PUBLIC HEALTH REPORTS.

HOOKWORM DISEASE IN ITS RELATION TO THE NEGRO.[a]

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During the last seven years considerable literature has appeared in regard to hookworm disease in the United States, but nearly all of these articles treat of the malady as found in the white race. The present paper is prepared with special reference and relation to the negro.

CAUSE OF HOOKWORM DISEASE.

Hookworm disease is caused by the presence of small worms belonging to a group of roundworms known technically as *Uncinariinæ*. Two different kinds of hookworms occur in man. One of these is known popularly as the "Old World hookworm," the other as the "New World hookworm." Both of these parasites are known to occur in Africa, the home of the negro, and both have been found in the negro. The Old World hookworm is relatively rare in the United States, where the great majority of cases of infection must be attributed to the New World parasite.

The New World hookworm is known technically as *Necator americanus*, which means "the American murderer." This name was given to it because of the great number of deaths it causes, directly or indirectly. It is about one-fourth to one-half an inch long and about as thick as a small hairpin. It has hard cutting plates or jaws guarding the entrance to its mouth, with the aid of which the parasite fastens to the intestinal wall.

WHERE THE HOOKWORM LIVES.

In its adult stage the hookworm is found fastened to the lining membrane of the small intestine. It is also sometimes found in the stomach. It makes a wound, sucks the blood, and produces a poisonous substance which injures the person infected.

A person may harbor a few hookworms, or several hundreds, or several thousands, according to the amount of infection to which he has been subjected. As children are usually subject to infection more than are adults, the disease is usually more common in them.

[a] This is an abstract of an address recently given before the Hampton Negro Conference at Hampton Institute, Hampton, Va.

HOW THE HOOKWORM DEVELOPS.

These parasites do not multiply in the intestine, as their eggs require oxygen in order to develop. It is important to recall that for every hookworm found in the bowels a separate germ (young worm) must enter the body.

The parasites in the bowels lay hundreds of eggs which are discharged by the patients in their stools. An ordinary stool from an infected person may contain thousands upon thousands of these eggs. This is an exceedingly important point to remember, for it is only through the discharges from the bowels that these eggs escape from the patients, and if all such discharges are properly disposed of hookworm disease can be stamped out of existence.

A few hours after the eggs are passed by the patient a young embryo develops in the egg and escapes from the egg shell. This tiny worm, which is scarcely visible to the naked eye, feeds for a few days. Within about a week it sheds its skin twice, in somewhat the same way that a snake sheds its skin. It now continues to live in the cast-off skin, but it takes no more food until it enters a person.

HOW THE HOOKWORM ENTERS HUMAN BEINGS.

The young worm may enter persons in two different ways. First, it may be swallowed in contaminated water or food. Secondly, it may bore its way through the skin. This second method of infection is doubtless the more common. The young hookworms in boring through the skin produce an attack of "ground itch" (also known as "foot itch," "footsore," "dew itch," "dew poison," etc.). *Thus "ground itch" is usually the first stage of hookworm disease.* It is quite generally believed that the wearing of shoes will prevent ground itch, and this popular belief is correct to a great extent, namely, so far as ground itch on the feet is concerned; wearing shoes will therefore *reduce* but not *eradicate* hookworm disease.

After entering the skin, these young worms make their way to the blood, and pass with the blood through the heart to the lungs. From the lungs the parasites pass up the windpipe, down the gullet, through the stomach, to the small bowels, where they gradually shed their skin two more times, become mature, and then begin their work of injuring the wall of the intestine, of sucking the blood, and of poisoning their victims.

FACTORS FAVORING HOOKWORM DISEASE.

There are certain factors which are especially favorable to the development of these parasites.

Climate.—Climate has an important influence on these worms. The hookworms which infest man require a certain amount of warmth in order to develop and on this account they thrive better in the South than in the North. Therefore, generally speaking, this disease is a tropical and subtropical malady. In the United States it is a southern disease, and its occurrence north of Maryland is exceptional. For practical purposes, we may say that the Potomac and the Ohio rivers form about the natural northern limit of its distribution, although some few cases do occur north of these streams.

Soil.—A loose soil, such as a sandy soil, is much more favorable to the development of the worms than is a hard, compact soil, such as clay.

Moisture and shade.—As the drying action of the sun is usually fatal to the worms when on the ground, shaded and moist localities are more favorable to the disease than are unshaded and dry localities.

SOIL POLLUTION.

It has been stated in the foregoing that the only way by which the hookworms' eggs escape from the patients is through the stools. As this is also the usual method by which the typhoid germs escape, it is seen that careless disposal of the body waste is favorable to the spread of both of these maladies. The contamination of the ground with disease germs is known as "soil pollution," and other things being equal, hookworm disease will increase in frequency as soil pollution increases, and will decrease as soil pollution decreases.

Exact studies have not as yet been conducted in this country, covering any great area in regard to the percentage of negroes infected with hookworm disease as compared with the white race in the same localities, but it is thoroughly established that hookworm disease does occur in the negro as well as in the white, and that in some countries it is especially common in the negro. The comparative statistics thus far available for Georgia and Florida show (in accord with what theory demands) that in our Southern States also hookworm disease is more common in the negroes than in the whites.

An examination of several hundred farms in North and South Carolina, Georgia, and Alabama shows that of the farms having no privies twice as many are occupied by negroes as by whites. This would indicate the negro to be a much more frequent soil polluter, and if he is infected with hookworm disease in equal proportion to the white race he will, because of his more frequent pollution of the soil, be a greater factor in the spread of the disease to others and its general dissemination throughout the community.

THE EFFECTS OF HOOKWORM DISEASE.

The effects of hookworm disease may be divided into the *direct* effects and *indirect* effects.

Direct effects.—Under the direct effects of this disease we may include the symptoms and deaths due directly to the infection. My experience has been chiefly among the whites and, in comparison, only to a limited extent among the negroes. Thus far I am persuaded that in reference to symptoms this infection is more severe on the white race than on the negro race, and this experience is in harmony with the observations of other workers. To put it into technical language, the negro (when compared with the white) presents a *relative immunity* to the direct effects of hookworm infection. This observation carries with it a very important thought, namely, that probably the negro race has had this disease for so many generations in Africa that it has become somewhat accustomed to it. This thought may be a very comforting one to the negro from one point of view, but from another viewpoint it must be decidedly disquieting to the white race, for it carries with it the thought that on an average, in the rural districts from the Potomac to the Gulf the 833 negroes to the 1,000 whites (found in eight States) represent *theo-*

retically 833 possible hookworm reservoirs who do not suffer so seriously from the direct effects of the malady, who are therefore not so likely to come under treatment, but who are likely to act as spreaders of the disease to the rest of the community; it also possibly indicates that the negro has brought hookworm disease with him from Africa and because of his soil pollution has spread it broadcast through the South, thereby killing thousands and causing serious disease among tens of thousands of others.

Whether this line of thought be considered justified or not, we must all frankly face the fact that the negro does have hookworm infection, and because of his insanitary habit of polluting the soil, especially in rural communities, his presence is a menace to others not only in respect to hookworm disease, but also in respect to all other diseases spread by soil pollution.

Among the symptoms due to the direct effect of hookworm infection the following are especially prominent:

In severe infections the patients may be underdeveloped both physically and mentally; they present an anæmia (often mistaken for malaria); the skin may be dry and tallow like; the hair is dry; the shoulder blades are often very prominent and the abdomen is frequently swollen ("pot-belly"); there is usually a tenderness in the pit of the stomach; in about half of the severe cases there are (or have been) ulcers on the shins; in about 90 per cent of the cases the patients have had "ground itch;" the hair in the armpits and on the pubis is frequently very scanty. Hookworm disease is the most frequent cause of "dirt eating." It is also the most common cause of anæmia found among farm and cotton-mill hands in the South. The patients are weak, and this weakness brings with it an indisposition to work, frequently interpreted as "laziness."

Indirect effects.—As this infection injures the intestinal wall, brings about an intestinal catarrh, and thus interferes with the digestion, it naturally increases the chances of death in case a person is infected at the same time with some other disease in which good nourishment is important for recovery. As hookworm infection decreases the number of red blood corpuscles, it also increases the chances of death in case a person is infected at the same time with some other disease in which a good supply of oxygen to the tissues is important for recovery. Since good nourishment and proper functioning of the blood are two of the most important factors in recovering from pulmonary tuberculosis (known commonly as consumption), it is to be expected that persons who have both tuberculosis and hookworm disease will stand less chance of recovery than will persons who have consumption but not hookworm disease. *In other words, hookworm infection has an indirect effect in increasing the death rate from pulmonary tuberculosis.* It has been estimated that it about doubles the chances for death in cases of this disease. Now, even admitting that the direct effects of hookworm infection on the negro are less than on the white, it is a suggestive combination of facts that the tuberculosis death rate is about three times as great in the negro as in the white (namely, 490.6 to 173.5 per 100,000).

It is evident, therefore, that the eradication of hookworm disease is of great importance to the negro in his fight against tuberculosis.

Quite recently some very important observations have been made in Manila upon the indirect effects of hookworm infection. When

the Americans took charge of Bilibid prison the death rate was 238 per 1,000 per year; by improving the sanitary conditions this death rate was reduced to about 75 per 1,000; here it remained stationary until it was discovered that a very high percentage of the prisoners were infected with hookworms and other intestinal parasites; then a systematic campaign was inaugurated to expel these worms, and when this was done the death rate fell to 13.5 per 1,000.

Although the death rate among our American negroes has not as yet been reduced in a similar way, it can not be doubted that a reduction of their hookworm infection would result in a reduction of their general death rate (from all causes), which, when compared with the death rate of the whites, is in the ratio of 29.6 to 17.3 per 1,000 per year for the registration area.

NEGRO EDUCATION AND HOOKWORM DISEASE.

Hookworm disease has a serious effect upon the mind and prevents children from fully and properly assimilating the education which the country is offering them. Hookworm children are apt to study and learn with difficulty. As I visit the country schools and pick out the children suffering from this malady, the teachers generally exclaim: "Why, Doctor, you have picked out the most stupid children in the class!" That same mental handicap which this disease places upon the white children seems also to rest upon the negro children, although, as already stated, my observations among the negroes are much less extensive than among the whites.

The point to be made is this: Because of the effects which this infection has upon the mind, the present soil pollution (which spreads the disease) so prevalent among the negroes is necessarily resulting in a severe handicap in the mental advancement of the negro children.

As nearly as can be estimated (admittedly a rough estimate) the physical condition of the southern country school children with whom I come in contact is such that they can not possibly assimilate much over 70 per cent of the education they receive; in other words, somewhere about 30 per cent of the educational efforts are wasted, and prominent southern educators have stated that this estimate is very conservative. It may be stated that many of the country schools and country churches are breeding places for disease, and whatever they may do for education and religion *they are in their present insanitary condition a menace to public health;* a large number of the country schoolhouses and country churches are not provided with any privy, and children congregating at the schools by polluting the soil may spread disease to one another.

TREATMENT OF HOOKWORM DISEASE.

Treatment of this malady should be conducted under the personal direction of a physician, as the size of the dose of thymol to be given depends upon the physical condition of the patient. Every person who has the infection, even if it is so light that he does not feel serious or any effects, owes it to his fellow-men to undergo treatment. The treatment is not expensive and it can be carried out without losing time from work.

PREVENTION OF HOOKWORM DISEASE.

All persons, whether infected or not, but living in the infected area, can aid in preventing this malady. *The most important point involved is to prevent soil pollution.* As stated in the foregoing, *because of the absence of privies* many farms, schools, and churches are acting as a medium for soil pollution, resulting in hookworm disease and certain other maladies.

