 18. YELLO May 13-May 19. Dec. 12-Jan. 30. Jan. 31-Feb. 27. Feb. 27-Mar. 6. Mar. 13-Mar. 20. Apr. 3-Apr. 10. May 30-June 3. Nov. 21-Dec. 26. Dec. 26-Jan. 30. Jan. 31-Feb. 6. Feb. 13-Feb. 20. Feb. 20-Mar. 6. Mar. 7-May 29.	W FEVI	3 32 200 9 3 3 4 10 288 5 6 16 78							
Yokohama	Dec. 30-Jan. 18 Dec. 4-Dec. 29 Dec. 30-Jan. 18. YELLO May 13-May 19. Dec. 12-Jan. 30. Jan. 31-Feb. 27. Feb. 27-Mar. 6. Mar. 13-Mar. 20. Apr. 3-Apr. 10. May 30-June 3. Nov. 21-Dec. 26. Dec. 26-Jan. 30. Jan. 31-Feb. 6. Feb. 13-Feb. 20. Feb. 20-Mar. 6. Mar. 7-May 29.	W FEVI	3 32 20 9 3 3 4 100 28 5 6 16 78 8							
Brazil: Bahia Para Rio de Janeiro	Dec. 30-Jan. 18 Dec. 30-Jan. 18 Pec. 30-Jan. 18 YELLO May 13-May 19 Dec. 12-Jan. 30 Jan. 31-Feb. 27 Feb. 27-Mar. 6 Mar. 13-Mar. 20 Apr. 3-Apr. 10 May 30-June 5 Nov. 21-Dec. 26 Dec. 26-Jan. 30 Jan. 31-Feb. 20 Feb. 20-Mar. 6 Mar. 7-May 29 Dec. 25-Jan. 30 Jan. 31-Feb. 21 Jan. 31-Feb. 27 Jan. 31-Feb. 27 Jan. 31-Feb. 20 Jan. 31-Feb. 27 Jan. 31-Feb. 27 Jan. 31-Feb. 27	W FEVI	3 32 200 9 3 3 4 10 288 5 6 16 78							
Brazil: Bahia Para Rio de Janeiro	Dec. 30-Jan. 18 Dec. 30-Jan. 18 YELLO May 13-May 19 Dec. 12-Jan. 30 Jan. 31-Feb. 27 Feb. 27-Mar. 6. Mar. 13-Mar. 20 Apr. 3-Apr. 10. May 30-June 5. Nov. 21-Dec. 26-Jan. 30 Jan. 31-Feb. 6. Feb. 13-Feb. 20 Feb. 20-Mar. 6. Mar. 7-May 29 Dec. 25-Jan. 30 Jan. 31-Feb. 27 Apr. 17-June 19 Dec. 20-Dec. 27 Apr. 17-June 19 Dec. 20-Dec. 27	W FEVI	3 32 20 9 3 3 4 100 28 5 6 6 16 6 78 8 1 9 8							
Brazil: Bahia	Dec. 30-Jan. 18 Dec. 30-Jan. 18 YELLO May 13-May 19 Dec. 12-Jan. 30 Jan. 31-Feb. 27 Feb. 27-Mar. 6. May 13-Mar. 10. May 30-June 5. Nov. 21-Dec. 26 Dec. 26-Jan. 30 Jan. 31-Feb. 6. Feb. 13-Feb. 20 Feb. 20-Mar. 6. Mar. 7-May 29 Dec. 25-Jan. 30 Jan. 31-Feb. 27 Apr. 17-June 19 Dec. 20-Dec. 27 Dec. 28-Jan. 17 Apr. 4-Apr. 17	4 2 W FEVI 5 12 21 174 84 88 43	3 32 200 9 3 3 4 4 100 28 5 6 6 78 8 1 9 8 2							
Pazil: Bahia Para Rio de Janeiro Cuba:* Cardenas Cienfuegos	Dec. 30-Jan. 18 Dec. 30-Jan. 18 YELLO May 13-May 19 Dec. 12-Jan. 30 Jan. 31-Feb. 27 Feb. 27-Mar. 6. May 13-Mar. 10. May 30-June 5. Nov. 21-Dec. 26 Dec. 26-Jan. 30 Jan. 31-Feb. 6. Feb. 13-Feb. 20 Feb. 20-Mar. 6. Mar. 7-May 29 Dec. 25-Jan. 30 Jan. 31-Feb. 27 Apr. 17-June 19 Dec. 20-Dec. 27 Dec. 28-Jan. 17 Apr. 4-Apr. 17	4 2 W FEVI 5 12 21 174 84 88 43	3 32 20 9 3 3 4 100 28 5 6 16 78 8 1 9 9 8 2 1 1							
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^{*}February 28, 1897, 300 cases of yellow fever were reported among the sick soldiers on the Island.

