

PUBLIC HEALTH REPORTS.

NOTES ON THE PROGNOSIS AND TREATMENT OF PELLAGRA.

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PROGNOSIS.

In undertaking any discussion of the prognosis of pellagra as seen in the United States there are at least two factors which must not be overlooked. The first is that our comparatively brief experience with the disease in this country should make us guarded in our statements, and the other is that a large part of our published experience is based on asylum cases of the disease, which are usually regarded as the most hopeless.

Generally speaking, it may, I think, be safely said that in this country at least the prognosis in all cases is grave as to final and complete recovery. The statistics in existence, all founded on asylum cases, and not a very large number at that, will give an average case mortality of about 67 per cent, a state of affairs which, to say the least, is not conducive to optimism.

All American physicians who have had experience seem to regard the outlook in individual cases as one of great gravity.

T. C. Allbutt (*Allbutt's System of Medicine*, Vol. II, 1897) says: "When the disease has recurred for three or four seasons, and especially if the mind be affected, the prognosis is very bad. I gathered from the physicians of Italian lunatic asylums that recovery of patients once arrived at the asylum stage of insanity is almost unknown. Still these are extreme cases; the mentally afflicted in their earlier phases may recover; only too often, however, the advance of death is inexorable." And this, I think, expresses very fairly the view generally entertained in the United States.

This view, however, may be unduly pessimistic. Lombroso states (*Trattato profilattico e clinico della pellagra*, Turin, 1892) that in 1883 there were treated in 866 Italian civil hospitals 6,025 pellagrins, of whom 923 died; in 1884 there were treated in 993 hospitals 6,944, of whom 780 died, thus giving, on a large experience, an average case mortality very close to 13 per cent. Wollenberg (*Public Health Reports*, July 23, 1909) reports from credible sources a total of 55,029 cases of pellagra in Italy in 1905, with a total mortality of 2,359, which is a little over 4 per cent.

Babes and Sion (*Spec. Path. u Therap. Nothnagel*, Band, XXIV), in dealing with nonasylum cases, state that with proper treatment complete cure of psychic as well as motor changes may result. They

also state that the disease can be strikingly improved or cured not only in early but in more advanced cases, though the prognosis is far better in early cases.

It is probably safe to assert that as a rule the earlier the diagnosis is made and treatment begun the better the prognosis. The diagnostician then should learn to profit by a similar experience in tuberculosis in which the situation is in some respects analogous.

Pellagra, like tuberculosis, is a very chronic condition with, in non-asylum cases, perhaps just as hopeful an outlook. We should profit by experience, learn to make diagnoses, and institute proper treatment in the early stages of the disease and hopefully counsel our pellagra patients as we do our tubercle cases. Pellagra is said in Italy to last as long as twenty-five years; and Babcock in South Carolina has seen cases of eight and twelve years' standing who were still in very good physical condition and showed improvement under treatment, if not recovery. It is true, however, that pellagra is variable in its manifestations, and acute accidents and grave complications are frequent.

The chronic type of the disease, without mental involvement, gives the most hopeful outlook. Acute manifestations must be viewed with the utmost gravity.

Pellagra is a disease of little fever, and it is, I think, the general opinion that fever, particularly if high or constant, must be regarded as a danger signal. The state of the erythema is generally thought to bear no relation to the gravity of the constitutional disturbances. It has been my experience, however, that moist, extensive erythemas are frequently accompanied by grave constitutional changes. Mental involvement, as stated, adds to the seriousness of the case; and such nervous disturbances as subsultus, marked tremor, retraction of the head, can, as in other affections, be interpreted as an index of severe intoxication. In mental cases periods of excitement are not rare, and they do much to help exhaust the patient. Severe recrudescence of the acute phenomena sometimes occur during the same season after the patient seemed to be on the road to recovery. Steadily progressing emaciation, especially if accompanied by an inveterate diarrhea, which is usual, very often ends fatally.

Certain complications are of great importance in prognosis, e. g., malaria, intestinal parasites, marked nephritis, acute bronchitis, pneumonia, decubitus gangrene (which is often difficult to avoid), possibly tubercle, and at times hyperpyrexia, due probably to a sudden overwhelming dose of toxic material. Then, of course, if a patient is carried through his summer manifestations safely one year, a reappearance of acute manifestations the next year must be watched for, more especially if anything should intervene to lower the general resistance, such as acute illness, childbirth, etc.

PROPHYLAXIS.

In any discussion of treatment we must first of course recognize the paramount importance of prophylaxis. Whatever views one may entertain as to the cause of the disease there seems to be an almost universal belief that there is some definite etiological relation between Indian corn and pellagra. In dealing with a disease of such gravity, a belief so universal as this can not be discarded

except in the face of conclusive proof to the contrary. There are also the best of reasons for thinking that poverty, especially abject poverty, and all that is implied in that term—poor and insufficient food, bad housing, unhygienic surroundings, mental depression, lowered physical resistance, and often alcoholism—have a greater effect than usual in predisposing to pellagra; and predisposition in this disease is generally admitted to be a factor of the greatest importance.

What shall be done then in the way of prophylactic measures? It is evident of course that as far as possible distress, poverty, and unhygienic surroundings should be relieved, alcohol interdicted, and the individual, as well as the community, placed under the best possible circumstances. This is nothing new of course and will receive the assent of all, but in Italy such unique attempts at general preventive measures have been adopted along this line as to give this statement a new meaning. Various establishments for the prophylaxis of the disease have been originated and are said to have been of aid in the production of hopeful results, such as the *pellagrosari*, *forni economici*, *forni rurali*, *cucine economice*, *locande sanitarie*, all of which are devoted to feeding, treating, and educating the unfortunate sufferers.

So far as a dietary containing corn is concerned, there is abundant evidence that good corn is not only a wholesome but a harmless food, and not a few writers have pointed out the folly of those who counsel the total rejection of so valuable a cereal. At the same time, entirely wholesome corn is not always easily differentiated from harmful corn. In the light of our present knowledge, therefore, maize should be admitted, it seems to me, into the dietary of certain institutions, like insane asylums, with the utmost caution. As for the use of corn or its products elsewhere or in one's individual diet, that is a matter which is as yet, to some extent, *sub judice*, and must for the time perhaps be left to individual judgment.

TREATMENT.

Regarding the medical treatment of the disease, Sir Henry Holland wrote, in 1817 (*Medico-Chirurgical Transactions*, London, 1820): "In short, it appears certain that mere medicine has done very little for the relief of pellagra; and Strambio, a man with large experience in asylums, frankly confesses that he never saw a case distinctly cured by the remedies that were employed."

Certainly we must admit, at the outset, that we have no specific for the disease; but since Holland's time Lombroso's magnificent work on pellagra has been done, and while by some he may be considered as too optimistic on treatment, his enormous experience certainly entitles his views to the greatest attention and respect. He says, after discussing the use of arsenic in the treatment of pellagra, that the therapy, which was at first desperate and could be summed up in baths barren of result, can now be undertaken more confidently and rationally, as the treatment of a chronic intoxication analogous to alcoholism or morphinism and curable by antidotes when the use of the toxic material has been suspended. (The antidotes referred to are arsenic and chloride of soda, concerning which more has been said elsewhere.)

Lombroso's teaching on therapy has had such a profound effect that it may be wise to give briefly some account of his views.

He recommends as a rule a liberal diet, including meats especially, but points out that this alone is insufficient. He also remarks that in well-nourished pellagrins this is of course not so much indicated, and adds that such cases are rebellious to treatment. He speaks of baths and cold douches, which he thinks benefit especially paretic states, the skin manifestations and the painful burning sensations so common in pellagrins; and further says that, while they do not cure, they at least prolong existence or render it more tolerable. In some patients, however, there is a true aversion to baths, and in such they should not be tried.

Of drugs in a general way he condemns the use of iron. In some cases, especially in the young and those with arrested development, he states that he has obtained magnificent results with simple salt rubs or frictions. He has experimented extensively with acetate of lead, but finds it of little use except in pellagra of the aged, in those who suffer acute articular pain, in cases of incipient paresis, and in cases of general tremor. The dosage used was 0.01 to 0.05 gram in 300 c. c. of water. In typhoid pellagra he tried numerous remedies without avail.

