ABSTRACT OF SANITARY REPORTS.

VOL. V. WASHINGTON, D. C., SEPTEMBER 5, 1890. No. 36.

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UNITED STATES.

SPECIAL REPORTS.

Gulf Quarantine Station—Yellow fever.

The following report has been received from the passed assistant surgeon in charge:

AUGUST 25, 1890.

SIR: I have the honor to report the arrival yesterday afternoon of the British bark *Francisco Garguilio*, seven days from Havana, for Ship Island, in earth and stone ballast. Said vessel lay to discharge at Tallapiedra wharf, which, from its proximity to the hospital sewer, is probably the very worst place in Havana, for seven days, and while there and after leaving, developed six cases of yellow fever; shipped one man just before leaving, who also developed it the day after the vessel's bill of health was signed. As the crew is only ten, and three are undoubtedly acclimated, this case shows either unusual susceptibility of the crew or very complete infection of the vessel. She is clean above ballast, bilge offensive, with a distinctly fœcal odor, and considerable dirty drainage in the forecastle. Undoubtedly infected, she can obviously develop no new case aboard.

Very respectfully,

H. R. CARTER,
Passed Assistant Surgeon.

NOTE.—For previous information relative to this vessel, see Abstract No. 35, p. 375.

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

CALIFORNIA—*San Francisco.*—Month of July, 1890. Population, 330,000. Total deaths, 600, including phthisis pulmonalis, 72; enteric fever, 17; diphtheria, 10; scarlet fever, 1; measles, 1; croup, 4; and whooping-cough, 1.

MASSACHUSETTS—*Worcester.*—Month of July, 1890. Population, 85,000. Total deaths, 172, including phthisis pulmonalis 14.

MICHIGAN.—Week ended August 23, 1890. Reports to the State board of health, Lansing, from 68 observers, indicate that membranous croup, inflammation of brain, erysipelas, typho-malarial fever, scarlet fever, pneumonia, influenza, inflammation of kidney, and tonsilitis increased, and that whooping-cough and diphtheria decreased in area of prevalence.

Diphtheria was reported at 26 places, scarlet fever at 24 places, enteric fever at 33 places, and measles at 11 places.

MINNESOTA.—Month of July, 1890. Population, 1,047,860. Reports to the State board of health show a total of 970 deaths, including measles, 6; scarlet fever, 2; diphtheria, 42; croup, 6; enteric fever, 17.

Measles, scarlet fever, and croup show a decrease and diphtheria and enteric fever show an increase in mortality, compared with the preceding month.

NEW YORK.—Month of July, 1890. Reports from 134 cities, towns, and villages, including New York and Brooklyn, show a total of 9,604 deaths, including phthisis pulmonalis, 868; enteric fever, 85; scarlet fever, 40; measles, 87; croup and diphtheria, 264; and whooping-cough, 120.

OHIO.—Month of July, 1890. Reports to the State board of health from 79 cities and towns, having an aggregate population of 1,301,300, show a total of 2,134 deaths, including phthisis pulmonalis, 178; croup and diphtheria, 62; measles, 10; scarlet fever, 4; enteric fever, 55; and whooping-cough, 3.

UTAH—*Salt Lake City.*—Month of July, 1890. Total deaths, 111, including phthisis pulmonalis, 1; diphtheria, 9; enteric fever, 5; and measles, 1.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Aug. 30	1,639,448	716	.....	.....	.....	.....	.....	.....	11	1	20	8	8
Chicago, Ill	Aug. 30	1,100,000	369	.....	.....	.....	.....	.....	.....	13	1	13	1	5
Philadelphia, Pa	Aug. 23	1,064 277	415	.....	.....	.....	.....	.....	.....	11	3	8	.....	9
Baltimore, Md	Aug. 30	500,343	157	.....	.....	.....	.....	.....	.....	8	.....	3	.....	5
St. Louis, Mo	Aug. 30	450,000	161	.....	.....	.....	.....	.....	.....	4	.....	4	.....	.....
Boston, Mass	Aug. 30	437,245	205	.....	.....	.....	.....	.....	.....	6	.....	10	.....	1
New Orleans, La	Aug. 16	254,000	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
New Orleans, La	Aug. 23	254,000	112	.....	.....	.....	.....	.....	.....	.....	.....	2	1	1
Pittsburgh, Pa	Aug. 23	240,000	77	.....	.....	.....	.....	.....	.....	8	1	9	.....	.....
Detroit, Mich	Aug. 23	230,000	57	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Louisville, Ky	Aug. 23	227,000	68	.....	.....	.....	.....	.....	.....	5	2	.....	.....	.....
Louisville, Ky	Aug. 30	227,000	53	.....	.....	.....	.....	.....	5	.....	.....	4	.....	.....
Milwaukee, Wis	Aug. 29	220,000	83	.....	.....	.....	.....	.....	.....	2	.....	8	2	.....
Rochester, N. Y	Aug. 23	135,000	48	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Rochester, N. Y	Aug. 30	135,000	41	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Providence, R. I	Aug. 30	132,000	62	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2
Indianapolis, Ind	Aug. 29	129,346	28	.....	.....	.....	.....	.....	.....	2	2	2	.....	.....
Denver, Colo	Aug. 29	125,000	50	.....	.....	.....	.....	.....	.....	12	.....	2	.....	1
Toledo, Ohio	Aug. 29	81,650	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn	Aug. 30	75,695	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass	Aug. 30	74,918	37	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....
Portland, Me	Aug. 16	42,000	19	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Portland, Me	Aug. 30	42,000	13	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Galveston, Tex	Aug. 8	40,000	14	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Newport, R. I	Aug. 28	20,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill	Aug. 25	16,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla	Aug. 23	15,000	10	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....