If there is a sewer present, it is best to construct a water-closet and connect it with the sewer. If there is no sewer, the next best thing is to construct a septic tank and a water-closet. There are many who can not afford to have a water-closet with septic tank, and under these circumstances the next best thing to do is to construct a sanitary privy and to clean it regularly. The following are the chief features of one type of this important outhouse: There should be a good floor extending under the seat as well as under the front part; a water-tight tub or barrel or galvanized pail is placed under the seat; on the bottom, inside of this receptacle, is placed a thin layer of sand or dirt each time it is emptied; the tub should be filled about one-fourth full with a 5 per cent crude carbolic-acid solution (1 part of crude carbolic acid to 19 parts of water); if economy is an important point, the tub may be filled one-fourth full of water and a cup of kerosene poured on the water, but if kerosene is used care should be taken not to throw any lighted matches into the tub; the back of the privy is provided with a hinged door, which is opened only in order to remove the tub for cleaning, while at other times it should be closed tightly in order to keep out flies and animals; the seat should be provided with hinged covers; the front door should be hinged so that it will close well, to keep out the rain; it is a good plan to place a ventilator in the roof, also one on each side near the roof, and one each side of the tub; it is desirable to screen with wire netting all of these ventilators, in order to aid in keeping out the flies.

The tub should be cleaned regularly, once or twice a week; the night soil should be burned or buried; if buried, this should not be done within 300 feet of any well, creek, spring, or other water supply. Under no circumstance should the night soil be used as top dressing on the gardens; if used at all for fertilizing purposes, it should first be allowed thoroughly to ferment, preferably in a vat, and then it should be plowed under in fields far removed from the house; while fermenting, a cup of kerosene oil should be poured into the vat in order to keep flies away; it is dangerous to dump the night soil on the manure pile, as flies breed in the manure, and if the night soil is mixed in, the flies may carry fecal material to the kitchen or dining room and infect the food with filth and with disease germs.

Still another plan is to build a vault under the privy. If this is done, it is well to pour a cup full of kerosene oil into the vault occasionally in order to repel flies.

The average privy found in the South is known as a "surface" or "dirt" privy, and is a very poor substitute for a water-closet, as it permits soil pollution.

Whatever style of closet is selected or whatever fluid is used, the chief points to be held in mind are: Prevent soil pollution; so protect the night soil that flies and other insects can not breed in it or feed upon it; and keep it out of the reach of animals of all kinds.

It lies within the power of preachers and teachers to play a very important rôle in reducing the death rate. They are the persons to whom many people look to set the example. If preachers and teachers themselves permit the yards of churches and schools to be defiled by soil pollution, it need not be thought strange if farmers permit soil pollution to occur around the homes. Further, it should be recalled that every church and every school around which soil pollution is permitted to occur may act as a disease-breeding center from which infection can be spread to the farms and homes. Further, also, not only can preachers and teachers do good by setting an example in preventing soil pollution, but if they will point out to their friends the dangers which this pernicious habit carries with it, they can be very important factors in inducing the public to institute more sanitary customs, and thereby they can be important factors in reducing the death rate.

UNITED STATES.

[Reports to the Surgeon-General, Public Health and Marine-Hospital Service.]

Reports from San Francisco, Cal.—Plague-prevention work at San Francisco, Oakland, and Point Richmond, and in Alameda and Contra Costa counties, Cal.

Surgeon Blue reports:

SAN FRANCISCO, CAL.

Date of last case of human plague: Sickened, January 30, 1908.
Date of last case of rodent plague: October 23, 1908.

Week ended July 10, 1909.

Sick inspected	2
Plague	0
Dead inspected	113
Plague	0
Premises inspected	1,645
Houses disinfected	37
Houses destroyed	1
Buildings condemned	9
Nuisances abated	139
Rats found dead	10
Rats trapped	1,580
Total rats taken	1,590
Rats identified:	
Mus norvegicus	1,160
Mus rattus	65
Mus musculus	352
Mus alexandrinus	7
Total	1,584
Rats identified as to sex:	
Male	597
Female	595
Total	1,192
Rats examined bacteriologically	1,112
Plague rats	0
Poisons placed	42,262

ALAMEDA COUNTY, CAL. (EXCLUSIVE OF OAKLAND).

Week ended July 10.

Dead inspected	40
Plague	0
Necropsies held	2

OAKLAND, CAL.

Date of last case of human plague: Sickened, July 17, 1908.
Date of last case of rodent plague: Trapped, December 1, 1908.

Week ended July 10.

Dead inspected	21
Plague	0
Premises inspected	502
Premises reinspected	228
Premises cleaned	68
Places made rat-proof	1
Garbage cans installed	24
Nuisances abated	86
Rats found dead	44
Rats trapped	651
Rats identified	716
Mus norvegicus	690
Mus rattus	5
Mus musculus	21
Ground squirrels caught	137
Rats examined bacteriologically	716
Plague rats	0
Ground squirrels examined bacteriologically	137
Plague squirrels	0

CONTRA COSTA COUNTY, CAL. (EXCLUSIVE OF POINT RICHMOND).

Date of last case of human plague: Sickened, July 21, 1908.
Date of last case of rodent plague: Found, June 18, 1909.

Week ended July 10.

Dead inspected	1
Plague	0
Ground squirrels shot	1,449
Ground squirrels found dead	16
Ground squirrels trapped	1
Ground squirrels examined bacteriologically	843
Ground squirrels infected with B. pestis	14
Ranches inspected	156

Plague-infected ground squirrels obtained from the following places:

June 30, 1909.

Lynch's ranch (near San Ramon)	1

July 2, 1909.

Keller's ranch (near Clayton)	1
Azeveda ranch (Morgan territory)	1

July 6, 1909.

Keller's ranch (near Clayton)	3

July 7, 1909.

McCabe ranch (near Byron)	1
Nortonville road	1
Keller's ranch (near Clayton)	2
Naphthaly ranch (near Walnut Creek)	1

July 8, 1909.

Naphthaly ranch (near Walnut Creek)	1
Joaquin ranch (near Clayton)	2

POINT RICHMOND, CAL.

Week ended July 3.

Premises inspected	150
Nuisances abated	9
Rats found dead	6
Poisons placed	2,100

Week ended July 10.

Sick inspected	2
Plague	0
Dead inspected	4
Plague	0

Report from Seattle, Wash.—Plague-prevention work.

Passed Assistant Surgeon Glover reports, July 13:

SEATTLE, WASH.

Date of finding of last plague rat, September 26, 1908.

Week ended July 10, 1909.

Rats received	706
Rats necropsied	567
Plague rats found	0
Plague-infected rats to date	21

STATISTICAL REPORTS OF MORBIDITY AND MORTALITY, STATES AND CITIES OF THE UNITED STATES—UNTABULATED.

CALIFORNIA—*Los Angeles.*—Month of June, 1909. Estimated population, 300,000. Total number of deaths reported, 326, corresponding to an annual death rate of 12.96 per 1,000 of population, including enteric fever 5, scarlet fever 1, whooping cough 2, diphtheria 2, and 60 from tuberculosis. Cases of contagious diseases reported: Diphtheria 12, enteric fever 21, scarlet fever 44, measles 14, and tuberculosis 53.

City and county of San Francisco.—Month of May, 1909. Estimated population, 475,000. Total number of deaths, 535, corresponding to an annual death rate of 13.44 per 1,000 of population, including measles 4, enteric fever 4, whooping cough 4, scarlet fever 1, diphtheria 5, and 79 from tuberculosis. Cases: Diphtheria 66, scarlet fever 50, smallpox 7, measles 192, whooping cough 70, enteric fever 15, and tuberculosis 110.

CONNECTICUT.—Month of June, 1909. Reports to the state board of health from 168 towns having an aggregate population of 1,038,240 show as follows: Total number of deaths from all causes, 1,210, corresponding to an annual death rate of 13.9 per 1,000 of population,

including measles 9, scarlet fever 12, diphtheria 12, whooping cough 11, enteric fever 10, and 92 from pulmonary tuberculosis. Cases: Measles, 1,090 in 64 towns; scarlet fever, 231 in 39 towns; diphtheria, 108 in 29 towns; whooping cough, 131 in 24 towns; enteric fever, 54 in 22 towns; and tuberculosis, 86 in 26 towns.

Bridgeport.—Month of June, 1909. Estimated population, 100,000. Total number of deaths, 115, corresponding to an annual death rate of 13.8 per 1,000 of population, including measles 1, enteric fever 2, and 12 from tuberculosis. Cases: Diphtheria 3, enteric fever 2, whooping cough 2, scarlet fever 19, measles 11, and pulmonary tuberculosis 8.

INDIANA.—Month of May, 1909. Total number of deaths, 2,739, corresponding to an annual death rate of 12 per 1,000 of the population, which is estimated at 2,732,549. Deaths from contagious diseases were: Tuberculosis 384, enteric fever 35, diphtheria 7, scarlet fever 14, measles 26, whooping cough 37, and 1 from smallpox. Cases: Smallpox, 88 in 13 counties; enteric fever, 80 in 22 counties; diphtheria, 56 in 21 counties.

LOUISIANA—*New Orleans.*—Month of June, 1909. Estimated population, 362,000 (white, 265,000; colored, 97,000). Total number of deaths, 536 (white 327; colored, 209), including enteric fever 9, scarlet fever 4, whooping cough 2, diphtheria 2, and 66 from tuberculosis. Annual death rate per 1,000 for the month: White, 14.81; colored, 26.88. Total white and colored, 17.76.

MASSACHUSETTS—*Worcester.*—Month of March, 1909. Estimated population, 143,333. Total number of deaths, 185, corresponding to an annual death rate of 15.48 per 1,000 of population, including enteric fever 1, whooping cough 1, scarlet fever 2, diphtheria 1, and 27 from tuberculosis. Cases: Diphtheria 26, scarlet fever 22, enteric fever 4, tuberculosis 44, measles 24, and whooping cough 8.

Month of April, 1909. Total number of deaths, 197, corresponding to an annual death rate of 16.44 per 1,000 of population, including enteric fever 1, measles 2, whooping cough 3, and 17 from tuberculosis. Cases: Scarlet fever 25, diphtheria 24, enteric fever 3, measles 19, whooping cough 3, and tuberculosis 27.

MINNESOTA.—Month of April, 1909. Estimated population, 1,979,658. Reports to the state board of health show as follows: Total number of deaths, 1,667, including diphtheria 36, enteric fever 21, scarlet fever 35, measles 3, whooping cough 17, smallpox 1, and 179 from tuberculosis. Deaths reported from state institutions during the month numbered 35, including enteric fever 3, and 8 from pulmonary tuberculosis.

St. Paul.—Month of April, 1909. Estimated population, 230,000. Total number of deaths, 198, corresponding to an annual death rate of 10.32 per 1,000 of population, including enteric fever 1, scarlet

fever 9, whooping cough 5, diphtheria 5, and 19 from tuberculosis. Cases: Diphtheria 79, scarlet fever 215, measles 5, and smallpox 8.

Month of May, 1909. Total number of deaths, 244, corresponding to an annual death rate of 12.72 per 1,000 of population, including enteric fever 5, scarlet fever 17, diphtheria 9, and 31 from tuberculosis. Cases: Diphtheria 98, scarlet fever 250, measles 11, and smallpox 2.

MISSOURI—*St. Louis.*—Month of May, 1909. Estimated population, 735,000 (white, 688,000; colored, 47,000). Total number of deaths, 880 (white, 766; colored, 114), including diphtheria 12, measles 22, enteric fever 6, whooping cough 1, scarlet fever 8, and 121 from pulmonary tuberculosis. Cases of contagious diseases reported: Diphtheria 115, enteric fever 15, measles 1,992, scarlet fever 85, whooping cough 24, smallpox 3, and pulmonary tuberculosis 164. The total number of deaths correspond to an annual death rate of 16.25 per 1,000 of population.