Finally in his search for a remedy (through some reports of Coletti and Perugini) he got the idea of using arsenic, and he says, after experience with the drug, that the results exceeded by far his expectations. He does not seem to regard arsenic as a true specific for pellagra and admits that it does not cure all cases, but he thinks it is a very valuable remedy, and that it acts in a certain sense as an antidote for the toxins of spoiled maize, to which he attributes the disease. As an antidote he compares it to the action of opium in alcoholism and mercury and the iodides in syphilis. Sodium chloride he seems to think has probably an equally powerful effect, but a very much more restricted field.

He uses arsenic in the form of Fowler's solution in dosage of 5, 10, 15, 20, and 30 drops, or in the form of pure arsenous acid (arsenic trioxide) dissolved in slightly alcoholized water, in doses of one-fortieth to one-twentieth milligram, increasing, according to tolerance, up to 0.001, 0.002, or 0.003 grams and very rarely even to 0.01 grams. The administration of the drug is suspended for a few days from time to time. He cautions against certain dangers in its use, however, and mentions as dangerous symptoms the appearance around the neck of an herpetic eruption, profuse salivation, anorexia, vomiting, diarrhea, palpitation of the heart, syncope, burning in the pharynx and stomach, headache, great muscular weakness, and bronchitis.

He thinks certain types are especially helped by the administration of arsenic, and that certain others receive no benefit, as follows:

Benefited.—Cases with marked marasmus; cases with incipient paresis; cases with sitophobia (gastralgie type); cases with vague mania but not systematized delirium; cases in the aged, if not at the verge of decrepitude.

Not benefited.—Cases in the young and in infants; cases well nourished and robust; cases with systematized delirium; cases with mental alienation of twenty to thirty years' duration; cases having lobar pneumonia, tuberculosis, albuminuria, or severe vertigo.

In cases of grave vertigo he sometimes uses the tincture of *coccus orientalis* in doses of 3 to 5 drops daily, progressing slowly to 30 drops a day. Among systematic remedies he uses opium in certain mental states and calomel and bismuth for the diarrhea.

Rest is of course very important in acute manifestations, especially if accompanied by fever. The diet should be highly nutritious and abundant, including meats. If diarrhea is too free and the stools contain undigested material, it must be regulated accordingly. The diarrhea, however, is probably trophic and not inflammatory in nature, so that food is not contraindicated, as in many intestinal disturbances, and the patient needs all the nourishment possible. Change of climate, if possible, may be very advisable, especially to colder latitudes. Hydrotherapy is undoubtedly a valuable aid. Saline infusions may at times be of service. During the warm season avoidance of the sun's direct rays may prevent a bad erythema. Cleanliness and good nursing are of course to be desired.

Symptomatic remedies must be used as needed. For insomnia some of the well-known hypnotics; for the erythema, if dry, oily applications or possibly tincture of iodine; if moist, a dressing of 1 per cent aqueous solution of picric acid is valuable at times, or other similar applications may be tried. Diarrhea must be met with the usual remedies; salicylate of bismuth has been highly recommended, and opium may prove of value. Pain, which is fortunately not very common or severe, may at times require morphine.

Complications, such as malaria, syphilis, and intestinal parasites, should receive prompt attention with appropriate remedies. If much anemia be present, many good observers think a bland preparation of iron is indicated. Mercury, except in cases complicated by syphilis, seems valueless. Following Wright's work on the succinamide of mercury in tuberculosis, Babcock and I tried this remedy in several cases, but achieved no results except in syphilitic cases. The drug proved quite irritating locally.

Use of the newer arsenical compounds.—The more or less recent introduction of certain new arsenical compounds seemed, in the light of Lombroso's work, to offer a better therapy for pellagra. Atoxyl, first used, I think, by Babes, has been given a trial by several and with very discordant reports as to results. Of these preparations atoxyl and soamin are the only ones which have been used, so far as I am aware. Arsacetin is another important member of this group.

A few words on these drugs and their method of use may not be inappropriate. Atoxyl and soamin are both trade names and are forms of sodium arsanilate, containing, respectively, about 26 per cent and 22 per cent of arsenic. They are sold in the form of the salt itself and in the form of hypodermic tablets.

Sodium arsanilate is prepared by condensing aniline and arsenic acid, eliminating water and isolating the arsanilic acids. The sodium salt is prepared by the usual methods.

It occurs as white, odorless crystals soluble in 5 or 6 parts of water and more soluble in warm water.

Action.—The arsenic of the arsanilic acid is liberated very slowly in the system, thus producing the ordinary therapeutic effects of arsenic with the advantage of a more continuous and less toxic action and less irritation. Toxic effects from excessive doses have been frequently noted although the toxicity is stated to be about one-fortieth of that of arsenic trioxide. The use in large doses has

occasionally resulted in blindness from degeneration of the optic nerve.

Dose.—0.02 to 0.2 grams ($\frac{1}{4}$ to 3 grains) hypodermically, every other day, gradually increasing if necessary until the single dose reaches 0.65 grams (10 grains) and until a total of 6.5 grams (100 grains) have been given. The drug should not be given by mouth, as it is decomposed by the acid of the stomach and toxic symptoms may result.

Arsacetin is sodium acetyl arsanilate. Its action is the same as sodium arsanilate. It is much more soluble and withstands heating so that its solutions may be sterilized. The dose is, hypodermically, 0.1 gram ($1\frac{1}{4}$ grains) to 0.5 gram ($7\frac{1}{4}$ grains), internally 0.05 gram ($\frac{3}{4}$ grain) three or four times daily. If energetic action is required, two injections a week of 0.6 gram (9 grains) each, given on successive days, should be continued till 20 injections have been given. (This brief account of these remedies is abstracted from *Jour. Am. Med. Assn.* LII, No. 26, p. 2106.)

Koch in his extensive experience with atoxyl in trypanosomiasis, after getting several cases of blindness, concluded that the safest and most efficient dosage hypodermically was 0.5 gram on each of two succeeding days, and with intervals of ten days between; this double treatment is repeated for many months. By mouth Koch found that a dose of 0.5 gram is insufficient, while larger doses produced toxic symptoms, and he had no success with the drug given in this way. (Terry, *Arch. Int. Med.* III, 2.)

About two years ago Babes reported his experience with atoxyl in Roumania, and spoke very highly of the use of it in pellagra. Warnock, of the insane asylum at Cairo, Egypt, in his report for 1907, being somewhat enthusiastic over the Roumanian report, gave the remedy a trial, and was much pleased with his early results. In his report for 1908, however, his conclusion is, "It may be said that the value of atoxyl in the treatment of advanced stages of pellagra such as are met with in this asylum has not been demonstrated," and he adds that he can not confirm the Roumanian experience with the drug.

Babcock, at the State Insane Asylum, at Columbia, S. C., who has used both atoxyl and soamin extensively, has stated in a recent unpublished paper that he has not observed any permanent benefit from treatment by either of these preparations. He thinks, however, Fowler's solution is a remedy of importance, especially in non-asylum cases, and advocates, in selected cases, a further trial of atoxyl and soamin.

Babcock uses atoxyl and soamin almost exclusively by the intramuscular method. They have not proved irritating when sterile solutions were used and antiseptic precautions observed. The usual dosage is from about 0.2 to 0.5 gram every other day for two or three doses, and then a rest for about ten days.

Wood, of Wilmington, N. C. (*Char. Med. Jour.* LX, 2), speaks disparagingly of atoxyl in his experience.

In my own experience, atoxyl and soamin have proved of little value, but I am as yet not willing to discard them as entirely useless. Fowler's solution seems beneficial in some cases. Donovan's solution has been tried also, but I have had no experience with it myself.

Quite recently Babes, with others, has advocated the use of atoxyl and arsenic trioxide combined (*Berl. Klin. Wochenschrift*, Feb. 8,

1909), and they report brilliant results. The method is as follows: Atoxyl, 0.5 gram hypodermically, externally on the sound skin, 5 grams of an ointment of arsenic trioxide (1 to 50), and internally a pill of arsenic trioxide (0.001 to 0.002 gram) thrice daily. I have seen this treatment given a limited trial at Columbia, S. C., without any benefit.

Serum treatment and transfusion of blood.—A word or so on serum treatment and transfusion of blood. There is a good deal of evidence tending to show that specific antibodies are developed in the blood of pellagrins, and the serum of cured cases has been successfully used in the treatment of typhoid pellagra (Antonini and Mariani—Contributo allo studio della sieroterapia nella pellagra, Bergamo, 1904). Babes and Sion (loc. cit.) have even expressed the confident hope of producing from the horse an efficient antiserum, but this has not yet been realized.