Cholera, yellow fever, plague, etc.—Continued. YELLOW FEVER—Continued.

Places.		Date.		Сайев.	Deaths.	. Remarks.
Santiago	Dec	5-Dec.	26		. 17	
		26-Jan.				
		16-Jan.				
	Jan.	30-Feb.	27		6	i
	Feb.	27-Mar.	27			
	May	2-June	19	51	26	
Sagua la Grande		19-Dec.			5	
		26-Jan.			6	
		9-Jan.			12	
		31-Feb.			7	
		27-Mar.			17	
Ecuador:	Mar.	28-June	19	264	11	
Guayaquil	Das	10 fa-			9	
Haiti:	Dec.	10-Jan.	1	•••••	9	
Port au Prince	Dec	1-Dec.	-		2	
	Dec.	14	4	•••••	- 2	Yellow fever epidemic.
		l-Mar.			3	renow iever epidenne.
Guadeloupe:			٠	•••••		• •
Basse Terre	Jan.	5		1	l	
Mexico:				_		
Vera Cruz	June	28				Yellow fever reported.
Inited States of Colombia:						
Panama	Apr.	14		20	17	
	June	15		82	54	Estimated.
Colon	May	12-May	25		5	

PLAGUE.

_	i	1	i ·
Egypt: Suez	Mar. 31		One case of plague on Br. S. S
India:	!		Dilwara from Bombay.
Bombay *	Dec. 1-Dec. 22	694	This is the number of deaths officially reported. The United States consulestimates the number of deaths for the same period at 2,763.
	Dec. 22-Jan. 5	738	
	Jan. 5-Jan. 12		Estimated deaths for this same period, 1,388,
	Jan. 12-Jan. 19		
	Jan. 19-Jan. 26		Estimated deaths for this same period, 1,462.
	Jan. 26-Feb. 23	. 2,884	Estimated deaths for this same period, 5,845.
	Feb. 23-Mar. 9	. 1, 282	Estimated deaths for this same period, 2,265.
	Mar. 9-Mar. 30	. 1, 431	Estimated deaths for this same period, 2,730,
	Mar. 31-June 1	. 1,681	Estimated deaths from March 31 to April 20, 2,892.
Calcutta Karachi	Feb. 6-Feb. 13		Plague epidemic; 220 cases, 214
China:			deaths to date.
Hongkong		.ii	A few cases.
Swatow	May 4		Epidemic of plague reported.
apan :			The property of
Formosa	Nov. 6-Nov. 30 53		
	Dec. 4-Dec. 29		
	Jan. 19-Jan. 27 3		
i			
	Mar. 24-Mar. 31 3		
1	Apr 1-Apr. 20 64	54	
	Apr. 20-May 20. 268		
Taihoku	Apr. 20-Apr. 27 3		
Russia :	- 1	,	
St. Petersburg	Apr. 10-Apr. 17	1	
	Mar. 31		One case of plague on Br. S. S.
			Baldwin.
	!	1	**************************************

^{*}Official returns show 9,118 cases and 7,602 deaths to March 12.

Current quarantine measures.