NEW YORK—*Yonkers.*—Month of June, 1909. Estimated population, 72,200. Total number of deaths, 84, corresponding to an annual death rate of 13.9 per 1,000 of population, including scarlet fever 1, diphtheria 1, enteric fever 1, and 10 from tuberculosis. Cases: Scarlet fever 70, enteric fever 2, diphtheria 11, measles 40, and tuberculosis 17.

PENNSYLVANIA—*Columbia.*—Report for the year ended April 30, 1909. Estimated population, 14,000. Total number of deaths, 170, corresponding to a death rate of 12 per 1,000 of population, including diphtheria 1, scarlet fever 1, enteric fever 3, whooping cough 2, and 8 from tuberculosis.

UTAH—*Salt Lake City.*—Month of June, 1909. Estimated population, 85,000. Total number of deaths from all causes, 108, corresponding to an annual death rate of 15.25 per 1,000 of population, including diphtheria 1, scarlet fever 2, enteric fever 1, measles 1, whooping cough 2, and 4 from pulmonary tuberculosis. Cases: Diphtheria 13, whooping cough 29, measles 3, smallpox 56, scarlet fever 55, and enteric fever 1.

VIRGINIA—*Richmond.*—Month of June, 1909. Estimated population, 115,701 (white, 73,204; colored, 42,497). Total number of deaths, 213 (white, 123; colored, 90), including whooping cough 1, and 22 from tuberculosis. Cases: Diphtheria 4, enteric fever 47, scarlet fever 3, measles 7, whooping cough 13, and smallpox 5.

WASHINGTON—*Tacoma.*—Month of June, 1909. Estimated population, 120,000. Total number of deaths, 51, corresponding to an annual death rate of 5.16 per 1,000 of population, including whooping cough 1, and 9 from tuberculosis. Cases: Pulmonary tuberculosis 31, scarlet fever 31, smallpox 2, measles 11, enteric fever 2, and diphtheria 8.

Smallpox in the United States as reported to the Surgeon-General, Public Health and Marine-Hospital Service, June 26 to July 30, 1909.

[For reports received from December 25, 1908, to June 25, 1909, see PUBLIC HEALTH REPORTS for June 25, 1909.]

[NOTE.—In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.]

Place.	Date.	Cases.	Deaths.	Remarks.
California:				
Hobart Mills	Apr. 1-30	1		
Sacramento	June 6-12	1		
San Francisco	June 6-12	1		
Truckee	Mar. 23	3		
Total for State		6		
Connecticut:				
New Haven	May 1-31	1		
Total for State		1		
Georgia:				
Macon	June 14-July 11	8		
Total for State		8		
Illinois:				
Alexander County—				
Cairo	May 1-June 30	25		
Champaign County	Apr. 1-May 31	25		
Christian County	Apr. 1-May 31	35		
Clay County	Apr. 1-30	1		
Clinton County	Apr. 1-June 30	7		
Cook County—				
Chicago	June 20-July 3	4		
Dewitt County	May 1-31	7		
Edwards County	Apr. 1-May 31	3		
Effingham County	Apr. 1-30	2		
Fayette County	May 1-31	2		
Franklin County	Apr. 1-May 31	2		
Fulton County	Apr. 1-June 30			Present.
Gallatin County	Apr. 1-May 31	16		
Iroquois County	May 1-31	1		
Jackson County	Apr. 1-May 31	14		
Murphysboro	Apr. 1-May 31	40		
Knox County	Apr. 1-30	8		
Lake County	Apr. 1-May 31	3		
Lasalle County	Apr. 1-30	3		
McDonough County	Apr. 1-30	25		
McHenry County—				
Marengo	May 1-June 30	97		
Macoupin County	Apr. 1-May 31	6		
McLean County	June 1-30	1		
Madison County	May 1-June 30	2		
Marion County	Apr. 1-June 30	14		
Massac County—				
Metropolis	Apr. 1-May 31	29		
Montgomery County	May 1-June 30	2		
Peoria County	Apr. 1-June 30	13		
Peoria	June 1-30	26		
Perry County	Apr. 1-May 31	11		
Pulaski County	May 1-31	5		
Rock Island County—				
Moline	June 1-30	1		
St. Clair County—				
East St. Louis	May 1-June 30	11		
Saline County	May 1-31	30		
Sangamon County	Apr. 1-30	1		
Springfield	May 29-July 9	3		
Schuyler County	May 1-31	1		
Shelby County	Apr. 1-May 31	2		
Stephenson County	May 1-31	4		
Tazewell County	May 1-31	5		
Pekin	Apr. 1-June 30	66		
Union County	Apr. 1-May 31	5		
Vermilion County	Apr. 1-May 31	2		
Danville	June 14-July 4	7		
Warren County	June 1-30	1		
Williamson County	Apr. 1-May 31	6		
Winnebago County	June 1-30	1		
Woodford County	Apr. 1-May 31	21		
Total for State		596		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Indiana:				
Allen County	May 1-31	5		
Fort Wayne	June 6-July 17	25		
Dearborn County	May 1-31	4		
Delaware County	May 1-31	1		
Muncie	June 20-July 10	4		
Gibson County	May 1-31	5		
Grant County	May 1-31	2		
Marion County—				
Indianapolis	June 14-20	1		
Montgomery County	May 1-31	4		
Parke County	May 1-31	1		
Pulaski County	May 1-31	2		
St. Joseph County—				
South Bend	June 13-26	4		
Vanderburgh County	May 1-31	6		
Vermilion County	May 1-31	38		
Wayne County	May 1-31	6	1	
White County	May 1-31	2		
Total for State		110	1	
Iowa:				
Keokuk	May 1-31	3		
Ottumwa	June 1-30	1		
Total for State		4		
Kansas:				
Kansas City	June 13-July 3	9		
Total for State		9		
Kentucky:				
Covington	June 13-July 3	5		
Lexington	June 20-July 10	9		
Newport	June 14-July 10	2		
Paducah	June 13-26	3		
Total for State		19		
Louisiana:				
New Orleans	June 13-July 10	9		
Total for State		9		
Maryland, general	Mar. 1-Apr. 30	9		
Total for State		9		
Massachusetts:				
Lawrence	June 27-July 3	1		
Total for State		1		
Michigan:				
Chippewa County	May 1-31	1		
Eaton County	May 1-31	5		
Houghton County	May 1-31	1		
Ingham County	May 1-31	1		
Jackson County	May 1-31	1		
Kalamazoo County—				
Kalamazoo	July 4-10	1		
Kent County—				
Grand Rapids	June 6-26	2		
Marquette County	May 1-31	4		
Muskegon County	May 1-31	5		
Oceana County	May 1-31	1		
Ottawa County	May 1-31	4		
Saginaw County	May 1-31	16		
St. Clair County	May 1-31	1		
Tuscola County	May 1-31	4		
Wayne County—				
Detroit	May 1-31	1		
Total for State		48		
Minnesota, general	Mar. 1-Apr. 30		3	
Duluth	June 19-July 16	11		
Minneapolis	May 1-31	20		
St. Paul	Apr. 1-May 31	10		
Total for State		41	3	

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Missouri:				
Kansas City	June 13-26	2		
St. Joseph	May 30-June 19	4		
St. Louis	June 20-July 17	3		
Total for State		9		
Montana:				
Dawson County	May 1-31	5		
Deer Lodge County	May 1-31	1		
Flathead County	May 1-31	4		
Gallatin County	May 1-31	4		
Jefferson County	May 1-31	2		
Lewis and Clark County—				
Helena	May 1-31	1		
Park County	May 1-31	6		
Livingston	May 1-31	6		
Sanders County	May 1-31	1		
Silver Bow County—				
Butte	June 11-July 15	15		
Teton County	May 1-31	1		
Valley County	May 1-31	1		
Yellowstone County	May 1-31	1		
Total for State		48		
Nebraska:				
Lincoln	May 1-31	14		
Total for State		14		
New York, general	May 1-31	408		
Total for State		408		
North Carolina:				
Bladen County	Apr. 1-30	5		
Buncombe County	Apr. 1-30	1		
Caldwell County	Apr. 1-May 31	18		
Camden County	Apr. 1-May 31	45		
Carteret County	Apr. 1-30	1		
Craven County	Apr. 1-May 31	7		
Cumberland County	May 1-31	1		
Duplin County	Apr. 1-May 31	16		
Johnston County	Apr. 1-30	2		
Lee County	Apr. 1-30	6		
Madison County	May 1-31	1		
Mecklenburg County	May 1-31	2		
Mitchell County	Apr. 1-30			Present.
Onslow County	Apr. 1-30	2		
Pamlico County	May 1-31	4		
Pasquotank County	Apr. 1-May 31	15		
Pitt County	Apr. 1-May 31	9		
Rawson County	May 1-31	9		
Sampson County	Apr. 1-May 31	47		In extreme northern part.
Transylvania County	May 1-31	5		
Wake County	Apr. 1-30	2		
Wayne County	May 1-31	14		
Wilson County	Apr. 1-30	1		
Yancey County	Apr. 1-May 31	8		
Total for State		221		
Ohio:				
Cincinnati	June 12-July 2	4		
Total for State		4		
Oklahoma:				
Oklahoma	Apr. 3-July 12	49		
Total for State		49		
Oregon:				
Portland	Apr. 1-June 30	26		
Total for State		26		
Pennsylvania:				
Philadelphia	July 10-16	1		
Total for State		1		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Tennessee:				
Knoxville	June 20–July 17	6		
Total for State		6		
Texas:				
Archer County	June 1–30	1		
Bee County	June 1–30	6		
Bexar County—				
San Antonio	June 13–July 17	9		
Cameron County	June 1–30	1		
Cherokee County	June 1–30	1		
Ellis County	June 1–30	1		
Galveston County	June 1–30	1		
Galveston	June 19–25	1		
Gonzales County	June 1–30	5	1	
Grayson County	June 1–30	9		
Harris County	June 1–30	12		
Harrison County	June 1–30	15		
Jefferson County	June 1–30	2		
Laredo County	June 19	1		
Matagorda County	June 1–30	3		
McLennan County	June 1–30	19		
Milam County	June 1–30	5		
Runnels County	June 1–30	6		
San Saba County	Apr. 9–June 30	11		
Smith County	June 1–30	10		
Stephens County	June 1–30	33	1	
Tarrant County	June 1–30	17	2	
Fort Worth	June 1–30	4		
Travis County	June 1–30	17		
Upshur County	June 1–30	1		
Van Zant County	June 1–30	2		
Wharton County	June 1–30	2		
Wichita County	June 1–30	5		
Williamson County	June 1–30	4	1	
Total for State		204	5	
Utah:				
Box Elder County	May 1–31	3		
Davis County	May 1–31	6		
Garfield County	May 1–31	1		
Salt Lake County	May 1–31	16		
Salt Lake City	June 1–30	56		
San Pete County	May 1–31	20		
Summit County	May 1–31	18		
Tooele County	May 1–31	5		
Uintah County	May 1–31	1		
Utah County	May 1–31	6		
Weber County	May 1–31	3		
Total for State		135		
Virginia:				
Lynchburg	June 20–26	1		
Total for State		1		
Washington:				
Spokane	June 6–July 3	7		
Tacoma	May 14–June 27	6		
Total for State		13		
Wisconsin:				
Ashland County	Jan. 1–Mar. 31	8		
Barron County	Jan. 1–Mar. 31	47		
Buffalo County	Jan. 1–Mar. 31	5		
Burnett County	Jan. 1–Mar. 31	11		
Calvert County	Jan. 1–Mar. 31	1		
Chippewa County	Jan. 1–Mar. 31	87	1	
Clark County	Jan. 1–Mar. 31	13		
Columbia County	Jan. 1–Mar. 31	1		
Douglas County	Jan. 1–Mar. 31	8		
Dunn County	Jan. 1–Mar. 31	35	2	
Fond du Lac County	Jan. 1–Mar. 31	1		
Jackson County	Jan. 1–Mar. 31	1		
Juneau County	Jan. 1–Mar. 31	39		
La Crosse County—				
La Crosse	June 13–July 10	2		
Manitowoc County	Jan. 1–Mar. 31	33		
Marathon County	Jan. 1–Mar. 31	1		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Wisconsin—Continued.				
Milwaukee County—				
Milwaukee	June 21-27	2		
Oconto County	Jan. 1-Mar. 31	1		
Outagamie County—				
Appleton	June 20-July 17	5		
Ozaukee County	Jan. 1-Mar. 31	13		
Pepin County	Jan. 1-Mar. 31	2		
Pierce County	Jan. 1-Mar. 31	4		
Polk County	Jan. 1-Mar. 31	2		
St. Croix County	Jan. 1-Mar. 31	47		
Sheboygan County	Jan. 1-Mar. 31	40		
Taylor County	Jan. 1-Mar. 31	5		
Trempealeau County	Jan. 1-Mar. 31	3		
Vernon County	Jan. 1-Mar. 31	51		
Washburn County	Jan. 1-Mar. 31	8		
Waukesha County	Jan. 1-Mar. 31	5		
Waupaca County	Jan. 1-Mar. 31	24		
Waushara County	Jan. 1-Mar. 31	1		
Winnebago County	Jan. 1-Mar. 31	4		
Total for State		510	3	
Grand total for the United States		2,510	12	