Working at the insane asylum at Columbia I have attempted to treat two cases with blood serum taken from cured pellagrins. One case died of pneumonia soon after treatment was begun, the other seemed to improve for a while, but is now much emaciated and is not expected to recover. I could not secure properly cured cases for obtaining the serum, and this may account to some extent for so poor a result.

Cole, of Mobile (So. Med. Jour., Apr., 1909, 631-638), reports a case cured by transfusion of blood from a cured pellagrin (after Crile's method). He has recently tried this in other cases and reports good results. It seems to me possible that the blood from any healthy individual might have a similar beneficial result.

Finally, it may be said that we have no specific for the disease, and that the remedies used have often proved disappointing; but a cheerful optimism, with the judicious use of the means at our command, will at times produce surprisingly good results and is certainly far preferable to an inert pessimism.

Before concluding, I desire especially to express my indebtedness to Dr. J. W. Babcock, whose wide clinical experience with pellagra has rendered his information and advice of great value.

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 Contra Costa County, Cal.

Surgeon Blue reports:

SAN FRANCISCO, CAL.

Last case of human plague: Sickened, January 30, 1908.

Last case of rodent plague: October 23, 1908.

Week ended August 21, 1909.

Dead inspected.....	87
Plague.....	0
Premises inspected.....	2,269
Houses disinfected.....	15
Buildings condemned.....	11
Nuisances abated.....	204

Rats found dead.....	11
Rats trapped.....	2,073
Total rats taken.....	2,084
Rats identified:	
Mus norvegicus.....	1,534
Mus rattus.....	61
Mus musculus.....	470
Mus alexandrinus.....	12
Total.....	2,077
Rats identified as to sex:	
Male.....	868
Female.....	835
Total.....	1,703
Rats examined bacteriologically.....	1,222
Plague rats.....	0
Poisons placed.....	22,824

OAKLAND, CAL.

Last case of human plague: Sickened, July 17, 1908.

Last case of rodent plague: Trapped, December 1, 1908.

Week ended August 21, 1909.

Dead inspected.....	30
Plague.....	0
Necropsies held.....	3
Premises inspected.....	439
Premises reinspected.....	206
Premises cleaned.....	61
Garbage cans installed.....	14
Nuisances abated.....	73
Rats found dead.....	31
Rats trapped.....	689
Rats identified:	
Mus norvegicus.....	702
Mus musculus.....	18
Total.....	720
Rats examined bacteriologically.....	720
Plague rats.....	0
Ground squirrels shot.....	210
Ground squirrels examined bacteriologically.....	210
Plague squirrels.....	0

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

Last case of human plague: Sickened, July 21, 1908.

Last case of rodent plague: Found, August 14, 1909.

Week ended August 14.

Dead inspected.....	1
Plague.....	0
Ranches inspected.....	164
Ground squirrels shot.....	1,781
Ground squirrels found dead.....	9
Ground squirrels examined bacteriologically.....	1,753
Ground squirrels infected with B. pestis.....	16
Total number of ground squirrels infected to date.....	174

Plague-infected ground squirrels obtained from the following places:

<i>July 19, 1909.</i>	
Naphtaly ranch.....	1
<i>August 1, 1909.</i>	
Silva ranch.....	1
<i>August 8, 1909.</i>	
California Vineyard Company.....	2
<i>August 9, 1909.</i>	
Meredith ranch.....	1
Mullholland ranch.....	1
<i>August 10, 1909.</i>	
Mount Diablo tract.....	1
<i>August 11, 1909.</i>	
Mullholland ranch.....	1
Nunez ranch.....	3
<i>August 12, 1909.</i>	
Silva Ranch.....	3
<i>August 13, 1909.</i>	
Silva Ranch.....	1
<i>August 14, 1909.</i>	
Silva Ranch.....	1

POINT RICHMOND, CAL.

Week ended August 21, 1909.

Dead inspected.....	1
Plague.....	0

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

Passed Assistant Surgeon Glover reports, August 23:

SEATTLE, WASH.

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

Week ended August 21, 1909.

Rats received.....	1, 247
Rats necropsied.....	1, 106
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 July, 1909. Estimated population, 300,000. Total number of deaths reported 330, corresponding to an annual death rate of 13.20 per 1,000 of population, including enteric fever 3, measles 1, whooping cough 5, diphtheria 3,

and 66 from tuberculosis. Cases of contagious diseases reported: Diphtheria 25, enteric fever 23, scarlet fever 32, measles 34, and tuberculosis 47.

CONNECTICUT—*Stamford*.—Month of August, 1909. Estimated population, 22,000. Total number of deaths not reported. No deaths from contagious diseases reported. Cases: Diphtheria 3, enteric fever 3, measles 1, scarlet fever 13, tuberculosis 4.

INDIANA—*Jeffersonville*.—Month of July, 1909. Estimated population, 12,000. Total number of deaths 21, including 2 from enteric fever. Cases: Diphtheria 3, enteric fever 2, and tuberculosis 4.

IOWA—*Cedar Rapids*.—Month of August, 1909. Estimated population, 35,000. Total number of deaths, 47, including enteric fever 1, and 3 from tuberculosis. Cases: Diphtheria 2, smallpox 1.

SIoux City.—Month of August, 1909. Census population, 33,111. Total number of deaths not reported. No deaths from contagious diseases reported. Cases: Diphtheria 5, and scarlet fever 1.

NEBRASKA—*Lincoln*.—Month of July, 1909. Estimated population, 65,000. Total number of deaths, 41, corresponding to an annual death rate of 7.56 per 1,000 of population, including 1 from tuberculosis. Cases: Diphtheria 1, measles 1, and smallpox 1.

NEW YORK—*Buffalo*.—Month of July, 1909. Estimated population, 352,387. Total number of deaths 525, including diphtheria 1, enteric fever 12, measles 1, scarlet fever 9, whooping cough 2, and 49 from tuberculosis. Cases: Diphtheria, 24, enteric fever 50, measles 60, scarlet fever 140, whooping cough 31, and tuberculosis 97.

Yonkers.—Month of July, 1909. Estimated population, 72,200. Total number of deaths, 92, corresponding to an annual death rate of 15.29 per 1,000 of population, including scarlet fever 1, enteric fever 1, and 9 from tuberculosis. Cases: Scarlet fever 50, enteric fever 7, diphtheria 15, measles 3, and tuberculosis 15.

NORTH CAROLINA.—Month of July, 1909. Estimated population, 1,893,810. Reports of state board of health from 86 counties show as follows: Measles in 18 counties, whooping cough in 34 counties, scarlet fever in 11 counties, diphtheria in 17 counties, enteric fever in 71 counties, malarial fever in 6 counties, pernicious malarial fever in 5 counties, and smallpox in 13 counties, viz: Beaufort 1, Caldwell 1, Camden 25, Craven 1, Duplin 9, Harnett 3, Madison 6, Nash 1, Pitt 8, Robeson 8, Rowan 7, Sampson 4, Watauga 12.

NORTH DAKOTA.—Month of July, 1909. Estimated population, 319,146. Deaths from contagious diseases 160, including diphtheria 3, scarlet fever 1, tuberculosis 1. Cases: Diphtheria 24, enteric fever 1, measles 26, scarlet fever 20, whooping cough 23, tuberculosis 3.

OREGON—*Portland*.—Month of July, 1909. Estimated population, 255,000. Total number of deaths, 140, corresponding to an annual death rate of 6.99 per 1,000 of population, including scarlet fever 1,

enteric fever 1, whooping cough 1, and 15 from tuberculosis. Cases: Diphtheria 9, measles 70, whooping cough 1, scarlet fever 21, smallpox 7, and enteric fever 11.

UTAH.—Month of July, 1909. Reports to the state board of health from 27 counties, having an estimated population of 346,873, show as follows: Total number of deaths, 250, including diphtheria 3, whooping cough 6, scarlet fever 3, enteric fever 9, smallpox 1, and 5 from tuberculosis. Cases: Diphtheria 21, enteric fever 79, measles 33, scarlet fever 64, smallpox 110, whooping cough 330, and tuberculosis 22 (incomplete).

VIRGINIA—*Newport News*.—Month of July, 1909. Estimated population, 28,749. Total number of deaths, 34, including enteric fever 2, and 4 from tuberculosis. Cases: Diphtheria 3, enteric fever 7, scarlet fever 2.