[Translated in this Bureau from the "Veröffentlichungen des Kaiserlichen Gesundheitsamtes," Berlin, June 2, 1897.]

Russia.—In consequence of a circular issued by the Customs Department May 13, antiplague serum, brought by private parties from abroad, shall be passed by the customs officers only on certification as to the origin of the serum, and when it shall be shown that it was obtained by the holders from an institution recognized by the commission. At the present time, the only establishment recognized is the Pasteur Institute.

By agreement between the commission and the minister of the interior, the following measures have been instituted to prevent the introduction of plague:

1. Letters, packages, printed matter, and business papers shall be

subject to disinfection by means of a steam current.

2. Letters and packages of declared value, which are rejected by the Russian post-office authorities, shall be returned to the places from which they were sent.

3. The same regulation shall hold good for all such packages arriving

from infected places from which importation is prohibited.

4. Disinfection shall be performed on the western frontier at Wirballen, Alexandrovo, Graniza, Wolotschisk, and Radsivilow; also at Odessa, Sebastopol, Batoum, Baku, and Vladivostock; on the Persian border at Dschulfa and Haudan, and on the Chinese border at Troizkossawsk. Mail and postal packages arriving from abroad at St. Petersburg, Moscow, Warsaw, Riga, Mitau, and Libau, must be sent to the post station in these cities for disinfection.

5. As evidence of the regulations having been complied with, every

letter or package shall be stamped with the word "disinfected."

The postal officials of British India have been requested by telegraph to inform the senders of correspondence not to send articles by post that may be injured by exposure to a steam current.

BELGIUM.—By ministerial order of May 21 the royal order of April 5, 1897, is amended as follows: "Kipskin may be admitted to importation and transportation even when arriving from infected localities."

HONGKONG.—The colonial government has declared Swatow to be infected and forbidden the importation from there of coolie labor.

BARBADOS.

Quarantine against smallpox and yellow fever.

Barbados, June 12, 1897.

SIR: In consequence of the prevalence of smallpox at Manaos, Brazil, and yellow fever at Colon, those places have been declared infected within the provisions of the quarantine act of this island. Quarantine is also in force here against Rio de Janeiro, Pernambuco, Para, Panama, Teneriffe, and Mayaguez, Puerto Rico. The public health of this island is unusually good.

Yours, etc.,

James Sanderson, Clerk, Quarantine Board.

CHINA.

Plague in Amoy.

The following telegram has just been received from the United States consul at Amoy, China:

"Amoy, June 30, 1397.—Plague epidemic. Johnson."

CUBA.

Smallpox and yellow fever in Cuban seaports.

June 25: The United States sanitary inspector at Habana reports that during the week ended June 24 there were in that city 48 deaths from yellow fever and 3 deaths from smallpox.

June 18: The United States sanitary inspector at Matanzas reports that during the week ended June 16 there were in that city 4 deaths from yellow fever and 1 death from smallpox.

June 19: The United States consul at Santiago reports that during the two weeks ended June 19 there were in that city 17 deaths from yellow fever.

June 21: The United States consul at Sagua la Grande reports that during the week ended June 19 there were in that city 30 new cases reported from yellow fever, and 45 cases and 2 deaths from smallpox.

June 22: The United States consul at Cordenas reports that during the week ended June 19 there were in that city 8 cases and 2 deaths from yellow fever.

Sanitary reports from Habana.

HABANA, CUBA, June 19, 1897.

SIR: I have the honor to submit the following report for the week

ending Thursday, June 17, 1897:

Yellow fever is increasing if the death rate and the reports from the Spanish military hospitals can be used as guides. There is no way to ascertain the number of cases in the city except to build upon the deaths reported at the cemeteries. The weather continues warm and with frequent rains, causing a high degree of humidity.

The rains of the past three weeks have washed much of the surface

filth from the streets into the sewers. There the filth remains.

American schooners, laden with lumber, from the ports in the south, still continue to come to this port, and they invariably go to the Talapiedra wharf, where they remain from seven to ten days. There are two such vessels at that wharf at the present writing.