Weekly morbidity and mortality table, cities of the United States.

[For smallpox, see special table.]

Cities.	Week ended—	Population United States census, 1900.	Total deaths from all causes.	Tuberculosis.		Enteric fever.		Scarlet fever.		Diphtheria.		Measles.		Whooping cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Altoona, Pa	July 17	38,973	15	4		1		1		1					
Ann Arbor, Mich	July 10	14,509	3	1								6			
Do	July 17	14,509	7	1	2	1						2			
Appleton, Wis	June 12	15,085	8												
Do	June 17	15,085	5												
Baltimore, Md	July 17	508,957	252	20	30	23	4	6		6		17	3	30	9
Bath, Me	...do	10,477				1				1		3			
Bayonne, N. J	...do	32,722		1	1	1				3		3			
Beaver Falls, Pa	...do	13,000		1								1			
Berkeley, Cal	...do	13,214	10		1										
Biddeford, Me	...do	16,145	3												
Biloxi, Miss	...do	5,467	2			1									
Binghamton, N. Y	...do	38,647	17	1						1					
Boston, Mass	...do	560,892	163	54	25	8	1	25	1	29	2	51		7	
Braddock, Pa	...do	15,654	8					7							
Bradford, Pa	...do	15,029						1							
Bridgeport, Conn	July 10	70,996	27		3	1		2		2		2	1		
Do	July 17	70,996	31	3	5	1		1		5		1	1	1	1
Bristol, R. I	July 3	6,901	1												
Do	July 10	6,901	3					1							
Do	July 17	6,901	2					1							
Do	July 24	6,901	3												
Brockton, Mass	July 17	40,063	12		3							1			
Butte, Mont	July 15	30,470	10							1					
Cambridge, Mass	July 17	91,886	18	9	2	1	1	4		3		8		1	
Camden, N. J	...do	75,935	24			1		5							
Camden, S. C	...do	2,441	4			1						1			
Carbondale, Pa	...do	13,536	5							2		2			
Charlotte, N. C	July 16	18,091	8		1	5									
Chelsea, Mass	July 17	34,072	16	5	1					1		1		1	
Chicago, Ill	...do	1,698,575	482	49	75	27	1	51	3	61	9	164	2	39	7
Chicopee, Mass	...do	19,167	6	1		1				1		1			
Cincinnati, Ohio	July 16	325,902		30	16	11	2	1		3		4		2	
Cleveland, Ohio	...do	381,768	158	27	14	9	2	7	1	9		45	2	5	
Clinton, Mass	July 17	13,667	6	1	1										
Columbus, Ohio	...do	125,560	44	3	2	1				1		1		2	
Concord, N. H	July 10	19,632	10	2	2			1		2		5			

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

Cities.	Week ended—	Population. United States, census, 1900.	Total deaths from all causes.	Tuberculosis.		Enteric fever.		Scarlet fever.		Diphtheria.		Measles.		Whooping cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Covington, Ky	July 17	42,938	10		1	1	1								
Danville, Ill	...do	16,520	5	1	1		1					1			
Dayton, Ohio	...do	85,333	40		2							5			
Detroit, Mich	...do	285,704	117					13	6	9					
Duluth, Minn	July 16	80,000	15	2				14	1	6	1				
Dunkirk, N. Y	July 17	11,616	3							1					
Elmira, N. Y	...do	35,672	9	1	2					4					
El Paso, Tex	July 20	15,905	36		3	2	1					2	1		2
Elkhart, Ind	July 17	15,184	6	1	1					1					
Erie, Pa	...do	52,733	24	5								21		13	6
Evansville, Ind	July 10	59,007	31	5	4	8	3			1					
Do	July 17	59,007	20		6	5				1					
Everett, Mass	...do	24,336	8	1		1		1		1		1			
Fall River, Mass	...do	104,863	55	5	2	1		3		1		5			
Findlay, Ohio	...do	17,613	4					1							
Galesburg, Ill	...do	18,607	6							1					
Galveston, Tex	July 16	37,789	13	2	2	5									
Gloucester, Mass	July 17	26,121	8		1										
Grand Rapids, Mich	...do	87,565	31			4		8	1	3		15	1	2	
Greensboro, N. C	...do	10,035	3			5		1							
Greenville, S. C	July 10	11,860	3							1					
Hammond, Ind	...do	12,376	8		2							1			
Do	July 17	12,376	6												
Harrison, N. J	...do	10,596	5	1	1										
Hartford, Conn	July 11	79,850	35	1	3			3	1	5					
Haverhill, Mass	July 17	37,175	5	3		1				3		1			
Hoboken, N. J	...do	59,364								3	1			1	
Hyde Park, Mass	...do	13,244	3			1				2				2	
Indianapolis, Ind	July 18	169,164	67	2	9	4	1	5		1		17	1	2	
Jacksonville, Fla	July 20	28,429	19	6	4	6	2								
Jersey City, N. J	July 18	206,433	94		6			3	2	5	1	4			
Johnstown, Pa	July 17	35,936	30	1	1			7	1	1		6		4	
Kingston, N. Y	July 10	24,535	6		1										
Do	July 17	24,535	8		2										
Knoxville, Tenn	...do	32,637	17	3	3	2	2			1					
La Fayette, Ind	July 19	18,116	6						1						
Lancaster, Pa	July 17	41,459	7	4		5		2		1		3			
Lawrence, Mass	...do	62,559	35	2	4			2		2		3			
Los Angeles, Cal	July 10	102,479	74	16	17	6	1	9		5		7		5	2
Lowell, Mass	July 17	94,969	42	6	4	3		2				8			
Lynn, Mass	...do	68,513	17		2			2		2		1			
Malden, Mass	...do	33,664	14	2	1	1	1	4		1	2				
Manchester, N. H	...do	56,987						6		8	3	48		1	1
Mansfield, Ohio	...do	17,650				2									
Marinette, Wis	...do	16,195	3												
Marlboro, Mass	...do	13,609	2	1											
Massillon, Ohio	...do	11,944	4		1										
Medford, Mass	...do	18,244	8					2		4		8			
Melrose, Mass	July 10	12,962	5	1										1	
Do	July 17	12,962	5	1	1			2							
Milwaukee, Wis	July 10	285,315	95	13	6	1	2	22	3	9	1	60	1	2	
Do	July 17	285,315	94	15	10	2		35	9	8	2	21	3	9	2
Mobile, Ala	July 10	38,469	18	2	2	7	2								
Do	July 17	38,469	24		7	3	1	2							
Montclair, N. J	...do	13,962	2	1								2		2	
Montgomery, Ala	July 16	30,346	14		2		1								
Moline, Ill	July 18	17,248	6			1									
Muncie, Ind	July 17	20,942	16		2									1	1
Nanticoke, Pa	July 18	12,616	1												
Nashville, Tenn	July 17	80,865	49	3	8	21	3	1							
Nebraska City, Nebr	...do	7,200	1												
Newark, N. J	...do	246,070	90		12	6	1	11	1	22					
New Bedford, Mass	...do	63,442	20	3	2	2		1				10			
Newburyport, Mass	...do	14,478	1			1									
New Orleans, La	...do	278,104	159	39	14	10	1	22	3	2		2			1
Newton, Mass	...do	33,587	8	2	2	3				3	1	1			
New York, N. Y	...do	3,437,202	1,397	480	158	60	8	107	8	250	27	501	13	47	12
Niagara Falls, N. Y	...do	19,457	8		1	1		1				8			
Norristown, Pa	...do	22,265	7		1	5									
North Adams, Mass	...do	24,200	9		1			1							
Northampton, Mass	...do	18,643	5	1											
Oakland, Cal	July 12	66,960	21	2	3	1		1		2					
Oklahoma City, Okla	July 3	43,500	11			15								1	
Do	July 10	43,500	17			25	1								
Do	July 17	43,500	28			30	5								