WASHINGTON—*Tacoma*.—Month of July, 1909. Estimated population, 120,000. Total number of deaths, 120, corresponding to an annual death rate of .45 per 1,000 of population, including diphtheria 1, enteric fever 1, and 7 from tuberculosis. Cases: Pulmonary tuberculosis 41, scarlet fever 46, measles 61, enteric fever 9, and diphtheria 12.

Smallpox in the United States as reported to the Surgeon-General, Public Health and Marine-Hospital Service, June 26 to September 10, 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:				
Berkeley.....	July 25-31.....	1		
Hobart Mills.....	Apr. 1-30.....	1		
Sacramento.....	June 6-12.....	1		
San Francisco.....	June 6-July 3.....	2		
Truckee.....	Mar. 23.....	3		
Total for State.....		8		
Connecticut:				
New Haven.....	May 1-31.....	1		
Total for State.....		1		
District of Columbia:				
Washington.....	Aug. 8-14.....	1		
Total for District.....		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-Aug. 21....	5		
Dewitt County.....	May 1-31.....	7		
Edwards County.....	Apr. 1-May 31.....	3		
Effingham County.....	Apr. 1-30.....	2		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Illinois—Continued.				
Fayette County.....	May 1-31.....	2		Present.
Franklin County.....	Apr. 1-May 31.....	2		
Fulton County.....	Apr. 1-June 30.....			
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-July 31.....	14		
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-July 31.....	37		
Perry County.....	Apr. 1-July 31.....	13		
Pulaski County.....	May 1-31.....	5		
Rock Island County—				
Moline.....	June 1-July 31.....	2		
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-July 31.....	3		
Stephenson County.....	May 1-31.....	4		
Tazewell County.....	May 1-31.....	5		
Pekin.....	Apr. 1-July 31.....	70		
Union County.....	Apr. 1-May 31.....	5		
Vermillion County.....	Apr. 1-May 31.....	2		
Danville.....	June 14-Aug. 1.....	11		
Warren County.....	June 1-July 31.....	3		
Will County—				
Joliet.....	July 1-31.....	1		
Williamson County.....	Apr. 1-May 31.....	6		
Winnebago County.....	June 1-30.....	1		
Woodford County.....	Apr. 1-July 31.....	25		
Total for State.....		638		
Indiana:				
Allen County.....	May 1-31.....	5		
Fort Wayne.....	June 6-Aug. 14.....	79		
Carroll County.....	June 1-30.....	1		
Clay County.....	June 1-30.....	4		
Dearborn County.....	May 1-31.....	4		
Dekalb County.....	June 1-30.....	1		
Delaware County.....	May 1-31.....	1		
Muncie.....	June 20-July 10.....	4		
Fayette County.....	June 1-30.....	1		
Gibson County.....	May 1-31.....	5		
Grant County.....	May 1-June 30.....	3		
Greene County.....	June 1-30.....	2		
Marion County—				
Indianapolis.....	June 14-20.....	1		
Montgomery County.....	May 1-June 30.....	9		
Parke County.....	May 1-31.....	1		
Pulaski County.....	May 1-31.....	2		
St. Joseph County.....	June 1-30.....	4		
South Bend.....	June 13-Aug. 14.....	5		
Vanderburgh County.....	May 1-June 30.....	26		
Vermillion County.....	May 1-June 30.....	41		
Vigo County.....	June 1-30.....	4		
Wayne County.....	May 1-June 30.....	10	1	
White County.....	May 1-31.....	2		
Total for State.....		215	1	
Iowa:				
Cedar Rapids.....	July 1-Aug. 31.....	2		
Keokuk.....	May 1-31.....	3		
Ottumwa.....	June 1-30.....	1		
Total for State.....		6		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Kansas:				
Allen County.....	May 1-31.....	5		
Atchison County.....	June 1-30.....	7		
Brown County.....	June 1-30.....	1		
Chautauqua County.....	May 1-31.....	3		
Cherokee County.....	May 1-31.....	1		
Coffey County.....	May 1-31.....	1		
Comanche County.....	June 1-30.....	3		
Cowley County.....	May 1-31.....	14		
Crawford County.....	May 1-31.....	20		
Pittsburg.....	May 1-June 30.....	4		
Decatur County.....	June 1-30.....	12	1	
Dickinson County.....	May 1-June 30.....	1		
Doniphan County.....	May 1-June 30.....	20		
Douglas County.....	May 1-31.....	1		
Elk County.....	May 1-31.....	1		
Ellsworth County.....	June 1-30.....	1		
Franklin County.....	May 1-31.....	5		
Geary County.....	May 1-31.....	4		
Graham County.....	June 1-30.....	6		
Greenwood County.....	May 1-31.....	3		
Jackson County.....	May 1-June 30.....	24		
Jefferson County.....	May 1-31.....	2		
Jewell County.....	May 1-31.....	6		
Kearny County.....	May 1-31.....	1		
Labette County—				
Parsons.....	May 1-June 30.....	8		
Lyon County.....	May 1-31.....	27		
Marshall County.....	May 1-June 30.....	225		
Montgomery County.....	May 1-June 30.....	3		
Nemaha County.....	June 1-30.....	1		
Osage County.....	May 1-June 30.....	32		
Osborne County.....	May 1-June 30.....	11		
Ottawa County.....	May 1-31.....	3		
Phillips County.....	May 1-31.....	1		
Pottawatomie County.....	May 1-June 30.....	7		
Pratt County.....	May 1-31.....	5		
Rawlins County.....	May 1-31.....	13		
Republic County.....	June 1-30.....	1		
Riley County.....	May 1-June 30.....	8		
Rush County.....	June 1-30.....	2		
Russell County.....	June 1-30.....	1		
Saline County.....	May 1-31.....	2		
Sedgwick County.....	May 1-31.....	11		
Wichita.....	July 11-Aug. 7.....	5		
Shawnee County.....	May 1-31.....	8		
Topeka.....	May 1-June 30.....	38		
Smith County.....	May 1-31.....	11		
Sumner County.....	May 1-31.....	3		
Thomas County.....	May 1-31.....	1		
Wabunsee County.....	May 1-31.....	6		
Wyandotte County.....	May 1-31.....	4		
Kansas City.....	June 13-July 17.....	10		
Total for State.....		593	1	
Kentucky:				
Ovington.....	June 13-July 3.....	5		
Lexington.....	June 20-July 31.....	14		
Newport.....	June 14-July 25.....	4		
Paducah.....	June 13-26.....	3		
Total for State.....		26		
Louisiana:				
New Orleans.....	June 13-Aug. 28.....	12		
Total for State.....		12		
Maryland, general.....				
	Mar. 1-Apr. 30.....	9		
Total for State.....		9		
Massachusetts:				
Lawrence.....	June 27-July 3.....	1		
Total for State.....		1		
Michigan:				
Bay County—				
Bay City.....	June 1-30.....	1		
Calhoun County.....	June 1-30.....	1		
Chippewa County.....	May 1-31.....	1		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Michigan—Continued.				
Delta County.....	June 1-30.....	1		
Eaton County.....	May 1-June 30.....	21		
Emmet County.....	June 1-30.....	1		
Houghton County.....	May 1-31.....	1		
Huron County.....	June 1-30.....	1		
Ingham County.....	May 1-31.....	1		
Jackson County.....	May 1-31.....	1		
Kalamazoo County—				
Kalamazoo.....	July 4-24.....	2		
Kent County—				
Grand Rapids.....	June 6-26.....	2		
Lapeer County.....	June 1-30.....	1		
Marquette County.....	May 1-June 30.....	6		
Muskegon County.....	May 1-June 30.....	6		
Newaygo County.....	June 1-30.....	1		
Oceana County.....	May 1-31.....	1		
Ottawa County.....	May 1-June 30.....	7		
Saginaw County.....	May 1-June 30.....	17		
Saginaw.....	July 25-31.....	1		
St. Clair County.....	May 1-June 30.....	4		
Schoolcraft County—				