Smallpox appears to be decreasing, both in number of new cases and

in deaths. * * *

Mortality for the week ended June 17.—Yellow fever, military hospital, 59; city, 1; total, 40. Enteric fever, 11; pernicious fever, 12; paludal fever, 1; smallpox, city, 3; total, 3. Tuberculosis, 40; enteritis, 18; dysentery, 15. Total deaths in the city, 248. Annual ratio per 1,000, 74.

Very respectfully, W. F. Brunner,

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

HABANA, CUBA, June 25, 1897.

SIR: I have the honor to transmit the following report of the health conditions of the city of Habana for the week ended June 24:

Yellow fever is steadily increasing, as the warm weather continues without abatement. The deaths in the city from that disease are apparently few in number, but it is hardly probable that the statistics are reliable. A visit to the largest military hospital, Alphonso XIII, on Tuesday, June 22, showed more than 50 cases of yellow fever in the wards set aside for this disease. Smallpox to the extent of 42 cases was seen, all but a dozen being convalescent. These two diseases are isolated in separate buildings, having their individual staff of medical officers and attendants.

There are said to be about 12,000 sick soldiers of the Spanish army now in the different military hospitals, and provisions are now being made to arrange for the care of several thousand more by using sugar warehouses. Hearing of this, I have visited nearly all the warehouses on the water front, but so far I can find no hospital equipment being placed in any of them. Smallpox has not attacked the soldiers coming from Spain to any extent, but seems to have prevailed among the native contingent.

The following mortality for the week ended Thursday, June 24, is submitted: Yellow fever, military hospitals, 47; city, 1; total, 48. Enteric fever, 8; pernicious fever, 12; paludal fever, 3; dysentery, 11 smallpox, city, 3; total, 3. Enteritis, 19; diphtheria, 1; tuberculosis 31. Deaths from all diseases, 231. Annual ratio per 1,000, 60.

Very respectfully, W. F. Brunner,

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

Sanitary reports from Santiago.

SANTIAGO DE CUBA, June 12, 1897.

SIR: I have the honor to inform you that there were 106 deaths for the week ended June 12. Of these, 7 were from yellow fever, 43 from dysentery, 25 from enteritis, acute and chronic; 6 from remittent, 2 from pernicious, 4 from tuberculosis; the rest from noncontagious diseases.

As I predicted in my last report, yellow fever is increasing daily, and as the summer advances the mortality from it will be decidedly large. Dysentery continues under an epidemic form. Some cases of beriberi have been reported, but as they have not come under my immediate observation I am doubtful about the existence of the disease; the board of health has appointed a commission of three physicians to study the cases reported.

Respectfully,

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

SANTIAGO DE CUBA, June 19, 1897.

SIR: Ninety-nine deaths close the mortuary record for the week ending this day. Of these, we have 10 from yellow fever, 45 from dysentery, 10 from enteritis, acute and chronic; 9 from tuberculosis, 4 from remittent, 2 from typhomalaria, 6 from pernicious; the rest from common diseases of noncontagious character.

There are over 2,000 sick soldiers at the military hospital and the number increases daily. Yellow fever is prevailing now to a great

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extent among the troops. Dysentery continues epidemically. Diarrhea prevails largely, while malarial fevers decline.

Respectfully,

Dr. H. S. Caminero,

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

GREECE.

Treatment of the wounded in the Græco-Turkish War.

ATHENS, May 31, 1897.

A few days before the Turkish Government had declared war I came to Athens, in order to have an idea myself of the wretched condition of the Cretan refugees; but unhappily I have been, and I am still, obliged to witness the disasters by which little Greece has been stricken.

The Greek Government, as well as the Greek population, was obliged to support and entertain many thousands of Christians from Crete, who, being Greeks, were obliged to take refuge in Greece, in order not to sustain the same massacres and illtreatment that poor Armenians have suffered in Constantinople, as well as in Asia Minor, and who have been helped by the United States Red Cross under the presidency of Miss Clara Barton.