Table of temperature and rain-fall, week ended August 29, 1890.

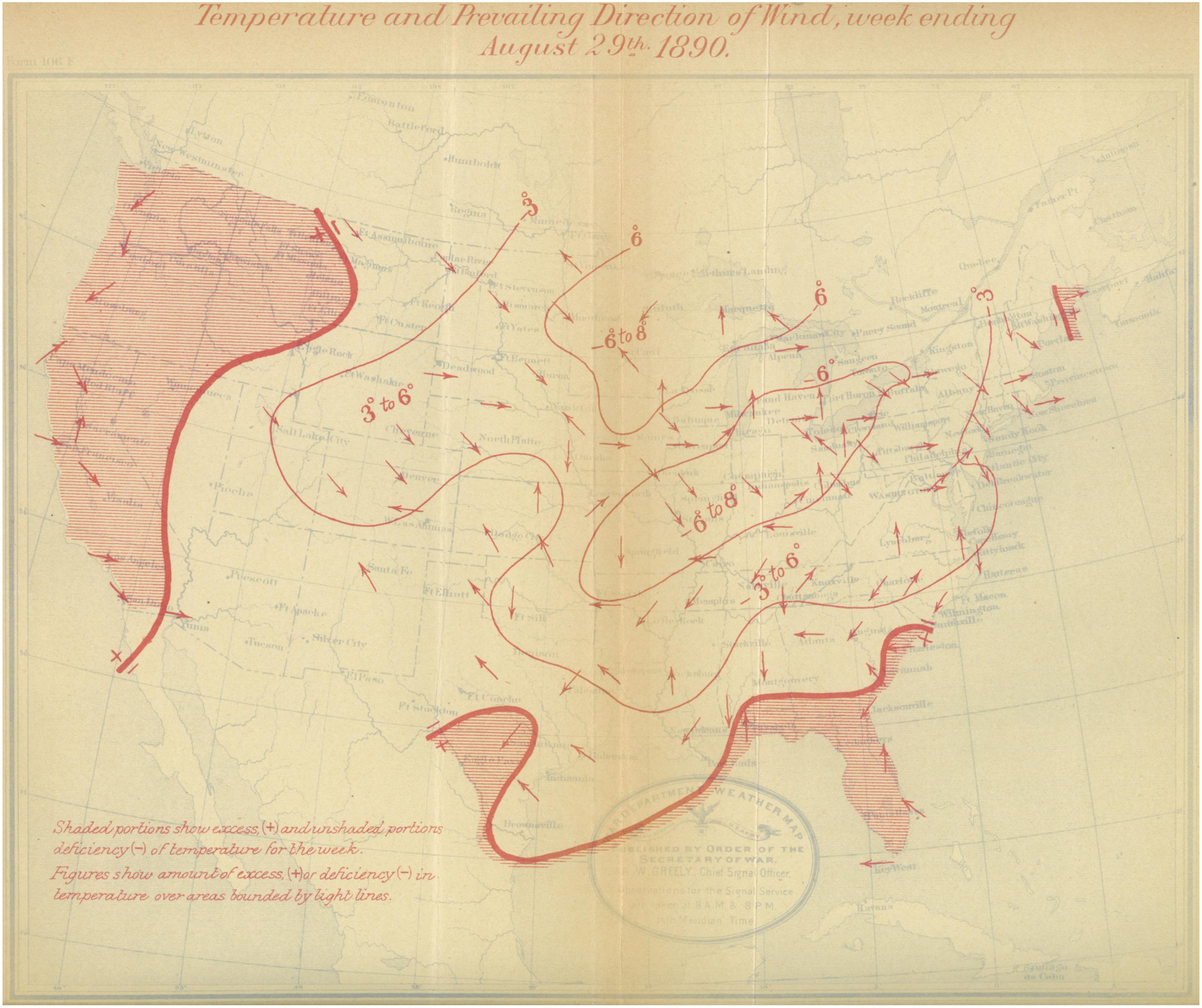
[Received from War Department, Signal Office.]