Manistique.....	June 1-30.....	27		
Tuscola County.....	May 1-31.....	4		
Wayne County—				
Detroit.....	May 1-31.....	1		
Total for State.....		110		
Minnesota, general.				
Becker County.....	Mar. 1-Apr. 30.....		3	
Bigstone County.....	June 15-21.....	5		
Carver County.....	June 8-14.....	1		
Faribault County.....	July 6-12.....	1		
Hennepin County—				
Minneapolis.....	May 1-June 30.....	39		
Hubbard County.....	May 25-31.....	1		
Itasca County.....	May 25-June 14.....	7		
Lesueur County.....	June 1-7.....	1		
McLeod County.....	May 25-31.....	1		
Marshall County.....	June 8-July 5.....	6		
Meeker County.....	May 25-31.....	5		
Morrison County.....	June 21-28.....	1		
Nobles County.....	May 25-June 21.....	2		
Olmsted County.....	June 8-14.....	2		
Pine County.....	May 25-31.....	1		
Ramsey County—				
St. Paul.....	Apr. 1-May 31.....	10		
Redwood County.....	June 1-7.....	1		
Rock County.....	June 1-7.....	1		
St. Louis County.....	May 25-June 21.....	3		
Duluth.....	June 10-Aug. 27.....	20		
Sibley County.....	June 22-28.....	3		
Steele County.....	May 25-June 21.....	3		
Wabasha County.....	May 25-31.....	2		
Wadena County.....	May 25-June 21.....	10		
Waseca County.....	May 25-31.....	8		
Wright County.....	June 15-21.....	1		
Total for State.....		137	3	
Missouri:				
Kansas City.....	June 13-26.....	2		
St. Joseph.....	May 30-July 24.....	19		
St. Louis.....	June 20-Aug. 14.....	6		
Total for State.....		27		
Montana:				
Carbon County.....	June 1-July 31.....	6		
Cascade County—				
Great Falls.....	June 1-30.....	1		
Chouteau County.....	June 1-30.....	1		
Custer County.....	June 1-30.....	1		
Dawson County.....	May 1-31.....	5		
Deerlodge County.....	May 1-31.....	1		
Fergus County.....	June 1-30.....	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		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Montana—Continued.				
Missoula County—				
Missoula.....	June 1-July 31.....	4		
Park County.....	May 1-June 30.....	21		
Livingston.....	May 1-July 31.....	12		
Sanders County.....	May 1-31.....	1		
Silverbow County.....	June 1-July 31.....	16		
Butte.....	June 11-Aug. 26.....	34		
Teton County.....	May 1-31.....	1		
Valley County.....	May 1-31.....	1		
Yellowstone County.....	May 1-July 31.....	7		
Total for State.....		124		
Nebraska:				
Lincoln.....	May 1-July 31.....	34		
Total for State.....		34		
New York, general.....				
	May 1-June 30.....	433		
Total for State.....		433		
North Carolina:				
Beaufort County.....	June 1-30.....	1		
Bladen County.....	Apr. 1-30.....	5		
Buncombe County.....	Apr. 1-30.....	1		
Caldwell County.....	Apr. 1-June 30.....	19		
Camden County.....	Apr. 1-June 30.....	70		
Carteret County.....	Apr. 1-30.....	1		
Craven County.....	Apr. 1-June 30.....	8		
Cumberland County.....	May 1-31.....	1		
Duplin County.....	Apr. 1-June 30.....	25		
Johnston County.....	Apr. 1-30.....	2		
Harnett County.....	June 1-30.....	3		
Lee County.....	Apr. 1-30.....	6		
Madison County.....	May 1-June 30.....	7		
Mecklenburg County.....	May 1-31.....	2		
Mitchell County.....	Apr. 1-30.....			Present.
Nash County.....	June 1-30.....	1		
Onslow County.....	Apr. 1-30.....	2		
Pamlico County.....	May 1-31.....	4		
Pasquotank County.....	Apr. 1-May 31.....	15		
Pitt County.....	Apr. 1-June 30.....	17		
Robeson County.....	June 1-30.....	8		
Rowan County.....	May 1-June 30.....	16		
Sampson County.....	Apr. 1-June 30.....	51		
Transylvania County.....	May 1-31.....	5		
Wake County.....	Apr. 1-30.....	2		
Watauga County.....	June 1-30.....	12		
Wayne County.....	May 1-31.....	14		
Wilson County.....	Apr. 1-30.....	1		
Yancey County.....	Apr. 1-May 31.....	8		
Total for State.....		307		
North Dakota:				
Bottineau County.....	May 1-31.....	1		
Grand Forks County.....	May 1-June 30.....	7		
Lamoure County.....	May 1-June 30.....	3		
McHenry County.....	May 1-31.....	1		
Stutsman County.....	June 1-30.....	2		
Walsh County.....	June 1-30.....	2		
Ward County.....	May 1-June 30.....	9		
Total for State.....		25		
Ohio:				
Cincinnati.....	June 12-July 2.....	4		
Dayton.....	July 18-Aug. 28.....	8		
Toledo.....	July 25-Aug. 7.....	2		
Total for State.....		14		
Oklahoma:				
Oklahoma.....	Apr. 3-Aug. 21.....	51	1	
Total for State.....		51	1	
Oregon:				
Portland.....	Apr. 1-June 30.....	26		
Total for State.....		26		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Pennsylvania:				
Philadelphia.....	July 10-24.....	4		
Total for State.....		4		
Tennessee:				
Knoxville.....	June 20-Aug. 21..	7		
Total for State.....		7		
Texas:				
Archer County.....	June 1-30.....	1		
Baylor County.....	June 1-30.....	22		
Bee County.....	June 1-30.....	6		
Bexar County.....	June 1-30.....	1	1	
San Antonio.....	June 13-July 17..	10		
Bowie County.....	June 1-30.....	7		
Cameron County.....	June 1-30.....	1		
Cherokee County.....	June 1-30.....	1		
Childress County.....	June 1-30.....	4		
Ellis County.....	May 1-June 30.....	2		
Galveston County.....	June 1-30.....	1		
Galveston.....	June 19-25.....	1		
Gonzales County.....	May 1-June 30.....	6	2	
Grayson County.....	June 1-30.....	9		
Harris County.....	June 1-30.....	12		
Houston.....	Mar. 28-June 19..	17		
Harrison County.....	June 1-30.....	15		
Henderson County.....	June 1-30.....	15		
Jefferson County.....	May 1-June 30.....	3		
Jones County.....	June 1-30.....	2		
Kinney County.....	June 1-30.....	1	1	
Lamar County.....	June 1-30.....	12		
Matagorda County.....	May 1-June 30.....	10		
McLennan County.....	June 1-30.....	19		
Milam County.....	June 1-30.....	5		
Runnels County.....	May 1-June 30.....	17		
San Saba County.....	Apr. 9-June 30.....	11		
Smith County.....	June 1-30.....	10		
Stephens County.....	June 1-30.....	33	1	
Tarrant County.....	May 1-June 30.....	19	3	
Fort Worth.....	June 1-July 31.....	5		
Travis County.....	May 1-June 30.....	19		
Upshur County.....	May 1-June 30.....	2		
Van Zandt County.....	May 1-June 30.....	6		
Webb County.....				
Laredo.....	June 19.....	1		
Wharton County.....	June 1-30.....	2		
Wichita County.....	June 1-30.....	5		
Williamson County.....	June 1-30.....	4	1	
Total for State.....		317	9	
Utah:				
Box Elder County.....	May 1-31.....	3		
Cache County.....	June 1-July 31.....	4		
Carbon County.....	June 1-July 31.....	3		
Davis County.....	May 1-July 31.....	30		
Emery County.....	June 1-July 31.....	4		
Garfield County.....	May 1-July 31.....	6		
Salt Lake County.....	May 1-July 31.....	57	1	
Salt Lake City.....	June 1-30.....	56		
San Pete County.....	May 1-July 31.....	29		
Summit County.....	May 1-July 31.....	67		
Tooele County.....	May 1-31.....	5		
Uintah County.....	May 1-July 31.....	21		
Utah County.....	May 1-July 31.....	10		
Weber County.....	May 1-July 31.....	4		
Total for State.....		299	1	
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		