It seems that Greece was not allowed to help the wretched Cretans.

There were more than 20,000, wretched, ill, and starving.

On the 16th of last April the Turkish troops received the order to attack, and on the 18th of the same month war was declared. As a consequence, the charges of the Greek Government, as well as those of the population, were very much increased. Besides the Cretans, there were and there are still, the wounded of the battles to help; besides the Cretans and the wounded are the Thessalian refugees, as well as those from Epirus, who, during the war, and especially after it, could not stay in their country on account of their Moslem countrymen, who are as barbarous as Moslem Cretans, if not worse.

At this moment the Greeks of the Greek Kingdom have to feed and

help nearly 350,000 and have to attend nearly 5,000 wounded.

It is very interesting, as well as very sad, to note that the Greeks, who as individuals are so skillful and capable of doing so many good things, when assembled and forming a government are incapable of

doing anything.

The Greek Red Cross, for instance, has not been of any assistance. I have to state nearly the same for the sanitary service of the Greek army. I can say that the wounded, as well as the refugees, have rather suffered from them. I can affirm that the wounded and the refugees have been attended with efficiency by private physicians, by private persons, and by rich Greeks, who have substituted what the Greek Government, the Greek Red Cross, and the sanitary service of the army have not been able to do.

Before the beginning of the war the Greek Red Cross had established five hospitals for wounded, one at each of the following places: Volo, Larisa, Tyrnavo, Carvassara, and Arta. Each of these hospitals was fitted for 50 beds. The hospital of Larissa was complete. They have made it the headquarters of the Red Cross. All the Red Cross material had been accumulated there. According to the slightest calculation there was more than 100,000 francs worth of material included in the armamentarium. The wounded of the Greek army have been deprived of this material, as the hospitals of Larissa and Tyrnavo were abandoned

to the Turks by the physicians who did not have a bit of sentiment of duty or they had forgotten it at that moment. If the chiefs of the Greek army were panic stricken the physicians ought to have staid there. The sole excuse they could offer was that the Turkish army had since the beginning of the war fired on the Red Cross hospital at Arta.

As a consequence of the above-mentioned cowardly action of the physicians of the Red Cross, as well as of the army surgeons, the poor wounded were left without any aid. Thanks to private men, to civilian physicians, everything has been reestablished, and the wounded, as well as the wretched refugees, have been attended and helped. physicians from abroad have arrived in Greece in order to serve their country, and, thanks to them, the wounded have been attended. Greek lady, the example of whom has been followed by others, had the good idea to establish a floating hospital on board a steamship, by which the wounded were carried from the seaports, near the battlefields, to the different cities where well organized hospitals exist. These cities are Athens, Piræus, Khalcis, Patras, Cephalonia, and Corfu. that all the wounded, except those whose condition did not allow them to be carried, and they are no more than 200, have been transported to the above-mentioned cities, where the population does all that is possible to do in order to relieve their sufferings.

The seaports where the wounded were embarked are Volos (before it was abandoned to the Turks), Stylis, and Aga-Marina in Thessaly, and Zaverda in Epirus. I have served as physician on board of one of these floating hospitals and have made four voyages. More than 600 wounded have been transported by the floating hospital, on board of which I served during the four voyages. I can state that the number of wounded of the Greek army during this one-month's war have not been more than 5,000. I hope I will be able to state how many of them have been attended in the Athens hospitals. Among these wounded there are many European volunteers who have come to Greece in order to fight for liberty against barbarism and tyranny. There are also several Turks.

There are in Athens four large hospitals and five or six public or private buildings and houses transformed into hospitals. The latter are maintained by private contribution. There are numerous schools as well as large private houses on which a Red Cross flag is hoisted, where the victims of the war, or rather of the Greek Government, are attended. It has been observed that the wounded Turks are constantly visited by the German minister, who visits only them.