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

Cities.	Week ended—	Population, United States census, 1900.	Total deaths from all causes.	Tuberculosis.		Enteric fever.		Scarlet fever.		Diphtheria.		Measles.		Whooping cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Orange, N. J	July 17	24,141	9	4	2					2		1			
Palmer, Mass	July 3	7,801	1									1			
Do	July 10	7,801	1			1						1			
Peekskill, N. Y	July 17	10,358	5									2			
Perth Amboy, N. J	...do	15,473	12												
Philadelphia, Pa	July 10	1,293,697	499	75	56	24	5	23		49	4	73	4	22	8
Pittsburg, Pa	July 17	321,616	168	40	8	14		12	2	4	2	6		29	1
Pittsfield, Mass	...do	21,766	3	3	1		2				2				
Plainfield, N. J	...do	15,369	6	1								2			
Plymouth, Pa	...do	13,649								1		1			
Portland, Me	July 4	50,145	13		1					2		1			
Do	July 11	50,145	12		2	1		1		2		1			
Portsmouth, N. H	July 17	10,637										1			
Portsmouth, Va	July 20	17,427	17		1	4		4							
Providence, R. I	July 17	175,597	76	15	10	2	1	11		6		12			1
Reading, Pa	July 19	78,961	25	1	1	3				3	1	1			
Richmond, Va	July 10	85,050	44	6	2	16	1			1		2		15	
Do	July 17	85,050	55	6	9	30	1	1						4	2
Rock Island, Ill	...do	19,493	5												
Sacramento, Cal	July 10	29,282	16		2		1			1		6			
Saginaw, Mich	June 26	42,345	15	3	3	1	1					8			
Do	July 3	42,345	13	2	2	1	1			1		3			
Do	July 10	42,345	17	4	4							3			
St. Louis, Mo	July 17	575,238	224	55	21	13	3	13	1	9	3	53		16	
San Antonio, Tex	July 10	53,321	5			8	5	1				1			
Do	July 17	53,321	2			9	2			2					
Schenectady, N. Y	...do	31,682	11	2		1		1		1		1			
Somerville, Mass	...do	61,643	9	5	1			3		10		6	1		
South Bend, Ind	...do	35,999	16	1		13	1	2							
South Bethlehem, Pa	...do	13,241	3	1		1						3			
Spokane, Wash	July 10	38,848	26		2	3		17	2	3	1	1			
Springfield, Mass	July 17	62,059	28	8	3	1		5	1	4		4			
Steelton, Pa	...do	12,063	3							1		7			
Superior, Wis	...do	31,091	5					3							
Tacoma, Wash	July 11	37,714	13		3			19	1	4		4			
Do	July 18	37,714	17	4	4	8		11		2	1				
Taunton, Mass	July 17	31,036	9					1				3			
Terre Haute, Ind	...do	36,673	20		4					1					
Titusville, Pa	...do	8,244	1												
Toledo, Ohio	June 5	131,822	28		4	5		1		1		27			
Do	June 12	131,822	32		3	2		2		4		12			
Do	June 19	131,822	34		4	2	2			1		38	2		
Do	June 26	131,822	32		4	1	1	4				16	2		
Do	July 3	131,822	32		2	2	1	3		1		17			
Do	July 10	131,822	40		4	3	1			2		21			
Do	July 17	131,822	32		3	2	2			1		6			
Trenton, N. J	...do	73,307		2	1	6	1			3					
Walla Walla, Wash	July 10	10,049	7	1	1			3		1					
Do	July 17	10,049	4					2							
Waltham, Mass	...do	23,481	5	3			1	1				1		1	
Warren, Pa	July 5	8,043	4			1	1	1				1			
Do	July 12	8,043	2	7	1							1			
Weymouth, Mass	July 17	11,324										1			
Wheeling, W. Va	...do	38,878	19	2	1	6				5		2			
Wilkes-Barre, Pa	July 16	51,721	25	5	3	4		2	1	2		4		1	
Wilkinsburg, Pa	July 21	13,000	2	5		2				1					
Williamsport, Pa	July 17	28,757	7	2		2		2							
Wilmington, Del	...do	76,508	31		2						1				
Winona, Minn	July 20	19,714	4												
Woburn, Mass	July 17	14,254	5							4	1				
Worcester, Mass	July 10	118,421	30	4	3	2		1		5		4		1	
Do	July 17	118,421	36					2		2				11	
Yonkers, N. Y	July 15	47,931	23		1			8		3		1			
York, Pa	July 17	33,708		7		1		1		2		3			
Zanesville, Ohio	...do	23,538	13		2	4									

FOREIGN AND INSULAR.

BARBADOS.

Report from Bridgetown—Inspection of vessels—Sanitary conditions.

Acting Assistant Surgeon Urquhart reports, July 10:

Week ended July 10. Bills of health issued to 4 vessels having a total of 253 members of crews and 68 passengers. Sanitary conditions of vessels, cargoes, crews, and passengers good.

The sanitary condition of the port and island is good. No quarantinable disease was reported for the week.

BRAZIL.

Reports from Rio de Janeiro—Inspection of vessels—Mortality—Smallpox.

Acting Assistant Surgeon Stewart reports, June 25 and July 1:

Week ended June 19. Vessels inspected and received bills of health: June 15, the Portugese bark *Soares de Costa*, bound for New Orleans, in stone ballast, with no change in the crew personnel and with no passengers; June 17, the British steamship *Hillbrook*, bound for a southern port via West Indies for orders and disinfection, with no passengers and no change in the crew and in water ballast; June 18, the British steamship *Verdi*, for New York, with cargo of coffee from this port and general cargo from the River Plate, with 12 cabin and 14 steerage passengers and with no change in the personnel of the crew. No other vessel left this port for United States ports during the week.

Week ended June 27. Two vessels left this port for United States ports, viz: June 23, the British steamship *Yola*, for Philadelphia, in cargo of manganese, with no passengers and no change in the crew, and on the same date the American bark *Antioch*, for a southern port, via West Indies, in stone ballast and with no passengers, and with 2 new members of the crew signed on in this port.

Mortality at Rio de Janeiro—Smallpox.—Week ended June 20, 1909. Total deaths, 265. No cases nor deaths due to yellow fever or plague. Smallpox caused 2 deaths, with 3 new cases reported. At the close of the week there were in the Hospital São Sebastião 17 cases of smallpox under treatment.

Week ended June 27. Total deaths, 224. No deaths nor cases due to yellow fever or plague. There were 3 deaths from smallpox, with no new cases. At the close of the week there were in the Hospital São Sebastião 15 cases of smallpox under treatment.

Total estimated population, 811,443. Census population, 1907, 628,675.

BRITISH HONDURAS.

Report from Belize, fruit port.

Acting Assistant Surgeon Mengis reports:

Week ended July 15. Present officially estimated population, 10,000. General sanitary condition of this port and the surrounding country during the week, very good.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
July 9	Belize	Mobile	18	1	0
9	Harry T. Inge	New Orleans	33	6	16
15	Jose	New York, via Central American ports.	34	2	16

CHINA.

Report from Amoy—Inspection of vessel—Plague.

Passed Assistant Surgeon Foster reports, June 14:

Week ended June 12. One bill of health issued.

June 10, the British steamship *Sungkiang*, with 60 members of crew and 44 cabin passengers, for Manila, Cebu, and Iloilo, was granted a supplemental bill of health. Two cabin passengers were rejected for trachoma and 1 for favus.

During the week ended June 12 there were 73 deaths from plague in Amoy.

Reports from Shanghai—Inspection of vessels—No plague-infected rats found—Smallpox and relapsing fever at Hankow.

Acting Assistant Surgeon Ransom reports, June 15 and 22:

Week ended June 12. Supplemental bills of health were granted to 3 steamships, having an aggregate personnel of 406, and there were inspected 2 vessels, 120 members of crews, and 3 cabin and 4 steerage passengers. There were disinfected 3 pieces of steerage baggage; 3 pieces were inspected and passed. Four emigrants for San Francisco per steamship *Asia* were examined and passed. Manifests were viséed for 8,857 pieces of freight, amounting to 1,587.51 tons.

The weekly report of the municipal health officer shows 1 death from smallpox among natives.

Reports from Hankow show smallpox and relapsing fever among natives.

Week ended June 19. Supplemental bills of health granted to 3 steamships, with an aggregate personnel of 892. Two vessels, 155 members of crews, and 5 steerage passengers were inspected. There were also inspected and passed 10 pieces of personal baggage; 2 pieces were disinfected. Four emigrants for San Francisco per steamship

Mongolia were examined; 3 were passed and 1 was recommended to wait. Manifests were viséed for 2,931 pieces of freight.

The weekly report of the municipal health officer shows 1 death from smallpox among natives.

No plague-infected rats were found among those found dead and examined at the municipal laboratory.

Reports from Hankow show relapsing fever still present in the native city.

Report from Swatow—Further relative to outbreak of plague in vicinity.

Consul Pontius reports, July 1:

The outbreak of bubonic plague in this district is now confined to the Touchowfu and Yin Shan districts, where it has lately appeared.

The total number of deaths to date is estimated at 2,400. In the Touchowfu and Yin Shan districts there are about 200 cases present. A few cases only have occurred at Swatow.

COSTA RICA.

Reports from Limon, fruit port.

Acting Assistant Surgeon Goodman reports:

Week ended July 11. Estimated population, 8,000. General sanitary condition of this port and the surrounding country during the week, good.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
July 4	Esparta	Boston	44	10	0
5	Prinz August Wilhelm	New York	142	36	22
5	Katie	Mobile	22	0	0
6	Nicoya	New York	54	7	0
7	Turrialba	New Orleans	90	11	57
8	Dictator	do	19	2	0
8	Ravn	Mobile	19	0	0
8	Manuel Calvo	Ponce, P. R	126	15	80
9	Barranca	New York	55	6	0
10	Appomattox	New Orleans	48	1	0
10	Greenbriar	do	45	0	0

CUBA.

Report from Cienfuegos—Inspection of vessels—Sanitary conditions.

Acting Assistant Surgeon Suarez reports, July 12:

Week ended July 10.

Vessel inspected	1
Bill of health issued	1
Members of crews inspected	25

The sanitary condition of the city and port continues satisfactory, no quarantinable disease having been reported.

Report from Habana—Inspection of vessels—House and water-deposit inspection—Stegomyia calopus abundant.

Passed Assistant Surgeon Amesse reports, July 20:

Week ended July 17.

Bills of health issued	18
Vessels inspected	13
Members of crews of outgoing vessels inspected	667
Passengers of outgoing vessels inspected	507

For the first ten days of July the district sanitary inspectors of Habana reported 24,729 house inspections and the uncovering of 48 deposits of larvæ, 22 of which were collections of *Stegomyia calopus*. Two hundred and thirty square meters of land were cleared of vegetation, 1,655 lineal meters of ditching repaired and cleaned, and 740 pools, ditches, drains, wells, and swamp areas petrolized. The littoral has also been oiled at various points where collections of brackish water favor the breeding of *Culex solicitans*.

The rainy season has interfered seriously with the operations of the sanitary squads in interior towns, and mosquitoes of various species, including *Stegomyia*, are now numerous throughout Habana, Matanzas, and Santa Clara provinces.

Report from Matanzas—Inspection of vessels—Mosquitoes.

Acting Assistant Surgeon Nuñez reports, July 19:

Week ended July 17. Bills of health granted to 2 vessels clearing for the United States.

No quarantinable diseases reported within this district during the week. Mosquitoes are numerous.

Report from Santiago—Inspection of vessels.

Acting Assistant Surgeon Wilson reports, July 14:

Week ended July 10. Bills of health issued to 8 vessels bound for the United States. No vessel was fumigated.

No new quarantinable disease was reported.

The sanitary department made 4,366 inspections of houses, finding larvæ in 9 water deposits.

CURAÇAO.

Measures against importation of plague from Venezuela—Examination of rats.

Consul Cheney reports, July 3:

Passengers from La Guaira are required to show certificate that they have not been in Caracas within 10 days. Persons arriving in transit are not allowed on shore. All baggage is fumigated. Cargo is rarely taken, but when it is taken, is required to be fumigated. Sailing vessels are fumigated. A bounty is paid for rats and mice by the wharf officials, and within the past year about 9,000 rats and 60,000 mice have been killed. Rats are rarely found, but mice are taken at the number of about 200 per day. Numerous examinations have been made, but no plague infection has been found.

GERMANY.

Report from Stettin—Fatal case of cholera at Konigsberg.

Consul Teichmann reports, July 25:

The consular agent at Königsberg confirms a death there, July 21, from Asiatic cholera. The patient was an American.

GUATEMALA.

Report from Puerto Barrios, fruit port—Stegomyia calopus present—Sanitary work.

Acting Assistant Surgeon Ames reports:

Week ended July 10. Present officially estimated population, 350. General sanitary condition of this port and the surrounding country during the week, good.

Stegomyia calopus present; 10,000 empty bottles collected and dumped into sea.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
July 7	Belize	Mobile	18	1	0
8	H. T. Inge	New Orleans	33	14	2

Temperature taken of all persons on above-named steamships day of sailing.

HAWAII.

Report from Honolulu—Examination of rats for plague infection.

Chief Quarantine Officer Hobdy reports, July 5:

HONOLULU.

Week ended July 3.

Total rats taken	530
Trapped	530
Found dead	0
Examined bacteriologically	425
Plague rats	0
Classification of rats trapped:	
Mus alexandrinus	63
Mus musculus	234
Mus norvegicus	106
Mus rattus	126
Average number of traps set daily	1,294

HONDURAS.