Locality.	Mean temperature in degrees, Fahrenheit.			Rain-fall in inches and hundredths.		
	Normal.	Excess.	Deficiency.	Normal.	Excess.	Deficiency.
New England States:						
Eastport, Me	56	3		.74	1.02	
Portland, Me	63		11	.81	.41	
Boston, Mass	66		8	1.02		.16
Block Island, R. I	67		5	.70		.26
Middle Atlantic States:						
Albany, N. Y	68		26	.78	1.60	
New York, N. Y	70		11	1.10	.64	
Philadelphia, Pa	72		20	1.10		.88
Atlantic City, N. J	70		22	1.09		.97
Baltimore, Md	73		23	1.01		.47
Washington, D. C	73		34	1.05		.75
Lynchburg, Va	74		30	.90		.70
Norfolk, Va	76		28	1.34		.24
South Atlantic States:						
Charlotte, N. C	77		27	1.09	1.39	
Wilmington, N. C	77		16	1.74		.66
Charleston, S. C	80	4		1.77		1.77
Augusta, Ga	79		8	1.03		.59
Savannah, Ga	80		2	1.82		1.82
Jacksonville, Fla	80		10	1.59		1.27
Key West, Fla	84		8	1.14		1.12
Gulf States:						
Atlanta, Ga	76		14	.91		.53
Pensacola, Fla	80	5		2.37		1.03
Mobile, Ala	81		7	1.54	.10	
Montgomery, Ala	80		6	.81	.32	
Vicksburg, Miss	81		26	.72	2.41	
New Orleans, La	82		13	1.20	1.22	
Shreveport, La	82		24	.46		.46
Fort Smith, Ark	79		41	.49	.81	
Little Rock, Ark	79		15	.86	.24	
Palestine, Tex	81		6	.42		.34
Galveston, Tex	84		9	1.12		.60
San Antonio, Tex	83	2		.78		.20
Corpus Christi, Tex	83		11	.84		.60
Brownsville, Tex	82			1.02		
Rio Grande, Tex	84			.84		
Ohio Valley and Tennessee:						
Memphis, Tenn	79		35	.73	1.58	
Nashville, Tenn	78		42	.77	.63	
Chattanooga, Tenn	75		20	.95	1.36	
Knoxville, Tenn	75		28	.98	.54	
Louisville, Ky	75		33	.81	.16	
Indianapolis, Ind	73		43	.79	1.21	
Cincinnati, Ohio	75		49	.91	1.75	
Columbus, Ohio	71		46	.84		.26
Pittsburgh, Pa	71		38	.74		.09
Lake Region:						
Oswego, N. Y	67		39	.56		
Rochester, N. Y	67		40	.74		.22
Buffalo, N. Y	67		40	.75	1.06	
Erie, Pa	69		46	.75		.21
Cleveland, Ohio	69		41	.74		.54
Sandusky, Ohio	71		54	.91		.65
Toledo, Ohio	70		53	.69		.59
Detroit, Mich	69		52	.66		.30
Port Huron, Mich	66		41	.63		.33
Alpena, Mich	63		32	.84		.34
Marquette, Mich	64		52	.70		.25
Grand Haven, Mich	66		52	.73		.44
Milwaukee, Wis	67		19	.70	.50	
Chicago, Ill	71		40	.73		.13
Duluth, Minn	63		47	.77		.11
Upper Mississippi Valley:						
St. Paul, Minn	68		53	.83	.03	
La Crosse, Wis	70		49	.83	.34	
Dubuque, Iowa	70			.82		
Davenport, Iowa	72		39	.93		.86
Des Moines, Iowa	72		41	.81		.49
Keokuk, Iowa	74		41	.73		.47
Springfield, Ill	73		42	.69		.52
Cairo, Ill	77		41	.63		.03
St. Louis, Mo	76		44	.56	.64	
Springfield, Mo	76			1.05		

Table of temperature and rain-fall, week ended August 29, 1890—Continued.

Locality.	Mean temperature in degrees, Fahrenheit.			Rain-fall in inches and hundredths.		
	Normal.	Excess.	Deficiency.	Normal.	Excess.	Deficiency.
Missouri Valley:						
Kansas City, Mo	76		33	.70	1.26	
Concordia, Kan	73		4	.56	1.14	
Omaha, Nebr	74		35	.79		.35
Valentine, Nebr	70		34	.39	.35	
Huron, Dak	68	14		.63		.51
Extreme Northwest:						
Moorhead, Minn	65		47	.84	.81	
St. Vincent, Minn	63		32	.63	.65	
Bismarck, Dak	66		30	.60		.31
Buford, Fort, Dak	64		14	.26		.10
Rocky Mountain Slope:						
Assinniboine, Fort, Mont	66		8	.28		.12
Helena, Mont	61	27		.21		.21
Custer, Fort, Mont	66			.26		
Rapid City, Dak	64			.33		
Salt Lake City, Utah	71		21	.19		.19
Cheyenne, Wyo	64		22	.35		.33
North Platte, Nebr	71		28	.56	.40	
Denver, Colo	70		24	.35	.29	
Dodge City, Kans	75	15		.72		.12
Elliott, Fort, Tex	74	17		.82	.92	
Sill, Fort, Ind. T	80	30		.63	1.51	
Santa Fé, N. Mex	65	5		.67		.63
Pacific Coast:						
Olympia, Wash	60	26		.14		.13
Portland, Oreg	63	34		.15		.15
Roseburg, Oreg	62	52		.07		.07
Red Bluff, Cal	78	26				
Sacramento, Cal	70	25				
San Francisco, Cal	59	25				
Los Angeles, Cal	69	9				
San Diego, Cal	68	5		.05		
Yuma, Ariz	90	13		.11		.11