The physicians and nurses sent from the different European Red Crosses are scattered in the above-mentioned different hospitals. There are now here physicians and nurses from England, Sweden, Germany, and France. There exists an English Red Cross hospital at Piræus and one at Khalcis. There is a German Red Cross hospital at Aga-Marina, on the seashore near Stylis.

The wounded, whom I have myself seen, present wounds from rifle bullets, and some of them were wounded with fragments of bombshells. I have not seen any wounded with side arms.

In my next report I will lay stress on the frequency of the different wounds and on the condition of the wretched refugees, as well as of the population of the Greek Kingdom. They are pitiable, though the latter is responsible for a great deal in allowing the existence of such a corrupt Government.

Spiridion C. Zavitziano,

United States Sanitary Representative to the International Sanitary Commission at Constantinople.

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MEXICO.

Yellow fever in Vera Cruz.

A telegram from United States Consul Schafer, dated June 28, reports the appearance of yellow fever at Vera Cruz.

Smallpox in Chihuahua.

EL PASO, TEX., June 22, 1897.

SIR: I have the honor to report that I am informed by a Mexican Central Railroad medical officer that smallpox is prevalent in the city of Chihuahua, a place about ten hours' ride by rail from the city of El Paso, Tex.

Precautions will be taken that the dread disease does not reach the border.

I am, sir, very respectfully, E. ALEXANDER, Sanitary Inspector, U. S. M. H. S.

STATISTICAL REPORTS.

AUSTRALIA—New South Wales—Newcastle.—Month of April, 1897. Population, 15,331. Total deaths, 19, including enteric fever, 1.

BAHAMAS—Dunmore Town.—Two weeks ended June 18, 1897. Estimated population, 1,472. No deaths.

Governors Harbor.—Two weeks ended June 19, 1897. Estimated population, 1,500. No deaths.

Green Turtle Cay—Abaco.—Two weeks ended June 17, 1897. Estimated population, 3,900. No deaths.

Brazil—Ceara.—Month of April, 1897. Estimated population, 50,000. Total deaths, 256.

Month of May. Total deaths, 180, including measles, 16; smallpox, 2, and whooping cough, 11.

FRANCE—Nantes.—Month of May, 1897. Estimated population, 125,757. Total deaths, 234, including enteric fever, 2, and diphtheria, 2.

Nice.—Month of April, 1897. Estimated population, 108,227. Total deaths, 150, including enteric fever, 1; phthisis pulmonalis, 23, and whooping cough, 2.

GREAT BRITAIN—England and Wales.—The deaths registered in 33 great towns in England and Wales during the week ended June 12 correspond to an annual rate of 15.6 a thousand of the aggregate population, which is estimated at 10,992,524. The highest rate was recorded in Salford, viz, 27.3, and the lowest in Croydon, viz, 8.2 a thousand.

London.—One thousand one hundred and seventy-seven deaths were registered during the week, including measles, 18; scarlet fever, 14; diphtheria, 39; whooping cough, 36; enteric fever, 6, and diarrhea and dysentery, 12. The deaths from all causes correspond to an annual rate of 13.8 a thousand. In greater London, 1,532 deaths were regis-

tered, corresponding to an annual rate of 12.7 a thousand of the population. In the "outer ring" the deaths included 8 from diphtheria, 11 from measles, 12 from whooping cough, and 3 from scarlet fever.

Ireland.—The average annual death rate represented by the deaths registered during the week ended June 12 in the 16 principal town districts of Ireland was 22.4 a thousand of the population. The lowest rate was recorded in Drogheda, viz, 3.8, and the highest in Limerick, viz, 39.3 a thousand. In Dublin and suburbs 150 deaths were registered, including scarlet fever, 4; enteric fever, 2; whooping cough, 4; diphtheria, 1, and measles, 2.

Scotland.—The deaths registered in 8 principal towns during the week ended June 12 correspond to an annual rate of 20.3 a thousand of the population, which is estimated at 1,549,907. The lowest mortality was recorded in Aberdeen, viz, 11.7, and the highest in Edinburgh, viz, 26.3 a thousand. The aggregate number of deaths registered from all causes was 606, including scarlet fever, 4; diphtheria, 2; measles, 27; whooping cough, 37, and smallpox, 1.