Report from Ceiba, fruit port.

Acting Assistant Surgeon Jumel reports:

Week ended July 14. Present officially estimated population, 6,800. General sanitary condition of this port and the surrounding country during the week, good.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.	Pieces of baggage disinfected.
July 9	Rosina	33	5	0	0
10	Navigator	21	1	0	0

Temperature of all persons on above-named vessels taken at time of clearance.

Report from Puerto Cortez, fruit port.

Acting Assistant Surgeon Wailes reports as follows:

Week ended July 13. Present officially estimated population, about 2,500. General sanitary conditions of this port and the surrounding country, good.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.	Pieces of baggage disinfected.
July 7	Utstein	16	2	0	0
10	Fjell	17	7	0	0
13	Ellis	.....	4	0	0

INDIA.

Report from Calcutta—Transactions of Service—Cholera, plague, and smallpox—Plague in Bengal and India.

Acting Assistant Surgeon Allan reports, June 24:

Week ended June 19. Bill of health issued to the steamship *Queen Mary*, bound for Boston and New York, with a total crew of 33. The usual precautions were taken, holds were fumigated, rat guards placed on wharf lines, and Asiatics' effects disinfected.

Week ended June 12. At Calcutta 40 deaths from cholera, 81 from plague, and 18 from smallpox; in Bengal, 104 cases of plague with 96 deaths; in India, 1,045 cases of plague with 907 deaths.

ITALY.

Report from Naples—Inspection of vessels—Examination of emigrants—Smallpox in Naples.

Assistant Surgeon Wollenberg reports, July 5:

Vessels inspected at Naples and Palermo, week ended July 3.

NAPLES.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of baggage inspected and passed.	Pieces of baggage disinfected.
June 27	San Giovanni	New York	219	70	380
30	America	do	1,155	130	1,380
30	Moltke	do	725	150	1,250
July 2	Sannio	do	275	60	420
	Total		2,374	410	3,430

PALERMO.

June 28	San Giovanni	New York	603	800	150

Rejections recommended.

NAPLES.

Date.	Name of ship.	Trachoma.	Favus.	Suspected trachoma.	Suspected favus.	Other causes.	Total.
June 27	San Giovanni	12	2	4	.....	1	19
30	America	32	4	28	.....	13	77
30	Moltke	24	1	12	.....	6	43
July 2	Sannio	15	1	13	.....	1	30
	Total	83	8	57	.....	21	169

PALERMO.

June 28	San Giovanni	26	.....	40	.....	1	67

Smallpox in Naples.—During the week ended July 4 there were 32 cases of smallpox with 4 deaths reported at the health office of the city of Naples.

JAPAN.

Reports from Yokohama—Inspection and fumigation of vessels—Plague—Plague at Tokyo.

Passed Assistant Surgeon Cumming reports, June 30:

Week ended June 26. Bills of health issued to 6 vessels, having an aggregate personnel of 39 saloon and 546 steerage passengers, and 459 members of crews.

Two steamships were fumigated to destroy vermin and 2 were required to wear rat guards while at the dock.

During the week 108 persons were bathed and their effects, consisting of 126 pieces of baggage, were disinfected. One lot of human hair was also disinfected.

Two more cases of plague have been reported. One patient is the wife of a man who peddles among the vessels in the harbor and the second is a clerk in a bank and seems to have frequented a shop in which human hair was handled.

An additional case of plague has also been reported at Tokyo.

Examination of emigrants.

Number of emigrants per steamship *Asia* for San Francisco, Cal., June 15: Examined 6; rejected 2.

Per steamship *Tosa Maru* for Seattle, Wash., June 24: Examined 29; rejected 1; held for observation 7.

Per steamship *Kumano Maru* for Manila June 26: Examined 12; held 1.

Per steamship *Mongolia* for Honolulu and San Francisco June 27: Examined 29; for Honolulu, rejected 1, held 4: for San Francisco, held 1.

Per steamship *Tenyo Maru:* Examined 33; for Honolulu, rejected 5; for San Francisco, held 3.

Reports from Kobe—Inspection of vessels—Examination of emigrants—Plague.

Acting Assistant Surgeon Knight reports, June 23 and 30:

Week ended June 19. Supplemental bill of health granted to 1 steamship.

There were inspected 46 members of crew. Manifests were viséed for 5,292 pieces of freight, amounting to 404 tons. During the week 15 cases of human hair were disinfected with formalin.

The official returns of infectious diseases for the week show 1 case of plague, with 1 death, at Kobe.

Week ended June 26. Supplemental bills of health granted to 4 steamships.

Sixty-eight members of crews and 859 steerage passengers were inspected and 69 steerage passengers were bathed and disinfected; their effects were disinfected by steam. The number of pieces of baggage steamed was 171 and bedding 138. Manifests were viséed for 55,653 pieces of freight, amounting to 5,354 tons.

The official returns of infectious diseases show 1 case of plague, with 1 death.

Emigrants examined.

Per steamship *Tosa Maru*, for Seattle, passed 24; recommended for rejection 14; steamship *Mongolia*, for Honolulu, passed 38, recommended for rejection 22; for San Francisco, passed 1; recommended for rejection 2. The emigrants passed, together with 6 intending passengers to Victoria by steamship *Tosa Maru*, were inspected, bathed, disinfected, and their effects were disinfected before embarkation.

Reports from Nagasaki—Examination of emigrants.

Acting Assistant Surgeon Thompson reports, June 5 and 12:

Week ended June 5. One emigrant for Manila examined and rejected. Week ended June 12. June 8, 3 emigrants for San Francisco examined, 2 recommended for rejection; June 10, 7 emigrants for Manila examined, 6 passed, 1 rejected; June 11, 3 emigrants for Manila passed.

No measures taken at Nagasaki to prevent ingress of rats into hulls of vessels—Examination of rats.

Doctor Thompson further reports, June 19, in response to bureau inquiry of May 18:

There being no wharves or docks in this port, vessels are moored in the bay and are loaded and coaled from small open lighters, the bottom boards of which are movable. Measures for rat destruction are actively enforced, and a reward is given for every rat delivered to the board of health. Nagasaki is comparatively free from rats.

MEXICO.

Report from the superior board of health of Mexico—No yellow fever reported in Mexico for the period of two weeks.

In compliance with articles 1 and 2 of the International Sanitary Convention held at Washington, October 14, 1905, the president of

the superior board of health of Mexico reports that for the weeks ended July 10 and 17 no case of nor death from yellow fever was registered in the Republic of Mexico and that prophylactic measures against the disease continue to be carried out.

Report from Coatzacoalcos—Inspection of vessels.

Acting Assistant Surgeon Thompson reports, July 15:

Week ended July 14. Supplemental bills of health issued to 2 vessels. Two vessels inspected.

Report from Progreso—Inspection and fumigation of vessels—Sanitary conditions.

Acting Assistant Surgeon Harrison reports, July 17:

Week ended July 16.

Vessels dispatched	5
Vessels fumigated	3
Members of crews	204
Passengers from this port	21

Sanitary conditions have continued fair; no quarantinable disease reported.

Report from Tampico—Inspection and fumigation of vessels—Sanitary conditions—Anopheles and Culex present.

Acting Assistant Surgeon Stowe reports, July 15:

Week ended July 14.

Vessels inspected and passed	6
Bills of health issued	6
Members of crews of outgoing vessels inspected	150
Passengers of outgoing vessels inspected	6
Vessels fumigated prior to sailing	0

No cases of quarantinable diseases occurred during the week.

The sanitary condition of the port and surrounding country is good. Mosquitoes are not abundant. They are for the most part *Anopheles* and *Culex*.

Report from Veracruz—Inspection and fumigation of vessels—Sanitary conditions—Few mosquitoes.

Acting Assistant Surgeon Carter reports, July 13:

Week ended July 11.

Bills of health issued	7
Vessels inspected	1
Vessels fumigated	6
Passengers inspected	102
Members of crews inspected	295
Passengers rejected	2

The health of this port remains fair. No contagious diseases were reported for the week. There are few mosquitoes.

NICARAGUA.

Report from Bluefields, fruit port—Stegomyia.

Acting Assistant Surgeon Layton reports:

Week ended July 10. Present officially estimated population, 2,500. General sanitary condition of this port and the surrounding country during the week, good. Mosquitoes abundant, chiefly *Stegomyia calopus; Culex fatigans* in lesser numbers.

Bills of health were issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
July 4	Imperator	New Orleans	20	4	0
10	Marietta Di Georgio	do	19	1	0

Temperatures of all persons on board the above-named vessels taken at hour of sailing.

PERU.

Report from Callao—Inspection and fumigation of vessels—Plague at Callao and Paita—Plague in Chilean ports.

Acting Assistant Surgeon Gutierrez reports, June 29:

Week ended June 26. Two vessels, with an aggregate personnel of 95 in the crew and 59 cabin and 28 steerage passengers, fumigated and dispatched.

Since June 19, 3 cases of plague have been reported at Callao. Plague is present at Paita.

Bills of health show plague in Chile: At Antofagasta, June 14, with 4 cases isolated in the lazaretto, and at Iquique, June 16, with 7 cases isolated, and with 2 cases and 1 death in two weeks.

PHILIPPINE ISLANDS.

Report from Manila—Smallpox—Status of cholera in the provinces—Inspection of vessels.

Chief Quarantine Officer Heiser reports, June 8:

Week ended June 5. One case of smallpox, with 1 death, was reported for the city of Manila.

Cholera was reported in the provinces, as follows:

Province.	Cases.	Deaths.
Iloilo	11	7
Pampanga	3	2
Moro	1	1
Oriental Negros	3	3
Total	18	13

Bills of health issued at the port of Manila:

July 5 the British steamship *Shimosa*, with 61 members of crew, en route from Yokohama to New York, granted a supplemental bill of health. Vessel partially fumigated. Cargo and personnel inspected and passed prior to sailing.

RUSSIA.

Report from Libau—Status of cholera in St. Petersburg—Cholera in other localities—Examination of emigrants.

Acting Assistant Surgeon De Forest reports, July 9:

Cholera in St. Petersburg.

Date.	Cases.	Deaths.
July 2	92	50
3	83	17
4	74	37
5	68	27
6	83	29
7	92	36
8	97	42
Total	589	238

Government of St. Petersburg, July 1, 14 cases, 3 deaths; July 2, 24 cases, 7 deaths; July 3, 9 cases, 5 deaths; July 3 to 5, 53 cases, 24 deaths. Government of Pskow, July 5, 1 case; Kronstadt, July 1, 4 cases, 2 deaths; Archangel, July 7, 9 cases, 2 deaths; Riga, July 8, 4 cases present, 1 death; Jaroslav (district of Myschkin), July 8, 3 cases present. Total for week ended July 8, 710 cases, with 272 deaths.

Two cases of relapsing fever occurred at Libau during the week ended July 4.

The steamship *Russia* sailed July 3 with 918 steerage and 41 cabin passengers and a crew, including officers, of 145. All on board had been in Libau under observation for 5 days; 300 pieces of baggage were disinfected.

To date I have examined 180 emigrants for the *Lituania*.

Report from Riga—Fatal cholera cases.

Consul De Soto reports, July 21:

Thirteen deaths from cholera.

ST. LUCIA ISLAND.

Reports from Castries—Inspection and fumigation of vessels—Sanitary conditions.

Acting Assistant Surgeon Maylie reports, July 5 and 12:

Week ended July 3. Vessels inspected, 5; fumigated, 1.

Sanitary condition of this port and vicinity good. No quarantinable diseases present.

Week ended July 10. Vessels inspected, 5; fumigated, 4.

VENEZUELA.

Report from La Guaira—Inspection of vessel—Health conditions—New plague case at Caracas.

Acting Assistant Surgeon Kellogg reports, July 8:

Week ended July 8. One vessel, the steamship *Senator*, for Galveston, received bill of health. The vessel had 40 members in the crew and neither landed nor embarked passengers.

Health conditions in La Guaira remain good. No unusual mortality is observed among rats. One fatal case of plague occurred at Caracas July 2.

ZANZIBAR.

Report from Zanzibar—Plague present.

The following is received from the Department of State under date of July 26:

Cablegram from Zanzibar reports "One case plague has appeared."

FOREIGN AND INSULAR STATISTICAL REPORTS OF COUNTRIES AND CITIES—UNTABULATED.

AFRICA—*Lourenço Marquez.*—Month of May, 1909. Estimated population, 10,000. Total number of deaths, 50, corresponding to an annual death rate of 60 per 1,000 of population, including 12 from tuberculosis.

ALGERIA—*Bona.*—Month of June, 1909. Estimated population, 42,934. Total number of deaths, 94, corresponding to an annual death rate of 26.28 per 1,000 of population, including smallpox 7, enteric fever 2, typhus fever 10, scarlet fever 1, and 15 from tuberculosis.

ARGENTINA—*Buenos Aires.*—Month of April, 1909. Estimated population, 1,201,722. Total number of deaths, 1,360, corresponding to an annual death rate of 13.2 per 1,000 of population, including enteric fever 37, scarlet fever 3, whooping cough 1, smallpox 6, measles 2, diphtheria 6, leprosy 1, and 157 from tuberculosis.

BRAZIL—*Bahia.*—Month of March, 1909. Estimated population, 286,000. Total number of deaths, 465, corresponding to an annual death rate of 19.15 per 1,000 of population, including yellow fever 24, plague 1, smallpox 8, beriberi 4, diphtheria 1, enteric fever 2, and 55 from pulmonary tuberculosis.

São Paulo, Santos, and Campinas.—Two weeks ended June 13, 1909. Estimated population, 300,000. Total number of deaths, 314, corresponding to an annual death rate of 27.04 per 1,000 of population, including leprosy 1, enteric fever 2, smallpox 3, scarlet fever 1, diphtheria 1, and 18 from tuberculosis.

CHILE—*Punta Arenas.*—Month of May, 1909. Estimated population, 12,000. Total number of deaths, 23, corresponding to an annual death rate of 21.8 per 1,000 of population, including 5 from tuberculosis.

FRANCE—*Cherbourg.*—Month of June, 1909. Estimated population, 43,948. Total number of deaths, 84, corresponding to an annual death rate of 22.8 per 1,000 of population, including enteric fever 3, and 19 from tuberculosis.

Marseille.—Month of June, 1909. Estimated population, 517,498. Total number of deaths, 784, corresponding to an annual death rate of 18.12 per 1,000 of population, including diphtheria 2, enteric fever 15, smallpox 5, scarlet fever 2, whooping cough 8, measles 32, and 105 from tuberculosis.

Nàntes.—Month of June, 1909. Population, 1900, 132,900. Total number of deaths, 262, including enteric fever 4, measles 1, diphtheria 1, and 62 from tuberculosis.

Roubaix.—Month of June, 1909. Estimated population, 121,115. Total number of deaths, 136, corresponding to an annual death rate of 13.2 per 1,000 of population, including scarlet fever 1, diphtheria 1, whooping cough 1, and 22 from tuberculosis.

St. Etienne.—Four weeks ended June 30, 1909. Estimated population, 150,000. Total number of deaths, 230, corresponding to an annual death rate of 20.8 per 1,000 of population, including scarlet fever 4, diphtheria 7, and 17 from tuberculosis.

Toulon.—Month of June, 1909. Estimated population, 105,000. Total number of deaths, 172, corresponding to an annual death rate of 19.2 per 1,000 of population, including typhus fever 2, scarlet fever 1, measles 2, and 1 from diphtheria.

GERMANY—*Munich.*—Month of May, 1909. Estimated population, 556,000. Total number of deaths, 972, corresponding to an annual death rate of 20.4 per 1,000 of population, including scarlet fever 12, measles 26, diphtheria 8, whooping cough 14, and 175 from tuberculosis.

GREAT BRITAIN—*England and Wales.*—The deaths registered in 76 great towns in England and Wales during the week ended July 3, 1909, correspond to an annual rate of 11.8 per 1,000 population, which is estimated at 16,445,281.

London.—One thousand and twenty-nine deaths were registered during the week, including measles 33, scarlet fever 3, diphtheria 7, enteric fever 1, whooping cough 20, tuberculosis 100, and 10 from diarrhea. The deaths from all causes correspond to an annual rate of 11.1 per 1,000. In Greater London 1,445 deaths were registered. In the "outer ring" the deaths included 6 from measles, 3 from scarlet fever, 2 from diphtheria, and 3 from whooping cough.

Ireland.—The average annual death rate represented by the deaths registered during the week ended July 3, 1909, in the 21 principal town districts of Ireland was 17.1 per 1,000 of the population, which is estimated at 1,142,308. The lowest rate was recorded in Queenstown, viz, 6.6, and the highest in Galway, viz, 42.7 per 1,000.

Scotland.—The deaths registered in 8 principal towns during the week ended July 3, 1909, correspond to an annual rate of 13.3 per 1,000 of the population, which is estimated at 1,839,038. The highest rate of mortality was recorded in Paisley, viz, 15.9, and the

lowest in Greenock, viz, 11.5, per 1,000. The aggregate number of deaths registered from all causes was 477, including diphtheria 3, measles 5, scarlet fever 3, and 13 from whooping cough.

MALTA.—Four weeks ended June 26, 1909. Estimated population, 212,888. Total number of deaths, 457, corresponding to an annual death rate of 27.3 per 1,000 of population, including whooping cough 3, and 12 from tuberculosis.

SPAIN—*Madrid.*—Month of June, 1909. Estimated population, 573,676. Total number of deaths, 1,281, corresponding to an annual death rate of 26.4 per 1,000 of population, including smallpox 84, typhus fever 129, enteric fever 20, scarlet fever 2, diphtheria 5, measles 16, whooping cough 10, and 134 from tuberculosis.

WEST INDIES—*St. Thomas.*—Four weeks ended June 18, 1909. Estimated population, 11,000. Total number of deaths, 13, including 2 from tuberculosis.

Cholera, yellow fever, plague, and smallpox, from June 26 to July 30, 1909.

[Reports received by the Surgeon-General, Public Health and Marine-Hospital Service, from American consuls, through the Department of State and from other sources.]

[For reports received from December 25, 1908, to June 25, 1909, see PUBLIC HEALTH REPORTS for June 25, 1909.]

[NOTE.—In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Swatow	May 11-29			Present in vicinity.
Germany:				
Konigsberg	July 21		1	
India:				
Bombay	May 30-June 29		62	
Calcutta	May 16-June 19		241	
Madras	May 29-June 25		2	
Negapatam	May 8-14		4	
Rangoon	May 16-June 19		4	
Indo-China:				
Saigon	May 9-June 12	9	4	
Philippine Islands:				
Provinces—				
Cebu	May 16-29	15	6	
Dapitan	May 9-15			Present.
Iloilo	May 23-June 5	14	10	
Moro	May 29-June 5	1	1	
Negros Occidental	May 9-22	18	8	
Negros Oriental	May 30-June 5	3	3	
Pampanga	May 9-June 5	9	6	
Samar	May 9-29	14	8	
Sorsogon	May 9-15	8	2	
Russia:				
Archangel	June 26-July 7	19	6	
Chmalysk, district	July 1	1		
Cronstadt	June 30-July 1	11	3	
Eastland, government	July 1	1		
Finland, Mariengam	June 23-24	1	1	
Jaroslav	July 8	3		
Kretsky, district	July 1	1		
Pskov	July 1-5	1	1	
Riga	July 1-8	5	1	July 21, 13 deaths.
Rjasin	June 24	1	1	
St. Petersburg, government	June 9-July 5	265	60	
St. Petersburg	June 2-July 8	1,681	579	
Siam:				
Bangkok	Apr. 25-May 28	1		
Straits Settlements:				
Singapore	May 9-June 5		18	

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

YELLOW FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Barbados, general	June 13-20	1		St. Joseph Parish, Dec. to June, 14 deaths not previously reported.
Brazil:				
Bahia	May 22-June 11	23	10	
Manaos	May 23-June 19		6	
Para	May 30-June 26	9	9	
Pernambuco	Apr. 15-30	3		
Ecuador:				
Guayaquil	May 23-June 12		13	
Mexico:				
Merida	June 5-11	2		
Panama:				
Canal Zone—				
Ancon	Mar. 1-31			1 case at Culebra Island quarantine station from a vessel and 1 fatal case en route from Guayaquil.

PLAGUE.

Australia:				
Adelaide	Apr. 30-May 1	1		
Mackay	Jan. 21	1	1	
Sydney	Apr. 18-May 15	5	1	
Brazil:				
Bahia	June 5-11	1		
Rio de Janeiro	May 17-30	1	1	
Chile:				
Antofagasta	May 9-30	13	5	June 14, 4 cases in the lazaretto.
Iquique	May 20-June 26	7	4	June 16, 7 cases in the lazaretto.
China:				
Amoy	June 1-19		205	In Amoy and vicinity, 15 deaths daily.
Canton	May 9-June 12	185	108	
Chinchew	May 22			Epidemic.
Hongkong	May 2-June 12	52	48	
Pollam	May 23-29	8	7	
Swatow district	May 16-July 1		350	July 1, 200 cases still present in Touchowfu and Yin Shan.
Ecuador:				
Guayaquil	May 23-June 12		11	
Egypt:				
Alexandria	May 30-June 16	2	1	
Port Said	May 29-July 7	6	3	
Provinces—				
Assiout	May 14-July 2	38	7	
Beherach	June 1-July 2	8	3	
Galyoobeeyeh	June 2-23	2		
Garbieh	June 2-21	12	5	
Fayoum	June 3-23	15	6	
Menouf	Jan. 18-July 8	74	11	
German East Africa:				
Muanza, district	Apr. 30-May 22		12	
India:				
Bombay Presidency and Sind.	May 16-June 12	885	791	
Madras Presidency	May 16-June 12	124	37	
Bengal	May 16-June 12	445	359	
United provinces	May 16-June 12	957	895	
Punjab	May 16-June 12	6,416	5,481	
Burma	May 16-June 12	161	170	
Central provinces, including Berar.	May 16-June 12	29	22	
Coorg				
Mysore State	May 16-June 12	61	50	
Hyderabad State				
Central India				
Rajputana and Ajmer-Merwara.	May 16-June 12	869	730	
Kashmir	May 16-June 12	4	3	
Northwest Province				
Grand total		9,951	8,538	
Indo-China:				
Saigon	May 9-June 12	11	11	

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

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Japan:				
Formosa	May 23–June 19	186	125	In south and central parts.
Kobe	May 30–June 26	6	4	
Tokyo	June 26	3		
Yokohama	May 25–June 28	12	7	
Mauritius	Apr. 1–30	4	4	
Peru:				
Arequipa, department	May 8–June 10	6	2	
Cajamarca, department	May 8–June 10	7	3	
Callao, department	May 8–June 10	4	1	
Callao	June 20–26	3		
Lambayeque, department	May 8–June 10	13	10	
Libertad, department	May 8–June 10	6	2	
Lima, department	May 8–June 10	5	3	
Piura, department—				
Paita	June 20–26			Present.
Siam:				
Bankok	Apr. 25–May 28	1	1	
Trinidad:				
Port of Spain	June 13–28	4	3	
Turkey in Asia:				
Beirut	June 25–July 4	1		In Harrett Aryk.
Venezuela:				
Caracas	June 18–July 11	4	1	
Zanzibar	July 26	1		

SMALLPOX.