Smallpox in the United States—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Wisconsin:				
Ashland County.....	Jan. 1-Mar. 31.....	8		
Baron County.....	Jan. 1-Mar. 31.....	47		
Buffalo County.....	Jan. 1-Mar. 31.....	5		
Burnett County.....	Jan. 1-Mar. 31.....	11		
Calumet 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		
Milwaukee County—				
Milwaukee.....	June 21-27.....	2		
Oconto County.....	Jan. 1-Mar. 31.....	1		
Outagamie County—				
Appleton.....	June 20-July 31.....	22		
Ozaukee County.....	Jan. 1-Mar. 31.....	13		
Peplin 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.....		527	3	
Grand total for the United States.....		3,974	19	

Plague in the United States as reported to the Surgeon-General, Public Health and Marine-Hospital Service, August 2-September 10, 1909.

Place.	Date.	Cases.	Deaths.	Remarks.
California:				
Alameda County—				
Sunol.....	Aug. 2-12.....	1	1	Case sickened July 27.

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

[For smallpox and plague, see special tables.]

Cities.	Week ended—	Popula- tion, United States census, 1900.	Total deaths from all causes.	Tuber- culosis.		Enteric fever.		Scarlet fever.		Diph- theria.		Measles.		Whoop- ing cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Altoona, Pa.....	Aug. 28	38,973	20	—	—	7	2	—	—	—	—	—	—	—	—
Ann Arbor, Mich.....	Aug. 21	14,509	7	1	1	—	—	1	—	—	—	—	—	—	—
Ashtabula, Ohio.....	Aug. 28	12,949	7	—	1	—	—	—	—	1	—	—	—	—	—
Auburn, N. Y.....	July 10	30,345	5	—	—	—	—	—	—	—	—	—	—	—	—
Do.....	July 17	30,345	4	—	—	—	—	—	—	—	—	—	—	—	—
Do.....	July 24	30,345	16	1	1	—	—	—	—	1	1	—	—	—	—
Do.....	July 31	30,345	15	1	1	1	—	1	—	1	—	—	—	—	—
Do.....	Aug. 7	30,345	11	1	—	—	—	—	—	1	—	—	—	—	—

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.
Auburn, N. Y.	Aug. 14	30,345	14	1	1	...	...	...	...	...	...	...	...	...	...
Do.	Aug. 21	30,345	12	...	1	...	...	...	...	...	...	...	...	...	...
Do.	Aug. 28	30,345	11	...	1	...	...	...	...	...	...	1	...	...	...
Baltimore, Md.	do.	508,957	200	18	28	56	5	6	...	4	...	4	1	14	...
Bayonne, N. J.	do.	32,722	1	1	...	...	...	1	...	7	...	...	...	...	...
Beaver Falls, Pa.	do.	13,000	0	1	...	...	...	...	...	...	...	...	...	...	...
Berkeley, Cal.	Aug. 14	13,214	6	1	1	2	...	...	...	...	...	2	...	...	...
Biddeford, Me.	Aug. 28	16,145	8	1	1	...	...	...	...	...	...	...	...	...	...
Biloxi, Miss.	do.	5,467	28	...	1	1	...	...	...	...	...	...	...	...	...
Binghamton, N. Y.	Aug. 21	38,647	18	...	3	2	...	2	...	...	...	1	...	...	...
Boston, Mass.	Aug. 28	560,892	201	59	21	22	1	20	...	35	2	13	...	2	1
Bradford, Pa.	do.	15,029	1	...	...	1	...	1	...	...	...	1	...	...	...
Bridgeport, Conn.	Aug. 21	70,996	25	4	3	1	...	2	1	4	...	...	...	...	...
Brockton, Mass.	Aug. 28	40,063	14	3	1	...	...	...	...	...	...	...	...	...	...
Butler, Pa.	Aug. 7	10,853	5	...	1	...	...	2	...	...	...	...	...	...	...
Do.	Aug. 21	10,853	4	...	...	...	...	2	...	...	...	...	...	...	...
Butte, Mont.	Aug. 19	30,470	10	...	...	1	...	1	...	2	1	...	...	...	...
Do.	Aug. 26	30,470	11	...	...	1	...	1	...	4	...	...	...	...	...
Cambridge, Mass.	Aug. 21	91,886	28	2	8	2	...	1	...	2	...	...	...	2	...
Do.	Aug. 28	91,886	25	8	3	3	...	...	...	3	...	1	...	...	...
Camden, N. J.	Aug. 28	75,935	31	1	1	4	...	...	...	4	...	...	...	...	...
Charlotte, N. C.	Aug. 27	18,091	7	1	1	...	...	...	...	2	...	...	...	...	...
Chelsea, Mass.	Aug. 28	34,072	2	1	1	...	...	...	...	...	...	...	...	...	...
Chicago, Ill.	do.	1,698,575	619	69	55	62	3	52	4	48	12	30	1	73	6
Chicopee, Mass.	do.	19,167	5	1	2	...	...	...	...	...	...	...	...	...	...
Cincinnati, Ohio.	do.	325,902	115	10	16	...	3	...	7	1	...	1	...	...	...
Cleveland, Ohio.	Aug. 27	381,766	150	17	13	23	1	9	...	16	1	4	1	10	...
Clinton, Mass.	Aug. 28	13,667	...	...	...	...	...	...	...	1	...	...	...	...	...
Columbus, Ga.	do.	17,614	5	...	...	...	...	...	...	...	...	...	...	...	...
Columbus, Ohio.	do.	125,560	68	6	6	10	3	2	...	1	...	...	...	...	...
Concord, N. H.	Aug. 21	19,632	2	...	...	...	...	...	...	1	...	...	...	...	...
Covington, Ky.	Aug. 28	42,938	15	...	1	6	1	...	...	...	...	...	...	...	...
Danville, Ill.	do.	16,534	8	...	2	...	...	...	...	1	...	...	...	...	...
Dayton, Ohio.	do.	85,333	32	...	5	5	...	...	...	...	...	...	...	...	...
Duluth, Minn.	Aug. 27	80,000	28	3	2	...	1	13	...	10	1	...	...	...	...
Dunkirk, N. Y.	do.	11,616	4	2	2	...	...	...	...	...	...	...	...	...	...
Elmira, N. Y.	Aug. 21	35,672	4	1	...	3	...	2	...	1	...	...	...	...	...
Do.	Aug. 28	35,672	14	1	...	3	...	1	...	...	...	...	...	...	...
El Paso, Tex.	Aug. 17	15,905	25	5	4	10	1	...	...	...	...	...	...	...	...
Do.	Aug. 24	15,905	28	78	6	6	...	...	...	...	...	...	...	...	...
Evansville, Ind.	Aug. 28	59,007	18	1	2	5	...	4	...	5	1	...	1	...	...
Everett, Mass.	do.	24,336	10	2	1	1	...	4	...	1	...	...	...	1	...
Fall River, Mass.	do.	104,863	49	6	5	9	...	5	...	1	...	...	...	...	...
Findlay, Ohio.	do.	17,613	9	...	1	1	...	...	...	1	...	...	...	...	...
Galveston, Tex.	do.	37,789	1	3	1	6	...	...	...	1	...	...	...	...	...
Gloucester, Mass.	do.	26,121	10	...	...	...	...	...	...	...	...	...	...	...	...
Grand Rapids, Mich.	do.	87,565	23	2	2	7	...	2	...	1	...	1	...	...	...
Hartford, Conn.	Aug. 22	79,850	20	6	1	1	...	...	...	1	...	...	...	...	...
Harrison, N. J.	Aug. 28	10,596	2	...	...	...	...	...	...	1	...	...	...	...	...
Haverhill, Mass.	Aug. 28	37,175	12	...	1	...	...	...	...	5	1	...	...	1	...
Houston, Tex.	do.	44,633	18	...	4	...	2	1	...	...	...	...	...	...	...
Hyde Park, Mass.	do.	13,244	5	...	...	...	...	...	...	...	...	...	...	...	...
Indianapolis, Ind.	do.	169,164	58	2	2	39	2	3	...	4	...	3	...	7	4
Johnstown, Pa.	do.	35,936	17	3	1	8	...	1	...	2	1	2	...	2	...
Kalamazoo, Mich.	Aug. 14	24,404	15	...	...	...	1	...	...	...	...	2	...	5	...
Do.	Aug. 21	24,404	12	...	1	2	...	...	...	1	...	3	...	1	...
Kansas City, Kans.	do.	51,418	25	1	1	5	3	1	...	4	...	...	...	...	...
Kansas City, Mo.	Aug. 14	163,752	59	...	6	8	2	4	...	3	...	...	...	...	...
Do.	Aug. 21	163,752	92	1	6	4	4	3	...	2	...	...	...	...	1
Kearny, N. J.	do.	10,886	1	...	...	1	...	...	...	2	...	...	...	...	...
Do.	Aug. 28	10,886	4	...	...	...	...	...	...	...	...	...	...	...	...
Knoxville, Tenn.	do.	32,637	8	...	...	1	...	...	...	...	...	...	...	...	...
Lancaster, Pa.	do.	41,459	12	3	...	9	...	...	...	...	...	...	...	1	...
Lawrence, Mass.	Aug. 21	62,559	31	...	4	4	...	...	...	1	1	8	...	...	...
Lebanon, Pa.	Aug. 28	17,628	7	2	...	...	...	...	...	...	...	...	...	1	...
Little Falls, N. Y.	Aug. 6	10,381	3	8	...	...	...	...	...	1	...	...	...	...	...
Do.	Aug. 13	10,381	6	...	1	...	...	...	...	1	...	...	...	...	...
Do.	Aug. 20	10,381	2	7	...	...	...	...	...	...	...	...	...	...	...
Do.	Aug. 27	10,381	1	7	...	...	...	...	...	...	...	...	...	...	...
Los Angeles, Cal.	Aug. 21	102,479	76	13	17	4	2	...	1	1	...	7	...	5	1
Lowell, Mass.	Aug. 28	94,999	41	3	3	1	...	...	...	5	1	6	...	...	...
Lynchburg, Va.	do.	18,891	...	...	3	...	...	3	...	...	...	...	...	4	...
Lynn, Mass.	Aug. 21	68,513	26	...	1	2	...	1	...	2	...	...	...	...	...
Malden, Mass.	do.	33,664	11	...	1	1	...	...	...	1	...	...	...	...	...
Manchester, N. H.	Aug. 28	56,987	28	3	3	...	...	...	...	7	...	3	...	1	1