INDIA—Singapore.—Month of April, 1897. Estimated population, 97,111. Total deaths, 735, including beriberi, 118, and phthisis pulmonalis, 12.

MOZAMBIQUE.—Month of May, 1897. Estimated population, 10,000. Total deaths, 17.

RUSSIA—Riga.—Month of March, 1897. Estimated population, 282, 000. Total deaths, 479, including diphtheria, 89; measles, 32; enteric fever, 14, and whooping cough, 3.

SWITZERLAND—Lucerne.—Month of May, 1897. Estimated population. 23,500. Total deaths, 42, including diphtheria, 1.

MORTALITY TABLE, FOREIGN CITIES.

Cities. Meek ended.		ula-	from		Deaths from—									
	Estimated popula- tion.	Total deaths f	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diplitheria.	Measles.	Whooping.			
Aden		35, 854		ļ		2		ļ 		ļ		ļ <u>.</u>		
Aix la Chapelle Do		112, 638 112, 638	43 51									1		
Alexandria	May 13	231, 396	226		ļ	1		·····		1	9			
Amhertsburg Amsterdam	June 12	2,300 495,974	1 12							1		4		
Bermuda Belfast		15, 013 281, 431	1 135	ļ. 				15	1	1	3			
Belize	June 18	13,000	4									`		
Belleville Bermuda	June 21 June 11	10, 459 15, 015	2 1								•••••			
Do	June 18	15, 015	0]								
Birmingham Do		505, 772 505, 772	187 190						1	3	14	1		
Bologna	May 22	121,579	72		ļ									
Bremen	June 12 May 29	121,579 142,500	52 28					•••••	•••••	1				
Brussels	June 5	507, 985	163							3	1	1		
Budapest Do		640,000 640,000							2	3	9 2			
Cairo	May 13	374, 838	360		١ ١	2				1	2			
Catania Chatham	June 8 June 21	120, 000 9, 052	58 3				1							
Christiania	June 5	192, 141	64								1			
De Cienfuegos	June 12 June 13	192, 141 24, 030	67 46							1	1			
Do Coaticook	June 20	24,030	51					1		ļ		•••••		
Do		2,500 2,500	0											
Do Cognac	June 19	2,500	0	 .						ļ				
Do	June 5 June 12	21,500 21,500	5 5											
Cologne	May 29 June 5	335, 116 335, 116	112 139							1		2		
Colombo, Ceylon	May 8	127, 836	83											
Do	May 15 May 22	127, 836 127, 836	106 100											
Do	Мау 29	127, 836	81					3						
Copenhagen Crefeld	June 5	333,714 108,500	108 31						1		$\frac{1}{2}$	8		
Demerara	May 1	86, 250	53									•••••		
Do Do	May 8 May 17	86, 250 86, 250	36 30		·····					1.				
Do	May 22	86, 250 86, 250	45 47									•••••		
Dresden	May 29 June 5	351, 800	144							5	1	1		
Dublin Dundee	May 8 June 5	350,000 163,090	226 56				1	2	4	2	8	16		
Do	June 12	163,090	58					2	1	1		2		
Dusseldorf Flushing	May 29 June 5	185, 759 17, 193	68 2		••••					1	2			
Do	June 12	17, 193	2											
Frankfort on the Main Do	June 5 June 12	238, 000 238, 000	84 78							1	1]		
Gibraltar	June 6	25, 900	17							1				
GirgentiGothenburg		24, 428 114, 527	9 26	·····		••••• ••••				1		1		
Halifax Hamburg		3⊀,700 641,780	18 166							2		1		
Do	June 12	641,780	203					1	1					
Havana Königsburg		200, 448 171, 700	248		40	3		11 1	•••••	1				
Leeds	June 5	402, 449							1	1	1	2		
Leghorn	June 12 June 5	402, 449 103, 755									1	2		
Do	June 12	103, 755	39				 							
Licata Liege	June 12	20,000 166,110					1	1						
Livingston, Guatemala	do	2,000	3											
London, Canada Madras		34, 855 452, 518				4								
Madrid	June 2 May 15	482, 816	297			2		7			19	i		
Magdeburg Manchester		214, 447 536, 426	219		•••		•••••		1		14			

MORTALITY TABLE, FOREIGN CITIES—Continued.