Algeria:				
Algiers	May 1–31		7	
Bone	June 1–30	16	7	
Argentina:				
Buenos Aires	Mar. 1–Apr. 30		10	
Rosario	Apr. 1–30	1	1	
Austria:				
Galicia	June 6–July 3	3		
Silesia	June 20–July 3	8		
Brazil:				
Bahia	May 22–June 11	10	3	
Pernambuco	Apr. 1–May 31		27	
Rio de Janeiro	May 17–June 27	43	18	
Santos	May 10–16		1	
São Paulo	May 10–16		1	
Canada:				
British Columbia—				
Vancouver	June 1–30	3		
Nova Scotia—				
Halifax	June 13–July 17	4		
Quebec—				
Montreal	June 17			2 cases additional at Grosse Isle on s. s. Virginian.
Ceylon:				
Colombo	May 23–29	2		
Chile:				
Valparaiso	May 16–29			Present.
Santiago	May 29			Still present.
China:				
Amoy	June 1–19	12	10	May 9–15; present.
Hankow	Apr. 25–June 12			Present among natives.
Hongkong	May 2–June 12	14	11	
Shanghai	May 10–June 19		4	Do.
Egypt:				
Cairo	May 21–June 24	10	11	
Suez	May 21–June 17	42	3	
France:				
Marseille	June 1–30		5	
Paris	May 23–June 26	27	2	
Germany, general	May 30–June 19	15		
Great Britain:				
Cardiff	July 6	1		
Liverpool	June 21–26	2		Case June 22, from s. s. Canada.
India:				
Bombay	May 26–June 29		52	
Calcutta	May 16–June 19		107	
Madras	May 22–June 25		9	
Rangoon	May 12–June 19		14	
Indo-China:				
Saigon	May 9–June 12	11	7	

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

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Italy, general	May 31–July 4	79		
Genoa	June 1–30	5		
Naples	May 31–July 4	92	15	
Ottiano	June 23	1		
Rome	Mar. 7–13	1	1	
Japan:				
Formosa	June 13–19	1		
Moji	June 6	1		From s. s. Selja.
Osaka	Jan. 1–May 31	3		
Yokohama	June 1–7	1		
Java:				
Batavia	May 6–June 12	10		
Mauritius:				
Port Saint Louis	Apr. 1–30	1	1	
Mexico:				
Aguascalientes	June 21–27		1	
Guadalajara	June 11–26	2	1	
Mexico	May 16–June 5		38	
Monterey	June 14–July 18		22	
Veracruz	June 1–19	2	2	
Panama:				
Canal Zone—				
Ancon	Mar. 1–31	1		At Culebra Island quarantine station, from a vessel.
Philippine Islands:				
Manila	May 9–June 5	15	4	
Portugal:				
Lisbon	May 30–July 3	24		
Russia:				
Libau	May 6–13	1		
Moscow	May 16–June 26	166	49	
Odessa	May 30–July 3	16		
Riga	June 6–July 3	23		
St. Petersburg	May 16–June 26	141	30	
Warsaw	Apr. 25–May 29		8	
Siam:				
Bangkok	Apr. 25–May 28	1	1	
Siberia:				
Vladivostok	May 15–28	2		
Spain:				
Barcelona	June 1–July 12		25	
Huelva	May 1–31		1	
Madrid	May 1–June 30		157	
Seville	May 1–June 30		2	
Valencia	May 30–July 10	40	2	
Vigo	May 23–July 10		5	
Straits Settlements:				
Singapore	May 16–22		1	
Switzerland:				
Aargau, canton	June 20–26	1		
Fribourg, canton	June 13–19	1		
Geneva, canton	May 30–June 26	9		
Tripoli:				
Tripoli	May 23–June 19	33	10	
Turkey in Asia:				
Bagdad	May 9–20			Present.
Bassorah	May 23–June 12			Do.
Smyrna	May 7–13		15	
Turkey in Europe:				
Constantinople	May 31–July 4		6	
Uruguay:				
Montevideo	Apr. 1–30		3	

Weekly mortality table, foreign and insular cities.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from— Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Aberdeen	July 3	181,918	41										1	2
Acapulco	...do	5,000	8											
Aix la Chapelle	June 19	159,904	40	4									5	
Amsterdam	July 1	565,920	149	13									12	6
Antwerp	June 26	323,921	66	3							2		4	
Athens	...do	241,058	88	22					9	7			2	
Bahia	June 11	265,000	99	11	1		3	2						
Baracoa	July 3	27,000	6											
Barcelona	July 5	600,000	310	12				5		5		2	1	
Barmen	June 19	161,900	44	4										
Do	June 26	161,900	35	3								1		
Basel	...do	131,000	34	7										1
Belfast	July 3	386,576	107	22						1				
Belize	July 8	9,113	5											
Bergen	June 26	87,749	18	2								1		
Berlin	June 19	2,101,817	529	77						2	8	11	17	5
Birmingham	July 3	558,336	124								2	1	6	2
Bluefield	...do	2,500	2											
Bombay	June 22	977,822	504	32	26	21		7		1			1	1
Bordeaux	June 19	253,000	83	14										
Do	June 26	253,000	81	12						2	1	1	1	1
Do	July 3	253,000	57	10						1				1
Bremen	...do	235,648	58	12							1	1	1	
Brussels	...do	704,975	144	21						1	3	4	1	
Calcutta	June 12	847,796	445	25	81	40		18					1	
Cartagena	June 13	30,000	13	1										
Do	June 20	30,000	13											
Chemnitz	June 26	276,762	73	3							2		1	1
Chihauhua	July 4	37,000	26	1										
Do	July 11	37,000	41	3						1				1
Cienfuegos	June 26	37,000	22											
Do	July 3	37,000	25											
Do	July 10	37,000	17											
Coburg	June 26	23,459	6											
Cognac	July 3	19,483	8	1										
Cologne	June 26	472,211	131	21							2	1	3	3
Colombo	June 5	155,869	124	17						6				
Do	June 12	155,869	120	15						12				
Colon	June 26	16,000	8	1										
Do	July 3	16,000	12											
Constantinople	June 27	1,000,000	204	40						8			1	
Copenhagen	June 19	447,000	129	16							1		7	3
Denia	June 26	12,232	4											
Dresden	June 12	547,600	109	13								2	3	
Do	June 19	547,600	121	12								3	1	
Do	June 26	547,600	142	18								6	1	2
Dublin	...do	394,525	155	45										5
Do	July 3	394,525	150	26							1	1	2	4
Dundee	...do	169,409	46									1		
Durban	June 12	60,244	15	2										
East London	June 5	49,253	9											
Do	June 12	49,253	6											
Erfurt	June 26	107,926	33	6							3	1		
Fiume	June 19	50,811	15	4										
Do	June 26	50,811	14	8										
Do	July 3	50,811	16	5										
Frontera	...do	9,000	3											
Georgetown	June 19	56,000	44	7										
Ghent	June 26	164,579	40	4										
Gibraltar	June 27	36,830	7	2										
Glasgow	July 9	872,021	221								2	2	2	6
Gothenburg	July 3	162,400	33	6										1
Greenock	...do	72,300	16											
Guadalajara	July 1	125,000	94								3			
Halifax	July 10	40,787	13	2										
Hamburg	July 3	872,252	205	29							1	7		6
Hamilton, Bermuda	July 5	20,206	6											
Havre	July 3	132,430	47	12										
Hilo	June 26	3,500	2											
Do	July 3	3,500	6	1										
Hongkong	June 5	315,616			10					1				
Do	June 12	315,616			9			1		1				
Hull	July 3	275,552	75								2	2	1	
Kobe	Apr. 3	380,717	147									2		
Konigsberg	June 26	239,100	92	10							1	1		1
La Guaira	June 27	10,000	9	5										
Do	July 4	10,000	6	1										

Weekly mortality table, foreign and insular cities—Continued.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from— Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Leeds	July 3	484,012	109	9					2		1			1
Leipzig	June 26	537,686	139	20							1	2	1	
Liverpool	July 3	760,357	235	19					1	1	4		11	5
London	do	4,833,938	1,029	100						1	3	7	33	20
Lübeck	do	97,000	30	2										
Madras	June 18	509,346	381										2	
Magdeburg	June 26	250,150	78	12							3	4		
Managua	June 19	22,278	15	1										
Do	June 26	22,278	26											
Manchester	do	631,533	201	24						2	4	3	14	3
Do	July 3	631,533	198	20						1	4	2	13	6
Mannheim	June 19	182,924	45	4									1	1
Matamoros	July 10	8,000	6	2										
Mazatlan	do	22,000	27											
Milan	June 20	900,000	231	33						2	3		2	
Do	June 27	900,000	214	39						3	5	2	1	
Moncton, New Brunswick	July 17	13,500	2											
Montreal	July 10	378,856	174	13						4				3
Moscow	June 26	1,335,104	752	78				12	1	2	21	13	26	1
München	do	566,000	192	43								1	2	1
Naples	July 3	593,729	257					4			1			
Nagasaki	June 20	175,936	42											
Newcastle-on-Tyne	July 3	281,584	66								1	1	2	2
Nottingham	June 26	260,000	64										1	1
Nuevo Laredo	July 10	8,000	4	2										
Odessa	June 26	520,000	234	25						1	3	2	1	3
Do	July 3	520,000	215	19							1	1	5	3
Palermo	June 19	335,000	141	6							2		8	
Do	June 26	335,000	171	10					2			2	2	
Para	do	185,000	85	8			4							
Penang	June 5	102,520	63	13										
Plymouth	July 3	124,180	28											
Port Elizabeth	June 19	32,959	7	1										
Queenstown	July 3	7,909	3											
Rangoon	June 12	252,155	205	5	24			4						
Rome	Mar. 27	559,715	217	19								2	8	2
Do	Apr. 3	559,715	234	15						2	2	1	18	
St. John, New Brunswick	July 10	40,711	11	1										
St. Petersburg	June 19	1,678,000	841	138		61		8	2	8	20	16	38	10
San Feliu de Guixols	July 3	11,094	4	1										
Santa Cruz de Teneriffe	June 26	46,000	14	2										
Do	July 3	46,000	14	3										
Santiago de Cuba	July 10	53,614	25	5						1				
Singapore	June 5	260,000	220	25		3				3				
Southampton	July 3	124,667	19	1						1				
Stettin	June 26	230,000	72	6								2		
Do	July 3	230,000	84	7								1		
Stockholm	June 19	339,582	104	25								1	1	1
Tarragona	May 1	20,400	8											
Do	May 8	20,400	11											
Do	May 15	20,400	11											
Tegucigalpa	June 30	24,000	6											
Turin	June 25	381,439	129	21										
Valencia	June 26	240,000	84	7									2	
Veracruz	July 3	32,000	34	11										
Victoria, British Columbia	July 10	30,000	5	1										
Vienna	June 26	2,064,037	615	107						1	8	5	10	5
Do	July 3	2,064,037	599	96							11	4	12	6
Vigo	June 26	40,000	16	4						1		1		
Do	July 3	40,000	16	4									1	
Warsaw	May 22	751,595	257	50					4		2		4	2
Do	May 29	751,595	246	50				2	4		4	1	3	3
West Hartlepool	July 3	66,750	14											
Winnipeg	July 10	122,000	22	1										
Yokohama	June 21	392,870			1					1				

By authority of the Secretary of the Treasury:

WALTER WYMAN,
Surgeon-General,
United States Public Health and Marine-Hospital Service.