Temperature and Prevailing Direction of Wind, week ending August 29th. 1890.



Rainfall, week ending August 29th. 1890.

Shaded portions show excess, (+) and unshaded portions deficiency, (−) in rainfall for the week.
Figures show, in inches, amount of actual rainfall over areas bounded by light lines.

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended August 16 corresponded to an annual rate of 21.0 a thousand of the aggregate population, which is estimated at 9,715,559. The lowest rate was recorded in Nottingham, viz, 11.9, and the highest in Preston, viz, 43.6 a thousand. Diphtheria caused 3 deaths in Salford, 2 in Leeds, and 3 in Liverpool.

London.—One thousand seven hundred and fifty-one deaths were registered during the week, including measles, 80; scarlet fever, 27; diphtheria, 15; whooping-cough, 39; enteric fever, 16; and diarrhœa and dysentery, 262. The deaths from all causes corresponded to an annual rate of 20.6 a thousand. Diseases of the respiratory organs caused 208 deaths. In greater London 2,198 deaths were registered, corresponding to an annual rate of 19.9 a thousand of the population. In the "outer ring" the deaths included measles 11 and whooping-cough 12.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended August 16, in the 16 principal town districts of Ireland, was 19.0 a thousand of the population. The lowest rate was recorded in Sligo, viz, 4.8, and the highest in Londonderry, viz, 25.0 a thousand. In Dublin and suburbs 136 deaths were registered, including measles, 1; enteric fever, 2; and whooping-cough, 3.

Scotland.—The deaths registered in eight principal towns during the week ended August 16 corresponded to an annual rate of 18.2 a thousand of the population, which is estimated at 1,345,563. The lowest mortality was recorded in Perth, viz, 12.5, and the highest in Glasgow, viz, 21.4 a thousand. The aggregate number of deaths registered from all causes was 470, including measles, 4; scarlet fever, 4; diphtheria, 7; whooping-cough, 20; fever, 2; diarrhœa, 36; and croup and laryngitis, 6.

Dundee.—Month of July, 1890. Total deaths, 268, including phthisis pulmonalis, 27; enteric fever, 1; measles, 23; diphtheria, 7; croup, 5; and whooping-cough, 7.

FRANCE—*Bordeaux.*—Seven months ended July 31, 1890. Population, 240,582. Total deaths, 3,432, including cholera, 3; small-pox, 1; enteric fever, 44; scarlet fever, 5; and diphtheria, 82.

Nantes.—Month of July, 1890. Population, 127,482. Total deaths, 177, including phthisis pulmonalis, 26; typhus fever, 8; diphtheria, 2; and small-pox, 1.

SPAIN—*Cholera.*—The Department of State transmits the following dispatch from the United States chargé d'affaires at Madrid, dated August 15, 1890:

A general review of the cholera situation in Spain for the past week shows a heavy increase in new invasions and deaths over the week previous, although, at the moment of writing, the official and Government reports tend to give a better coloring to the condition of the disease.

It goes without contradiction that it is gradually increasing both in intensity and ground covered. At present five provinces claim its presence, Valencia, Badajoz, Alicante, Toledo, and Castile. Necessarily, it has followed the lines of travel, and although the Government has made noble efforts in many ways to stamp out the disease, yet refugees carry the contagion to a more or less extent, and its presence in Toledo, Llerina, and Madrid is accounted for by this cause.

A most remarkable state of affairs existed in Arges, a small village of some 200 people near Toledo. On the first appearance of the cholera, those pecuniarily able immediately left, some fifty in all; of the balance 120 were taken with the disease, of which over 61 died, among the latter, the parish priest, the carpenter of the village, and the keeper of the cemetery, who dug the graves; the alcalde and clerk were also down with it, and stories were told of mothers unable to obtain coffins for their husbands and infants and going through the one street of the village with the bodies on a cart to the cemetery and obliged to dig the graves themselves. What few stores the town contained were closed. The inhabitants were actually starving to death until the Government stepped in and sent provisions, medicines, carpenters, and general assistance. The misery which existed in that little village is without parallel.

In the province of Valencia, affairs are about stationary, but in the city itself it seems to be taking hold, owing, probably, to the following incident: The city has a sanitary brigade which makes immediate visits to suspicious cases, and in one case they treated a woman who died a few hours afterwards; they ordered her immediate burial, but the woman's daughter claimed that her mother was not dead; the doctors insisted that she was and insisted on the funeral, which took place under Government's orders. The parish priest sided with the daughter, and the result was the next time the brigade appeared a mob congregated and the physician and assistants were stoned and abominably assaulted. They naturally declined to do any further work in their line, and that portion of the city is unprotected, and there occurred to-day eight or nine new cases. In Madrid several deaths have occurred which on investigation showed the unfortunates came from infected towns. A reappearance of the disease is also reported from Denia.

A summary of the official reports from August 1 to August 14 gives 1,042 new cases and 505 deaths.

Cholera report for the city and province of Valencia for the week ended August 7, 1890.

The following has been received from the United States consul at Barcelona:

In the city of Valencia, cholera, 24 cases, 16 deaths. In the province of Valencia, August 1—

	Cases.	*Deaths.*
Alcantara	1	0
Alfarrasi	0	1
Algernesi	1	2
Benifairo'	1	0
Canals	22	8
Cerdá	2	1
S. Geronimo	6	1
Luchente	2	1
Millares	2	2
Rotglá	4	6
Rotova	2	1
Tabernes de Valldigua	0	1
Navarres	3	1
Palma	2	1
Ayelo de Malferit	1	1
Masamagrell	1	0

August 2—

Alcira	2	2
Canals	11	8
Granja	4	2
Rotglá	7	3
Algernesi	0	1
Castellon de Rugat	0	1
Castellon	1	1
Alcudia	2	0
Millares	3	0
Palma	3	0
Terrateig	1	0
Cuatretonda	6	2

August 3—

Alcudia	3	0
Anylo de Malferit	1	1
Algernesi	7	2
Beniganim	1	1
Cuatretonda	1	2
Castellon de Rugat	2	1
Canals	30	15
Fortaneli	1	0
Granja	4	0
Luchente	4	2
Llanera	2	1
Montichelvo	1	1
Millares	1	1
Palma	1	0
Terrateig	2	1
Rotglá	6	1
Alberique	1	0
Valladá	1	0

August 4—

	Cases.	*Deaths.*
Algernesi	5	2
Alcudia	6	3
Cuatretonda	9	4
Castellon de Rugat	1	1
Canals	20	5
Cerdá	1	1
Fortaneli	1	0
Granja	3	3
Luchente	4	1
Llanera	1	1
Llosa de Ranes	3	1
Millares	2	1
Paiporta	0	1
Rotglá	3	2
Terrateig	0	2
Torrella	2	2
Castellon	1	0
Utiel	1	1
Masalaves	1	1
Riola	3	0
Alcudia	1	1

August 5—

Algernesi	4	1
Alcantara	1	0
Alberique	1	0
Carlet	0	1
Benifairo	1	0
Cuatretonda	7	4
Castellon de Rugat	1	0
Canals	16	6
Fortaneli	1	1
Luchente	6	0
Manuel	0	1
Millares	3	2
Montesa	1	0
Navarres	1	1
Riola	0	1
Utiel	7	0
Buñol	1	1
Valles	1	0
Silla	1	0
Castellon	0	1

August 6—

Algernesi	3	1
Alfarrasi	1	0
Ayélo Malferit	1	0
Benicolet	1	0
Cuatretonda	7	7
Castellon de Rugat	1	0
Canals	12	3
Cerdá	4	1
Luchente	13	3
Manuel	1	0
Millares	1	0
Paiporta	2	0
Palma	2	1
Riola	2	1
Tabernes de Valldigua	1	0
Utiel	0	1
Anna	1	1
Belgida	1	0

August 7—

	Cases.	Deaths.
Algernesi	5	0
Alcantara	1	1
Albalat Ribero	2	0
Angelo de Malferit	1	2
Alcudia	1	0
Benicolet	1	0
Cuatretonda	4	3
Canals	16	5
Cerdá	5	2
Granja	1	0
Luchente	4	0
Llanera	2	0
Manuel	1	0
Millares	1	1
Palma	1	0
Rotglá	1	1
Tabernes de Valldigua	1	1
Torella	0	1
Utiel	3	0

Total number of cases in the city and province of Valencia, 1,309. Deaths, 602.

ITALY—*Licata.*—Period from June 29 to August 9, 1890. Population, 20,000. Total deaths, 95, including enteric fever, 15; scarlet fever, 30; and diphtheria, 6. Prevailing diseases were scarlet and malarial fevers.

ASIATIC TURKEY—*Erbil—Cholera.*—The following has been received from the United States consul at Bagdad, dated July 19, 1890:

SIR: I beg leave to submit the following, which I believe to be wholly untrustworthy, not by overstatement, but by suppression of facts:

1. On the 12th instant the sanitary department of Bagdad officially reported an outbreak of cholera on the 6th instant in Erbil, the ancient Arbela, some 200 miles north of Bagdad, and supposed to contain a population of 3,000 souls.

2. Since the 12th instant daily bulletins have been issued, showing the number of attacks and deaths according to the schedule hereto annexed.

3. At the present time there is no prevailing illness known in Bagdad.

4. A strict quarantine is imposed on all roads leading from the infested district towards Bagdad.

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

JOHN HENRY HAYNES,
Consul.

Schedule of cases and deaths from cholera in Erbil.

Date.	Cases.	Deaths.
July 6–8	32	11
9	47	27
10	9	11
11	26	16
12	39	11
13	12	12
14	6	5
15	6	13
16	3	2
17	2	0
Total	182	108

INDIA—*Calcutta—Cholera.*—Quarter ended March 31, 1889. Total deaths 3,727, including cholera, 456; fevers, 970; and small-pox, 473.

The high mortality from cholera was not equally distributed throughout the quarter, but more than one-third of the deaths in the three months occurred in less than a fortnight. There continued throughout the whole of January the usual three or four deaths from cholera, which has been the average number since the improvements in the water-supply. The few exceptions observed were mostly ascribable to pilgrim movements or to festivals. Suddenly, however, on the 31st of January, the mortality rose to more than three times the average, continued to rise for several days, and with oscillations between three, four, and five times the ordinary mortality, remained high for a fortnight, when it almost as suddenly returned to the normal. During this short period there were 178 deaths.

Singapore—Cholera, etc.—Month of May, 1890. Total deaths, 601, including fever, 160; cholera, 26; small-pox, 1; and beri-beri, 30.

JAPAN—*Nagasaki-ken—Cholera.*—The United States consul reports 578 new cases of cholera in Nagasaki-ken and 306 deaths therefrom, during the period from July 25 to August 3, 1890. From the outbreak of the epidemic until August 3, 1890, there have been officially reported 1,286 cases and 727 deaths. At the date of the report, August 3, there were 389 cases under treatment.

EGYPT—*Cairo—Precautions against returning pilgrims.*—The United States consul-general, under date of August 4, 1890, reports as follows:

The cholera having appeared in epidemic form at Mecca and in the Hejaz Province in Arabia, the Egyptian Sanitary Council has decided, on July 31, to enforce a strict quarantine on all arrivals from Arabian ports on the Red Sea coming from infected districts at the time of the return of the pilgrims. Such strong measures are necessary because there are now several thousand Egyptian pilgrims at Mecca, and were they allowed to return freely, the introduction of the cholera into Egypt would be a certainty.

CUBA—*Havana—Yellow fever.*—The United States consul-general reports 85 cases and 11 deaths from yellow fever during the week ended August 21, 1890.

BRAZIL—*Pernambuco—Small-pox.*—The United States consul reports 120 deaths from small-pox during the week ended July 29, 1890. Small-pox still prevalent, but continues, as before, almost entirely among the poorer classes.

Cholera at Mecca.

[Translated for this Bureau from *La Revue Médico-Pharmaceutique*, Constantinople, July 31, 1890.]

Telegrams received at Constantinople July 30 reported cholera at Mecca. The appearance of the disease coincided with the great pil-

grimage of Courban, Bairam. At Bakou only seventy deaths from cholera are reported. The heat is extreme throughout central Russia.

Measures have been taken against pilgrims coming from the Hedjaz; in Egypt, fifteen days quarantine at Djebel-Tor, and five days at the Wells of Moses; in Turkey, ten days at the several ports on the Ottoman coast.

The bacillus of diphtheria.

[Contributed.]

The *Annales* of the Pasteur Institute for July contains an important contribution to the study of diphtheria by Roux and Gerkin. This is the third paper by the authors named upon the etiology of diphtheria, and like those which have preceded it contains valuable experimental evidence in support of the view that the Klebs-Læffler bacillus is the specific infection agent in this disease. We give below a brief extract from the introductory remarks of the authors, together with their "practical conclusions:"

"During the past two years a great number of experimental researches upon diphtheria have been published; they confirm, for the most part, the results obtained by Klebs, by Læffler, and also those which we have published in this journal.

"Diphtheria is characterized by the bacillus described by Klebs and Læffler; in order to establish the diagnosis of the disease it is sufficient to demonstrate the presence of this bacillus. This is easily accomplished by microscopical examination and by cultures upon blood serum, according to the method indicated by Læffler. These means of diagnosis, which bring into view the specific cause of the disease, are especially precious in cases in which the diagnosis is difficult even for experienced physicians. We have employed them in more than a hundred cases of diphtheria, and we believe that this is the only way of establishing a scientific diagnosis. We commence our mémorie by giving an account of the technique which should be followed in searching for the specific bacillus in diphtheritic false membranes.

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"The practical conclusions which we draw from this long mémoire are the following:

"The best method of arresting the propagation of diphtheria is to recognize the disease as soon as possible; consequently the exact diagnosis should be made by a microscopic examination of the false membrane and by cultures upon blood serum.

"The diphtheritic virus may remain for a long time in the mouth after the disease is cured; consequently those who have had diphtheria should not be returned to their ordinary associations so long as they carry about with them the bacillus.

"The diphtheritic virus may be preserved for a long time in a dry condition; consequently it is necessary to disinfect by heat the body linen and all objects which have been in contact with those who have suffered an attack of diphtheria.

"The attenuated virus of diphtheria is very widely distributed and may recover its virulence; consequently it is necessary at the commencement of a simple sore throat or of the sore throat of measles and scarlet fever to resort to the use of antiseptic washes for the throat."

Prevention of tuberculosis.

[Translated for this Bureau from *La Rivista Internazionale d'Igiene*, Naples, June, 1890.]

The congress for the study of tuberculosis in men and animals which met at Paris, July, 1889, discussed the means of preventing the disease within certain limits by instituting measures to prevent contact with tuberculous persons, and the use, as food, of the milk and flesh of tuberculous animals. The results of this discussion were referred to a committee appointed by the Paris Academy of Medicine, among the members of which were Professors Chauveau, Grancher, Ladouzy, Cornil, Verneuil, and Villemin. The committee reported substantially as follows:

Tuberculosis is a parasitic, virulent, contagious disease, transmissible, caused by a micro-organism, the bacillus of Koch. This micro-organism penetrates into the organism by the digestive tube, with food; by the respiratory system, with the air breathed; by the skin and the mucous membrane, in consequence of abrasions, punctures, wounds, and ulcerations.

Some diseases—for example, measles, small-pox, chronic bronchitis, pneumonia, and some constitutional conditions due to diabetes, alcoholism, etc.—predispose to the contraction of tuberculosis.

The parasite of tuberculosis may be found in the milk, blood, and flesh of animals, which serve as food for men. Raw and rare meat and blood, as possibly containing living tubercular germs, should be prohibited. Milk, for the same reason, should not be used uncooked.

The germs of tuberculosis may be communicated from the infected to the healthy person by sputum, by pus, desiccated mucous, and, in general, by any object containing desiccated tubercular substance.

This report, and the prohibitory regulations suggested by it, excited animated discussion in the Paris Academy.

Dugardin Beaumetz considers the transmission of tuberculosis by food as of secondary importance. Milk, he asserts, rarely contains tubercular germs. This opinion is sustained by Daremberg, Sée, and Colin.

According to Lancereaux, contagion plays a secondary part in the etiology of tuberculosis. Two factors only are essential to it—predisposition of the organism and the penetration into the organism of a specific microbe. Predisposition is due to alcoholism and to breathing vitiated air. Every effort should, therefore, be made to suppress alcoholism, and to secure for operatives and students the necessary air-supply. The bacilli penetrate the organism by way of the respiratory system. The sputum of consumptives should, therefore, be destroyed, and their apartments and clothing disinfected.

Cornil insists on the contagiousness of phthisis. Both Cornil and Vallin maintain that milk should be boiled. To this Lagneau objects that crude milk is more readily digested, and that cows are rarely tuberculous.

Doctor Sée draws attention to the fact that the results of the latest experiments of Koch and Cornet are unfavorable to the theory of atmospheric contagion. The cause of tuberculous predisposition is absolutely unknown, and the only means of preventing the disease is the observance of hygienic rules. He quotes a recent statement from Cornet admitting desiccated sputum to be the sole means of propagation,

and asserting that the influence of predisposition and heredity has been greatly exaggerated.

The discussion resulted in the adoption of the following resolutions, drawn up by Doctor Bergeron:

1. Tuberculosis is a parasitic and contagious disease. The micro-organism of contagion has its seat in the powder produced by the desiccated sputum of consumptives and the pus of tuberculous wounds. The surest means, therefore, of preventing contagion is the destruction of pus and sputum, before desiccation, by boiling water.

2. The parasite is sometimes found in milk from tuberculous cows; hence the boiling of milk to be used as food is a precaution to be recommended.

3. The Academy calls the attention of the proper authorities to the dangers created by tuberculous persons in barracks, schools, and workshops.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris	Aug. 16	2,260,945	903	.....	.....	2	.....	13	5	31	14	10
Brussels	Aug. 9	469,459	201	.....	.....	1	.....	4	.....	1	.....	.....
Hamburg	Aug. 2	455,000	247	.....	.....	.....	.....	2	.....	3	.....	.....
Rio de Janeiro	Aug. 2	450,000	283	.....	7	4	6	8	.....	.....	.....	.....
Calcutta	July 12	433,219	177	26	.....	2	.....	.....	.....	.....	.....	.....
Rome	July 5	417,392	174	.....	.....	.....	.....	3	.....	1	.....	.....
Amsterdam	Aug. 16	406,402	140	.....	.....	.....	.....	3	.....	3	.....	.....
Lyons	Aug. 9	401,930	194	.....	.....	.....	.....	2	.....	10	.....	.....
Cologne	Aug. 11	284,574	171	.....	.....	.....	2	.....	.....	1	2	4
Odessa	Aug. 2	276,300	169	.....	.....	.....	.....	.....	2	.....	.....	1
Odessa	Aug. 9	276,300	177	.....	.....	1	.....	4	1	.....	.....	1
Palermo	Aug. 2	250,000	95	.....	.....	.....	2	.....	2	.....	.....	.....
Bristol	Aug. 16	232,248	61	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rotterdam	Aug. 16	203,472	76	.....	.....	.....	.....	.....	.....	1	.....	.....
Genoa	Aug. 16	180,373	83	.....	.....	3	2	.....	.....	2	.....	.....
Frankfort-on-the-Main	Aug. 16	170,773	61	.....	.....	.....	.....	.....	.....	7	.....	.....
Konigsberg	July 26	160,553	1	.....	.....	.....	.....	.....	1	.....	.....	.....
Trieste	Aug. 9	158,054	78	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ghent	Aug. 9	152,395	89	.....	.....	.....	.....	.....	.....	1	1	1
Christiania	Aug. 9	143,300	55	.....	.....	.....	.....	.....	1	2	.....	.....
Funchal	Aug. 9	133,250	26	.....	.....	.....	4	.....	.....	.....	.....	.....
Stuttgart	Aug. 16	125,510	39	.....	.....	.....	.....	.....	.....	3	.....	.....
Bremen	Aug. 9	124,000	44	.....	.....	.....	.....	1	.....	3	.....	.....
Cardiff	Aug. 16	117,012	59	.....	.....	.....	.....	1	.....	1	.....	.....
Barmen	Aug. 9	113,000	22	.....	.....	.....	.....	.....	.....	.....	.....	3
Barmen	Aug. 16	113,000	43	.....	.....	.....	.....	.....	.....	.....	.....	.....
Havre	Aug. 16	112,074	89	.....	.....	.....	.....	6	.....	.....	1	1
Aix-La-Chapelle	Aug. 17	109,523	81	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stettin	Aug. 2	106,281	58	.....	.....	.....	.....	2	.....	.....	.....	.....
Leghorn	Aug. 17	103,723	38	.....	.....	.....	.....	1	.....	.....	.....	.....
Zurich	Aug. 9	91,323	8	.....	.....	.....	.....	.....	1	.....	1	.....
Hiogo, Japan	July 5	89,363	30	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hiogo, Japan	July 12	89,363	45	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hiogo, Japan	July 19	89,363	52	.....	.....	.....	.....	.....	.....	.....	.....	.....
Messina	Aug. 16	79,971	46	.....	.....	.....	.....	.....	.....	4	.....	.....
Angers	July 26	78,553	64	.....	.....	.....	.....	.....	.....	.....	.....	.....
Angers	Aug. 9	78,553	52	.....	.....	.....	.....	.....	2	.....	.....	.....
Mayence	Aug. 18	65,802	40	.....	.....	.....	.....	.....	.....	1	.....	.....
Jerez de la Frontera	Aug. 9	61,708	28	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Aug. 15	46,374	54	.....	2	.....	.....	.....	.....	.....	.....	.....
Trapani	Aug. 2	43,095	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marsala	Aug. 2	40,131	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cienfuegos	Aug. 17	40,065	23	.....	.....	.....	.....	2	.....	.....	.....	.....
Cape Town	July 30	36,000	25	.....	.....	.....	.....	.....	.....	.....	.....	1
Schiedam	Aug. 17	25,600	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cardenas	Aug. 17	25,000	17	.....	.....	.....	1	5	.....	.....	.....	.....
Vera Cruz	Aug. 23	23,800	28	.....	1	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Aug. 10	23,681	10	.....	.....	1	.....	1	.....	1	.....	.....
Girgenti	Aug. 2	23,547	13	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Aug. 22	18,284	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena	Aug. 9	16,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena	Aug. 16	16,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sagua la Grande	Aug. 16	15,605	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Moncton, N. B.	Aug. 25	15,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Flushing	Aug. 17	13,200	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sonneberg	July 19	11,600	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sonneberg	July 26	11,600	2	.....	.....	.....	.....	.....	.....	2	.....	.....
Sonneberg	Aug. 2	11,600	5	.....	.....	.....	.....	1	.....	3	.....	.....
Guelph	Aug. 25	10,173	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sherbrooke	July 31	10,000	31	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tampico	Aug. 18	9,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colon	Aug. 15	8,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Guayra	Aug. 9	7,428	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Guayra	Aug. 16	7,428	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sarnia	Aug. 23	6,200	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Puerto Plata	July 26	4,100	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Puerto Plata	Aug. 2	4,100	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Puerto Plata	Aug. 9	4,100	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Coaticook	Aug. 23	3,800	3	.....	.....	.....	.....	.....	.....	2	.....	.....
Prescott	Aug. 21	2,988	2	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.