. Cities. Neek ended.		el i	gog ,		Deaths from—								
	Week ended.	Estimated popula-	Total deaths fi	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping	
Maracaibo	June 5	50,000	22								14		
Do	June 12	50,000	40								3		
Matamoras	June 11	12,000	2								ļ		
Do	June 18	12,000	4										
latanzas	June 16	62,000	76		4	1		5			3		
Layence	June 12	74, 917	24		l	<u>-</u>		1			ļ		
lessina	do	107,000	24					3				•••	
Iontevideo	May 22	215, 061	54										
Turemburg	May 8	173, 817	98				ļ				1		
uremons	Mor 18	173, 817	91				1	1	1	•••••	•		
Do	May 15	173, 817	91						1	1		1	
	May 22	173, 817	81								3	1	
Do	May 29	44,500	115								î	1	
dessa	June_5	92,000	103										
alermo	do	273,000	23								1	1	
lymouth	June 12	97,340	23							••••	•••••		
ort au Prince	May 10	60,000	23 24								•••••	· · ·	
<u>Do</u>	May 17	60,000										1	
Do	May 24	60,700	15							•••••	•••••	١.	
uerto Barrios	June 12		. 1			•••••				•••••			
rague	June 5	193, 097	143						1	•••••		1	
uerto Cortes	June 16	2,000	. 0										
lio de Janeiro	May 22	679,000	*289		8								
Do	May 29	679,600	†316		3			1				٠.	
otterdam	June 5	288, 863	96							3			
Do	June 12	288, 863	98						2	l		٠.	
agua la Grande	do	17,536	40							í		٠.	
Do	June 19	17,536	45		ļ	2						٠.	
t. Georges, Bermuda	June 12	2, 150	0										
Do	June 19	2, 150	0									١.,	
t. Petersburg	May 29	1, 257, 023	625			4		10	14	39	38	1	
Do	June 5	1, 257, 023	677			2	1	23	11	42	45		
t. Stephens, New Brunswick	June 19	3,000	0									١.,	
an Juan del Norte	June 5	1,437	0					ļ	 				
Do	June 12	1,497	0						l			٠.	
chiedam	June 5	26, 627	10									٠.	
Do	June 12	26, 627	9			. .	ĺ					١.,	
heffield	do	352,950	120				i			2	3	1	
outhampton	June 5	98,002	28									1	
Do	June 12	98,002	28							1	1	1	
outh Shields	May 29	95,798	22					1					
Do	June 5	95,798	41		ļ					ļ	2		
tettin	May 29	150,000	62					1					
Do	June 5	150,000	57							ļ. .		١.,	
tockholm	do	274,611	84					1	2				
uttgart	June 3	158, 378	71							2			
Do	May 10	158, 378	44										
rapani	June 5	43,095	15										
rieste	May 29	158, 314	69			1					••••	١.	
Do	June 5	158, 314	68						1	1	1		
uxpan	do	10, 280	7									1	
enice	do	165, 222	56							. .			
era Cruz	June 17	30,000	31										
Varsaw	May 29	601, 408	188				1		2	5	2		
Do	June 5	601, 408	175					2	3		2	1	
armouth	June 12	6,500	- 0								ļ		
Do	June 20	6,500	ĭ										
urich	May 29	151,000	$5\overline{4}$				1			1		1	
Do	June 5	154,000	49	1,	,.		1	1		2	l	١	

* Beriberi, 6.

† Beriberi, 5.

By authority of the Secretary of the Treasury: