

ABSTRACT OF SANITARY REPORTS.

VOL. VI.

WASHINGTON, D. C., JANUARY 30, 1891.

No. 5.

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UNITED STATES.

Official experiments with the Koch lymph.

The following instructions were issued January 19 to Assistant Surgeon H. D. Geddings :

SIR: You are hereby placed on temporary duty at the port of Georgetown, D. C., for the purpose of making experiments as to the efficiency, or otherwise, of the recently invented "lymph," for the cure of tuberculosis, by Professor Koch, of Berlin, a supply of which is herewith transmitted. Your method of making the test will be as follows :

1. You will take a photograph of each patient, and the bacilli will also be photomicrographed.
2. The weight and chest expansion will be recorded.
3. You will ascertain the area of dullness on the chest by means of the pleximeter, and mark its limits with iodine, and photograph the chest.
4. The usual clinical record will be kept throughout, commencing from the time of entering the hospital, particularly observing the time of rising of the evening hectic and its duration, and the time of appearance of perspiration. Its relative amount and duration will also be noted. The temperature will be taken at 7 a. m., between 1 and 2 p. m., and 7.30 p. m. Clinical charts similar to those used in the investigations and diagnoses of yellow fever by Doctor Guitéras and Doctor Fagét will be used. The time of administration of the lymph will also be noted. The time of appearance of pyrexia, commonly termed "reaction," and of its disappearance, will also be noted.

Besides the foregoing, any other clinical symptoms that may occur to you in the progress of the case will be noted.

The sputum cups will be labeled for each patient under observation, and the nurse will be cautioned about allowing them to become mixed in any way. The new pattern paper cups will be used.

* * * * *

These experiments must necessarily be private, so that the patients may not be disturbed, but all results will be made public at the conclusion, by this Bureau.

Respectfully yours,

JOHN B. HAMILTON,
Supervising Surgeon-General, M.-H. S.

Report of official experiments with the Koch lymph in progress.

JANUARY 28, 1891.

SIR: In compliance with your letter of January 19, 1891, I have the honor to submit the following preliminary report of experiments undertaken at this hospital with the Koch lymph upon cases of tubercle of lung and larynx.

Seven cases were selected for the treatment, six males and one female. Of these cases five are to be classed as tubercle of lung, one as tubercle of larynx, and one as tubercle of lung and larynx. All are in the first stage of the disease (stage of consolidation), no patient having been submitted to the treatment who presented physical signs of softening (formation of cavities).

The duration of these cases varies from four months to two years, their ages from eighteen to fifty-one years.

In all cases the presence of the bacillus tuberculosis was established by microscopical examination of the sputum, the method of staining employed being that of Weiss (see *New York Medical Journal*, January 17, 1891), and specimens from each case were preserved for photomicrographic representation. In each case the patient was weighed, the areas of dullness marked upon the chest, and a photograph of the chest taken.

The uniform dose of .001 gm. of the lymph was first administered on Saturday, January 24, between 10.30 and 11.15 a. m.

Pyrexia (reaction) followed in every case, the time of its appearance varying from ten minutes to four hours and thirty minutes, its intensity ranging from 38.8° C. to 40.4° C., its duration from six hours to twenty hours. More or less well-defined rigors occurred in every patient, and in every case the subsidence of the fever was marked by more or less sweating. But little pain or discomfort was complained of in any instance. Expectoration was increased in every case, apparently, however, without any increase in severity of cough.

On January 27 six of the seven cases above mentioned were again subjected to a treatment of .002 gm. of the lymph. At this time it can only be stated that the reaction was slower than in the first treatment, its general intensity slightly lower, and its duration shorter. An exception is to be noted in one case, the temperature reaching 40.6° C., against 40.4° C. in the first instance. On this day two patients submitted to an initial treatment with .001 gm. lymph, reacted, respectively, in two and one-half hours and six hours, the temperature being 38.6° C. and 39.4° C., its duration about eight and eighteen hours, and rigors and sweating appearing in both cases.

The work of photomicrographing the sputum is in progress, and it is hoped to bring it to a conclusion during the present week.

Very respectfully, your obedient servant,

H. D. GEDDINGS,
Asst. Surgeon, M.-H. S.

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

CALIFORNIA—*Oakland*.—Month of December, 1890. Population, 60,000. Total deaths, 74, including phthisis pulmonalis, 3; enteric fever, 1; diphtheria, 2; measles, 1; and croup, 1.

COLORADO—*Denver*.—Month of December, 1890. Population, 150,000. Total deaths, 223, including phthisis pulmonalis, 24; enteric fever, 30; scarlet fever, 2; diphtheria, 19; membranous croup, 5; and whooping cough, 1.

FLORIDA—*Jacksonville*.—Month of December, 1890. Population, 25,000. Total deaths, 38, including phthisis pulmonalis 3 and whooping cough 1.

IOWA—*Davenport*.—Month of December, 1890. Population, 28,500. Total deaths, 35, including phthisis pulmonalis, 2; enteric fever, 2; diphtheria, 4; and membranous croup, 2.

MICHIGAN.—Week ended January 17, 1891. Reports to the State board of health, Lansing, from 52 observers, indicate that inflammation of bowels, typhomalarial fever, membranous croup, inflammation of brain, diphtheria, erysipelas, remittent fever, and scarlet fever increased, and that cerebro-spinal meningitis, whooping cough, and cholera morbus decreased in area of prevalence.

Diphtheria was reported present during the week at 33 places, scarlet fever at 55 places, enteric fever at 21 places, and measles at 31 places.

Detroit.—Month of December, 1890. Population, 220,000. Total deaths, 285, including phthisis pulmonalis, 25; enteric fever, 3; scarlet fever, 2; diphtheria, 48; croup, 14; and measles, 5.

MISSOURI—*Kansas City*.—Month of December, 1890. Population, 135,000. Total deaths, 141, including phthisis pulmonalis, 15; enteric fever, 1; scarlet fever, 2; diphtheria, 3; and whooping cough, 1.

RHODE ISLAND.—Month of December, 1890. Reports to the State board of health from 24 cities and towns, having an aggregate population of 314,810, show a total of 447 deaths, including phthisis pulmonalis, 45; enteric fever, 9; diphtheria, 7; scarlet fever, 1; and croup, 7.

TENNESSEE—*Nashville*.—Month of December, 1890. Population, 76,309. Total deaths, 114, including phthisis pulmonalis, 15; enteric fever, 4; scarlet fever, 1; diphtheria, 1; and measles, 1.

TEXAS—*Invasion of smallpox from Mexico*.—Governor Ross, in his annual message, January 1, 1891, after referring to the efficient quarantine system originated by the State health officer, Doctor Rutherford, calls attention to the fact that Texas for thousands of miles is separated from Mexico by the Rio Grande River, which presents no obstruction to free intercourse between the two countries. Smallpox prevailing on the Mexican side is readily carried into Texas. The constant intercourse by railway between Mexico and all parts of the United States causes danger to the other States as well as Texas, and, in view of these

Table of temperature and rainfall, week ended January 23, 1891.

[Received from War Department, Signal Office.]

Locality.	Mean temperature in degrees Fahrenheit.			Rainfall in inches and hundredths.		
	Normal.	Excess.	Deficiency.	Normal.	Excess.	Deficiency.
New England States:						
Eastport, Me.....	19	39	.....	.91	1.09	.....
Portland, Me.....	19	47	.....	.81	2.24	.....
Boston, Mass.....	24	66	.....	.98	.60	.....
Block Island, R. I.....	30	46	.....	1.00	.36	.....
Middle Atlantic States:						
Albany, N. Y.....	23	25	.....	.64	1.74	.....
New York, N. Y.....	30	40	.....	.91	1.19	.....
Philadelphia, Pa.....	33	28	.....	.77	.70	.....
Atlantic City, N. J.....	32	31	.....	.84	.19	.....
Baltimore, Md.....	34	32	.....	.71	1.01	.....
Washington, D. C.....	32	42	.....	.77	1.22	.....
Lynchburg, Va.....	38	22	.....	.98	.10	.....
Norfolk, Va.....	41	12	.....	.91	.03	.....
South Atlantic States:						
Charlotte, N. C.....	42	7	.....	1.25	.....	.51
Wilmington, N. C.....	48	.....	5	.91	.....	.51
Charleston, S. C.....	51	.....	1	.98	.....	.52
Augusta, Ga.....	48	.....	12	1.05	.....	.67
Savannah, Ga.....	53	.....	22	.77	.....	.64
Jacksonville, Fla.....	57	.....	23	.77	.....	.50
Key West, Fla.....	71	.....	45	.49	1.30	.....
Gulf States:						
Atlanta, Ga.....	43	.....	4	1.47	.....	.60
Pensacola, Fla.....	54	.....	35	1.12	.....	.42
Mobile, Ala.....	52	.....	32	1.12	.....	.34
Montgomery, Ala.....	49	.....	24	1.12	.....	.54
Vicksburg, Miss.....	46	.....	6	1.26	.10	.....
New Orleans, La.....	55	.....	33	1.25	.....	1.12
Shreveport, La.....	44	.....	3	1.12	.....	.81
Fort Smith, Ark.....	37	.....	.....	.49	.....	.49
Little Rock, Ark.....	41	31	.....	1.14	.....	1.14
Palestine, Tex.....	44	2	.....	1.03	.....	.11
Galveston, Tex.....	53	.....	29	.91	.68	.....
San Antonio, Tex.....	52	.....	35	.35	.94	.....
Corpus Christi, Tex.....	55	.....	28	.91	.42	.....
Brownsville, Tex.....	58	0	0	.46	.50	.....
Rio Grande City, Tex.....	57	28	.....	.23	.70	.....
Ohio Valley and Tennessee:						
Memphis, Tenn.....	38	19	.....	1.39	.....	1.39
Nashville, Tenn.....	38	5	.....	1.26	.....	.58
Chattanooga, Tenn.....	42	.....	3	1.71	.07	.....
Knoxville, Tenn.....	39	.....	12	1.33	.43	.....
Louisville, Ky.....	33	35	.....	.96	.....	.49
Indianapolis, Ind.....	27	47	.....	.71	.....	.65
Cincinnati, Ohio.....	33	10	.....	.77	.....	.37
Columbus, Ohio.....	29	27	.....	.77	.....	.36
Pittsburgh, Pa.....	31	33	.....	.76	.....	.11
Lake Region:						
Oswego, N. Y.....	21	47	.....	.70	.23	.....
Rochester, N. Y.....	22	52	.....	.75	.....	.12
Buffalo, N. Y.....	22	57	.....	.63	.....	.20
Erie, Pa.....	25	55	.....	.80	.....	.33
Cleveland, Ohio.....	26	42	.....	.61	.....	.15
Sandusky, Ohio.....	26	41	.....	.49	.....	.17
Toledo, Ohio.....	25	54	.....	.49	.....	.40
Detroit, Mich.....	24	46	.....	.42	.....	.34
Port Huron, Mich.....	20	65	.....	.47	.....	.35
Alpena, Mich.....	14	99	.....	.61	.....	.06
Marquette, Mich.....	12	84	.....	.35	.10	.....
Grand Haven, Mich.....	23	56	.....	.50	.....	.31
Milwaukee, Wis.....	18	85	.....	.51	.....	.19
Chicago, Ill.....	23	55	.....	.49	.....	.34
Duluth, Minn.....	6	123	.....	.24	.....	.15
Upper Mississippi Valley:						
St. Paul, Minn.....	9	123	.....	.21	.....	.20
La Crosse, Wis.....	12	121	.....	.28	.....	.15
Dubuque, Iowa.....	15	111	.....	.35	.....	.34
Davenport, Iowa.....	19	84	.....	.42	.....	.11
Des Moines, Iowa.....	16	109	.....	.28	.....	.27
Keokuk, Iowa.....	21	90	.....	.35	.....	.29
Springfield, Ill.....	26	52	.....	.52	.....	.47
St. Louis, Mo.....	29	58	.....	.56	.....	.56

Table of temperature and rainfall, week ended January 23, 1891—Continued.

Locality.	Mean temperature in degrees Fahrenheit.			Rainfall in inches and hundredths.		
	Normal.	Excess.	Deficiency.	Normal.	Excess.	Deficiency.
Missouri Valley:						
Springfield, Mo.....	29	59		.49		.41
Kansas City, Mo.....	24	78		.28		.26
Concordia, Kans.....	19	97		.23		.22
Omaha, Nebr.....	16	126		.14		.14
Valentine, Nebr.....	12	145		.14		.13
Huron, Dak.....	1	199		.07		.04
Extreme Northwest:						
Moorhead, Minn.....	5	162		.14		.03
Bismarck, Dak.....	2	199		.14		.12
Buford, Fort, Dak.....	0	205		.14		.13
Rocky Mountain Slope:						
Assinniboine, Fort, Mont.....	0	257		.26		.26
Helena, Mont.....	13	154		.34		.34
Custer, Fort, Mont.....	7	224		.21		.21
Salt Lake City, Utah.....	26	14		.35		.35
Cheyenne, Wyo.....	22	61		.05		.04
North Platte, Nebr.....	15	111		.08		.08
Denver, Colo.....	25	31		.14	.05	
Pueblo, Colo.....	27	7		.07	.21	
Montrose, Colo.....	26		28	.14		.14
Dodge City, Kans.....	21	48		.07		.07
Abilene, Tex.....	41	8		.21	.15	
Sill, Fort, Ind. T.....	33	42		.21	.20	
El Paso, Tex.....	45		28	.14		.10
Santa Fé, N. Mex.....	28		12	.14	.17	
Fort Grant.....	44		14	.20		.20
Pacific Coast:						
Olympia, Wash.....	37	70		1.89		.20
Portland, Oreg.....	36	70		1.68		1.20
Roseburg, Oreg.....	39	42		1.53		1.40
Red Bluff, Cal.....	45	70		1.05		1.00
Sacramento, Cal.....	46	14		.85		.85
San Francisco, Cal.....	50	42		1.11		1.10
Los Angeles, Cal.....	52	70		.63		.60
San Diego, Cal.....	53	56		.42		.40
Yuma, Ariz.....	54	42		.07		.07

FOREIGN.

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

BRAZIL—*Yellow fever*.—The United States consul at Para transmits translations of communications published in the newspapers, showing the prevalence of yellow fever in the interior.

CUBA—*Havana*.—Under date of January 17, 1891, the United States sanitary inspector reports as follows :

Week ended January 15, 1891. Total deaths, 121, including yellow fever, 3 (8 new cases); enteric fever, 3; so-called pernicious fever, 2; and measles, 1.

The Italian bark *José é Maria* discharged cargo at wharf on Havana side. This vessel remained in port 46 days, and sailed for New Orleans January 17, 1891, without cargo or passengers, after taking in a portion of the ballast at the wharf. Sanitary condition of bark reported as "fair only."

DUTCH GUIANA—*Paramaribo*.—Month of November, 1890. Population, 28,221. Total deaths, 71.

EGYPT.—The towns in upper and lower Egypt, including Gizeh and the Suez Canal, show a total of 782 deaths, including phthisis pulmonalis, 64; enteric fever, 18; smallpox, 2; diphtheria and croup, 5; measles, 2; and whooping cough, 5.

GREAT BRITAIN—*England and Wales*.—The deaths registered in 28 great towns of England and Wales during the week ended January 10 corresponded to an annual rate of 28.1 a thousand of the aggregate population, which is estimated at 9,715,559. The lowest rate was recorded in Derby, viz, 12.9, and the highest in Preston, viz, 39.8 a thousand. Diphtheria caused 3 deaths in Norwich, 3 in Manchester, and 2 each in Salford, Liverpool, Bradford, and Leeds.

London.—Two thousand five hundred and five deaths were registered during the week, including measles, 76; scarlet fever, 16; diphtheria, 28; whooping cough, 76; enteric fever, 9; and diarrhoea and dysentery, 13. The deaths from all causes corresponded to an annual rate of 29.1 a thousand. Diseases of the respiratory organs caused 991 deaths. In greater London 3,085 deaths were registered, corresponding to an annual rate of 27.4 a thousand of the population. In the "outer ring" the deaths included measles, 21; whooping cough, 10; and diphtheria, 11.

Newcastle-upon-Tyne.—Two weeks ended January 10, 1891. Population, 163,000. Total deaths from all causes, not reported. Diphtheria caused 1 death.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended January 10, in the 16 principal town districts of Ireland, was 31.1 a thousand of the population. The lowest rate was recorded in Dundalk, viz, 4.4, and the highest in Lurgan, viz, 51.8 a thousand. In Dublin and suburbs 165 deaths were registered, including measles, 1; enteric fever, 4; diphtheria, 2; and whooping cough, 6.

Scotland.—The deaths registered in eight principal towns during the week ended January 10 corresponded to an annual rate of 26.8 a thousand of the population, which is estimated at 1,345,563. The lowest mortality was recorded in Dundee, viz, 19.4, and the highest in Glasgow, viz, 39.1 a thousand. The aggregate number of deaths registered from all causes was 755, including measles, 15; scarlet fever, 8; diphtheria, 5; whooping cough, 19; fever, 8; and diarrhoea, 13.

INDIA—*Calcutta—Cholera.*—The United States consul-general, under date of December 24, 1890, reports 37 deaths from cholera during the week ended November 29 and 43 deaths for the week ended December 6, 1890.

ITALY—*Florence.*—Month of November, 1890. Population, 182,307. Total deaths, 338, including enteric fever, 7; scarlet fever, 2; and diphtheria, 2.

JAPAN—*Hiogo—Cholera.*—The United States consul sends the following report, dated December 24, 1890: Week ended December 6, 1890. Cases, 1; deaths, 0.

MEXICO—*Piedras Negras—Smallpox.*—The following has been received from the United States consul, dated December 16, 1890:

I have the honor to report that smallpox has somewhat abated in number of cases, but has markedly increased in violence, and consequent fatality. No reliable data as to present number of cases obtainable.

There have been, since June last, over 400 deaths in this town, from this disease.

The quarantine still continues in full force.

NEW ZEALAND.—Month of October, 1890. Reports to the registrar-general from the four principal towns, having an aggregate population of 105,619, show a total of 97 deaths, including enteric fever, 1; scarlet fever, 2; and diphtheria, 1.

TURKEY IN ASIA—*Tripoli—Cholera.*—Under date of December 15, 1890, the United States consul at Beirut transmits the following:

In continuation of previous dispatches upon the subject of cholera in Syria, I regret to have to inform the Department that this much-dreaded epidemic has now made its appearance under the very doors of Beirut,

four cases having occurred in Tripoli, between the 8th and 9th, all proving fatal. Five on the 10th; three, two of them fatal, on the 11th; eleven deaths on the 12th; twenty-eight cases and twelve deaths on the 13th, and thirty-one cases, with thirteen deaths, on the 14th instant.

Tripoli is a seaport on the Syrian coast, about forty English miles north of Beirut, and has a population of 41,344 inhabitants.

Every precaution has been taken by both the governments of the adjacent vilayets of Beirut and the Lebanon to arrest, if possible, the invasion of Beirut by this much-dreaded disease.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Vienna.....	Dec. 20....	800,120	431			1		2	4	15	20	1
Vienna.....	Dec. 27....	800,120	408			1	2		5	11	13	
Hamburg.....	Dec. 27....	570,534	242					1	4	3		
Brussels.....	Jan. 3....	469,459	260			7		2				
Warsaw.....	Dec. 27....	455,852	244			5		3	7	11		
Buda Pesth.....	Dec. 31....	422,377	30						3	17		
Lyons.....	Jan. 3....	401,930	254					2		7		
Leipzig.....	Dec. 28....	360,671	122							6	1	
Leipzig.....	Jan. 4....	360,671	143						3	2		
Munich.....	Jan. 3....	345,000	165							13		
Copenhagen.....	Dec. 27....	312,387	113						6	5		
Cologne.....	Dec. 27....	280,206	164							5	7	6
Odessa.....	Dec. 27....	276,300	117						7	2	2	
Barcelona.....	Jan. 9....	272,000	202			5		9		8		
Dresden.....	Dec. 27....	269,000	98					1	1	6		
Dresden.....	Jan. 3....	269,000	100					2		4		
Palermo.....	Jan. 3....	250,000	158					1	1	4		
Antwerp.....	Jan. 3....	232,418	129							1		
Rotterdam.....	Jan. 10....	209,137	159									
Prague.....	Jan. 3....	188,992	137			1			1	6		
Frankfort-on-the-Main.....	Jan. 3....	179,850	71						1	8		
Hanover.....	Jan. 3....	163,000	64						1	7		
Trieste.....	Jan. 3....	158,054	113							3		
Christiania.....	Dec. 27....	143,300	48							6		
Christiania.....	Jan. 3....	143,300	45						2	5		
Nuremberg.....	Dec. 27....	142,403	75					1		4		
Stuttgart.....	Jan. 10....	139,659	52						1	6		
Funchal.....	Nov. 29....	133,250	22			4						
Funchal.....	Dec. 20....	133,250	19									
Funchal.....	Dec. 27....	133,250	15			1						
Funchal.....	Jan. 3....	133,250	23			1						
Elberfeld.....	Jan. 3....	125,830	65					1		3	4	3
Bremen.....	Jan. 4....	124,940	55			1				1		
Cardiff.....	Dec. 13....	117,012	30									
Cardiff.....	Dec. 20....	117,012	66									
Cardiff.....	Dec. 27....	117,012	59							1		
Barmen.....	Dec. 27....	116,192	49					1		1		1
Barmen.....	Jan. 3....	116,192	43							3	3	
Havre.....	Jan. 3....	112,074	78						2			
Aix-la-Chapelle.....	Jan. 4....	111,361	48									
Catania.....	Jan. 4....	109,000	62					2	1	1		
Crefeld.....	Jan. 3....	108,000	74									
Crefeld.....	Jan. 10....	108,000	81							5		
Leghorn.....	Jan. 4....	103,723	56						1			
Gothenburg.....	Jan. 3....	100,622	36						1			
Rheims.....	Jan. 3....	97,903	35							2		1
Rheims.....	Jan. 10....	97,903	47							1		
Zurich.....	Jan. 3....	91,323	21						1	4	3	4
Hiogo.....	Dec. 6....	89,363	71					1				
Hiogo.....	Dec. 13....	89,363	74									
Mannheim.....	Jan. 3....	80,000	28						1	1		
Mayence.....	Jan. 3....	73,271	25							3		
Jerez de la Frontera.....	Dec. 27....	61,708	62			8						
Trapani.....	Jan. 3....	43,095	7									

MORTALITY TABLE, FOREIGN CITIES—CONTINUED.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.	
Cienfuegos.....	Jan. 4.....	41,647	13										
Cienfuegos.....	Jan. 11.....	41,647	17		1								
Marsala.....	Jan. 3.....	40,131	12										
Cape Town.....	Dec. 23.....	36,000	28										
Schiedam.....	Jan. 10.....	25,600	12										
Cardenas.....	Jan. 18.....	25,000	7										
Vera Cruz.....	Jan. 15.....	23,800	26		1								
Gibraltar.....	Jan. 4.....	23,681	19								1		
Girgenti.....	Jan. 3.....	23,547	10								2		
Iquique.....	Nov. 15.....	20,000	19					1	1				
Iquique.....	Nov. 22.....	20,000	27										
Iquique.....	Nov. 29.....	20,000	22			2							
Iquique.....	Dec. 6.....	20,000	22					1	3				
Victoria, B. C.....	Jan. 17.....	20,000	10										
Licata.....	Jan. 3.....	19,000	10										
Kingston, Can.....	Jan. 16.....	18,172	3										
Kingston, Can.....	Jan. 23.....	18,172	4										
Rio Grande do Sul.....	Dec. 15.....	16,000	27										
Hamilton, Bermuda.....	Jan. 15.....	15,700	1										
Hamilton, Bermuda.....	Jan. 22.....	15,700	2										
Sagua la Grande.....	Jan. 10.....	15,605	11										
St. Thomas, W. I.....	Dec. 26.....	15,000	33										
St. Thomas, W. I.....	Jan. 2.....	15,000	38										
Flushing.....	Jan. 10.....	13,200	6										
Guelph.....	Jan. 18.....	13,173	1										
Tuxpan.....	Jan. 3.....	9,000	7										
Tuxpan.....	Jan. 10.....	9,000	4										
Chatham.....	Jan. 17.....	8,730	4										
Coaticook.....	Jan. 17.....	3,800	1										
Clifton.....	Jan. 17.....	3,500	2										
Livingston.....	Jan. 13.....	3,000	1										
Prescott.....	Jan. 15.....	2,988	2										
Puntarenas.....	Dec. 13.....	2,100	3										
Puntarenas.....	Dec. 20.....	2,100	3										

OFFICIAL :

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.