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

Cities.	Week ended—	Popula- tion, United States census, 1900.	Total deaths from all causes.	Tuber- culosis.		Enteric fever.		Scarlet fever.		Diph- theria.		Measles.		Whoop- ing cough	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Mansfield, Ohio.....	Aug. 28	17,650	.....	.....	.....	16	.....	.....	.....	1	.....	.....	.....	.....	.....
Marinette, Wis.....	do.	16,195	3	.....	.....	.....	.....	2	.....	3	.....	.....	.....	.....	.....
Marlboro, Mass.....	Aug. 21	13,609	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Massillon, Ohio.....	Aug. 28	11,944	3	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medford, Mass.....	do.	18,244	4	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Melrose, Mass.....	Aug. 21	12,962	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mobile, Ala.....	Aug. 14	38,469	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Aug. 21	38,469	26	.....	5	3	.....	2	.....	.....	.....	.....	.....	.....	.....
Moline, Ill.....	Aug. 28	17,248	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Montclair, N. J.....	do.	13,962	6	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....
Montgomery, Ala.....	Aug. 27	30,346	27	.....	1	.....	3	.....	.....	.....	.....	.....	.....	.....	1
Mount Vernon, N. Y.....	Aug. 28	21,228	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn.....	do.	80,865	27	12	4	26	.....	4	.....	.....	.....	2	.....	.....	.....
Nanticoke, Pa.....	Aug. 29	12,616	8	2	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....
Nebraska City, Nebr.....	Aug. 28	7,200	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newark, N. J.....	do.	246,070	122	19	10	17	1	12	.....	15	2	.....	.....	.....	2
New Bedford, Mass.....	do.	63,442	44	5	5	2	.....	2	.....	.....	.....	.....	.....	1	.....
Newburyport, Mass.....	do.	14,478	4	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
New London, Conn.....	Aug. 21	17,548	11	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	Aug. 28	17,548	7	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
New Orleans, La.....	do.	278,104	101	22	15	9	1	21	.....	11	.....	1	.....	.....	.....
Newport, Ky.....	Aug. 28	28,901	14	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.....	do.	33,587	10	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New York, N. Y.....	do.	3,437,202	1,336	491	149	158	14	58	5	156	14	167	9	44	13
Niagara Falls, N. Y.....	do.	19,457	8	1	1	3	.....	1	.....	.....	.....	.....	.....	1	.....
Northampton, Mass.....	do.	18,643	4	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Oakland, Cal.....	Aug. 23	66,960	29	.....	5	1	1	2	.....	1	.....	.....	.....	.....	.....
Orange, N. J.....	Aug. 28	24,141	9	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Ottumwa, Iowa.....	Aug. 14	18,197	21	4	2	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Do.....	Aug. 21	18,197	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paducah, Ky.....	July 10	19,446	10	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	July 17	19,446	6	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Do.....	July 24	19,446	10	5	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	July 31	19,446	7	.....	.....	3	1	.....	.....	.....	.....	.....	.....	10	1
Do.....	Aug. 7	19,446	14	6	4	.....	.....	.....	.....	.....	.....	.....	.....	12	2
Do.....	Aug. 14	19,446	12	5	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Aug. 21	19,446	9	7	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Philadelphia, Pa.....	do.	1,293,697	401	88	58	35	9	4	.....	53	2	13	3	20	.....
Pittsfield, Mass.....	Aug. 28	21,766	13	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plymouth, Pa.....	Aug. 14	13,649	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Aug. 21	13,649	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Portsmouth, Va.....	Aug. 24	17,427	4	.....	1	5	.....	4	.....	.....	.....	.....	.....	.....	.....
Pottstown, Pa.....	Aug. 28	13,696	4	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Providence, R. I.....	do.	175,597	56	10	6	5	.....	.....	.....	3	.....	.....	.....	3	1
Quincy, Mass.....	May 22	23,899	7	1	1	.....	.....	6	.....	.....	.....	5	.....	.....	.....
Do.....	May 29	23,899	7	5	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Do.....	June 5	23,899	3	.....	1	1	.....	.....	.....	3	.....	1	.....	.....	.....
Do.....	June 12	23,899	8	3	1	.....	.....	1	.....	.....	.....	4	.....	.....	.....
Do.....	June 19	23,899	4	.....	.....	1	.....	.....	.....	4	.....	5	.....	.....	.....
Do.....	July 3	23,899	10	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	July 10	23,899	4	4	1	1	.....	.....	.....	.....	.....	3	.....	.....	.....
Do.....	July 17	23,899	5	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....
Do.....	July 24	23,899	4	3	1	.....	.....	2	.....	3	.....	5	.....	.....	.....
Do.....	July 31	23,899	9	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	Aug. 7	23,899	6	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Do.....	Aug. 14	23,899	9	.....	1	.....	.....	.....	.....	1	.....	1	.....	1	.....
Do.....	Aug. 21	23,899	4	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Racine, Wis.....	Aug. 28	29,102	10	.....	1	.....	.....	2	.....	1	.....	.....	.....	.....	.....
Reading, Pa.....	Aug. 30	78,961	29	1	.....	4	.....	.....	.....	.....	.....	1	.....	1	.....
Rock Island, Ill.....	Aug. 28	19,493	6	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Sacramento, Cal.....	Aug. 21	29,282	14	.....	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....
St. Louis, Mo.....	Aug. 28	575,238	193	29	25	28	6	10	1	13	1	.....	1	6	.....
Saginaw, Mich.....	Aug. 7	42,345	13	1	1	.....	.....	.....	.....	1	.....	3	.....	.....	.....
Do.....	Aug. 14	42,345	13	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	Aug. 21	42,345	20	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Francisco, Cal.....	Aug. 14	342,782	92	18	5	4	3	3	.....	6	.....	1	.....	5	1
Do.....	Aug. 21	342,782	106	17	2	7	1	8	.....	4	.....	.....	.....	7	.....
San Jose.....	do.	21,500	6	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Somerville, Mass.....	Aug. 28	61,643	23	7	2	.....	.....	5	.....	5	.....	.....	.....	.....	.....
South Bend, Ind.....	do.	35,999	15	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Bethlehem, Pa.....	do.	13,241	10	5	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Springfield, Ohio.....	Aug. 21	38,253	11	3	1	1	1	1	.....	2	.....	.....	.....	.....	.....
Do.....	Aug. 28	38,253	14	2	1	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Springfield, Mass.....	do.	62,059	21	1	3	.....	.....	1	5	2	3	.....	1	.....	.....

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.
Steelton, Pa.....	Aug. 28	12,068	3	1	—	—	—	—	—	—	—	4	—	—	—
Tacoma, Wash.....	Aug. 22	37,714	22	1	2	5	—	2	—	3	—	—	—	—	—
Taunton, Mass.....	Aug. 28	31,036	14	1	—	4	—	—	—	1	—	—	—	—	—
Trenton, N. J.....	do.	73,307	5	1	5	5	—	3	—	1	—	—	—	—	—
Waltham, Mass.....	do.	23,481	7	—	—	4	—	2	1	—	—	—	—	—	—
Washington, D. C.....	Aug. 21	278,718	116	30	11	16	2	16	1	1	—	1	—	13	—
Weymouth, Mass.....	Aug. 28	11,324	7	1	—	—	—	—	—	—	—	3	—	—	—
Wheeling, W. Va.....	Aug. 14	38,878	7	1	—	—	—	—	—	—	—	—	—	—	—
Do.....	Aug. 21	38,878	11	2	—	4	—	—	—	—	—	—	—	—	—
Wilkes-Barre, Pa.....	Aug. 20	51,721	17	2	—	4	—	2	—	—	1	1	—	—	—
Do.....	Aug. 27	51,721	20	5	—	—	—	1	—	5	—	—	—	3	—
Wilmington, Del.....	Aug. 28	76,508	14	—	2	—	—	1	—	—	—	—	—	—	—
Woburn, Mass.....	do.	14,254	6	—	—	—	—	—	—	—	—	—	—	—	—
Yonkers, N. Y.....	Aug. 19	47,931	28	9	3	1	—	6	—	1	—	—	—	—	—
Do.....	Aug. 26	47,931	26	3	3	—	1	4	—	—	—	2	—	—	—
Zanesville, Ohio.....	Aug. 28	23,538	6	1	1	—	—	1	—	—	—	—	—	—	—

FOREIGN AND INSULAR.

BARBADOS.

Report from Bridgetown—Inspection of vessels—Sanitary conditions.

Acting Assistant Surgeon Urquhart reports, August 21:

Week ended August 21. Bills of health issued to 6 vessels, having a total of 108 passengers and 393 members of crews. Sanitary condition of vessels, cargoes, crews, and passengers good. Sanitary condition of the port and island good. No quarantinable disease reported.

CHINA.

Reports from Hongkong—Quarantine restrictions—Plague—Examination of emigrants—Inspection of vessels.

Passed Assistant Surgeon McKeon reports, July 19 and 27:

Week ended July 17. To the restrictions enforced by Hongkong as reported July 10, the following have been added:

Disease.	Port or place.	Restriction in force.
Plague.....	Amoy.....	Medical examination; quarantine at the discretion of the medical officer.

To the restrictions enforced against Hongkong as reported July 10, the following have been added:

Place or port.	Nature of measure.
Chefoo.....	Hongkong declared an infected port. Do.
New-chwang.....	

Week ended July 24.

Restrictions enforced by and against Hongkong remain as reported July 17.

Quarantinable diseases.—Week ended July 17: Plague 2 cases, 2 deaths. Week ended July 24: Plague 8 cases, 5 deaths.

Examination of aliens.—For Honolulu and Pacific coast ports, week ended July 17: Examined 438, rejected 93. Week ended July 24: Examined 0.

Inspection of vessels.—Week ended July 17: Inspected 10. Week ended July 24: Inspected 9.

Report from Shanghai—*Inspection of vessels*—*No plague infection found in rats*—*Cholera at Hankow and smallpox at Tientsin.*

Acting Assistant Surgeon Ransom reports, July 28:

Week ended July 24. Supplemental bills of health granted to 3 steamships having an aggregate personnel of 1,544. There were inspected 2 vessels, 391 members of crews, and 31 steerage passengers. Manifests were viséed for 7,452 pieces of freight and 10 pieces of human hair were disinfected. Two pieces of steerage baggage were inspected and passed and 6 pieces disinfected. Twelve emigrants were examined for passage to the United States per steamships *Siberia* and *Aki Maru*, of whom 11 were passed and 1 was recommended for rejection on account of favus.

The last plague rat was found July 5. Of 241 rats found dead and examined during the week ended July 24 none proved to be plague infected.

Reports from Hankow for the week ended July 17 show 1 case and 1 death from cholera. Tientsin reports for the week ended July 3, 1 case and 2 deaths from smallpox.

CUBA.

Report from Santiago—*Inspection of vessels*—*Leprosy.*

Acting Assistant Surgeon Wilson reports, August 24:

Week ended August 21. Bills of health issued to 6 vessels bound for the United States. No vessel fumigated. One new case of leprosy is reported, making a total of 4 cases present.

The sanitary department reports having inspected 3,022 houses, finding larvæ in 2 water deposits.

GUATEMALA.

Reports from Puerto Barrios, fruit port—*Stegomyia calopus present*

Acting Assistant Surgeon Ames reports:

Week ended August 21. Present officially estimated population, 350. General sanitary condition of this port and the surrounding country during the week, good. *Stegomyia calopus* present. No quarantinable disease exists.

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.
Aug. 16	Heredia.....	New Orleans via Belize...	81	5	14
18	Belize.....	Mobile via Belize.....	18	0	0
20	Belvernon.....	New Orleans via Belize...	22	0	5

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

HAWAII.

Report from Honolulu—Examination of rats for plague infection.

Chief Quarantine Officer Hobdy reports, August 16:

HONOLULU.

Week ended August 14.

Total rats taken.....	557
Trapped.....	543
Shot from trees.....	14
Found dead.....	0
Examined bacteriologically.....	409
Plague rats.....	0
Classification of rats trapped:	
Mus alexandrinus.....	42
Mus musculus.....	252
Mus norvegicus.....	106
Mus rattus.....	143
Classification of rats shot from trees:	
Mus alexandrinus.....	3
Mus rattus.....	11
Average number of traps set daily.....	1, 294

HONDURAS.

Report from Ceiba, fruit port.

Acting Assistant Surgeon Jumel reports:

Week ended August 25. 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.
Aug. 20	Rosina.....	33	1	0	0
22	Fjell.....	17	0	0	0
23	John Wilson.....	18	6	0	0
24	Navigator.....	21	0	0	0

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

INDIA.

Report from Calcutta—Transactions of service—Cholera, plague, and smallpox—Summary of plague in Bengal and India.

Acting Assistant Surgeon Allan reports, August 5:

Week ended July 31. Bill of health issued to the steamship *Kasama* bound for Boston and New York with a total crew of 59. The usual precautions were taken, holds fumigated, rat guards placed on wharf lines, and Asiatics' effects disinfected.

Week ended July 24. Seventeen deaths from cholera and 17 from plague in Calcutta; in Bengal, 24 cases and 26 deaths from plague; in India, 781 cases of plague with 623 deaths.

ITALY.

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

Surgeon Geddings reports, August 16:

Week ended August 14. Vessels inspected at Naples.

NAPLES.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of baggage inspected and passed.	Pieces of baggage disinfected.
Aug. 11 14	Carpathia..... Verona.....	New York..... Philadelphia.....	714	80	790

Rejections recommended.

Date.	Name of ship.	Trachoma.	Favus.	Suspected trachoma.	Suspected favus.	Other causes.	Total.
Aug. 11 14	Carpathia..... Verona.....	14	1	9	0	4	28

Smallpox in Naples.—During the week ended August 15, 22 cases of smallpox and 6 deaths were reported at the health office of the city of Naples.

JAPAN.

Reports from Nagasaki—No quarantinable disease—Examination of emigrants.

Acting Sanitary Inspector Thompson reports, July 24 and 31:

Week ended July 24. No quarantinable disease reported. Eight emigrants for Honolulu examined: 5 passed, 3 recommended for rejection; for San Francisco, examined 6, passed 5, recommended for rejection 1. Rejections were for trachoma.

Week ended July 31. No quarantinable disease present. Five aliens for Honolulu examined; passed 1; recommended for rejection 4; for San Francisco, examined 6, passed 5; recommended for rejection 1.

MEXICO.

Report in regard to yellow fever in Colima.

In response to a request for information in regard to the cases of yellow fever reported as having occurred at Colima, the president of the superior board of health of Mexico reported under date of September 8:

There is no yellow fever in Colima and has been none.

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

Acting Assistant Surgeon Carter reports, August 23:

Week ended August 22.

Bills of health issued.....	4
Vessels fumigated.....	3
Vessels inspected.....	1
Passengers inspected.....	116
Members of crews inspected.....	188

The sanitary conditions of Veracruz have been fairly good, no contagious diseases having been reported with the exception of 2 cases of smallpox. These cases came from Mexico City and were taken sick shortly after their arrival in Veracruz. They were promptly isolated and all precautions were taken. Of the 6 cases in the lazaretto previously reported, 1 ended fatally.

No serious sickness occurred on vessels while in harbor and no misquitos were found on board. The mosquitoes present in Veracruz are mostly *Culex*.

NETHERLANDS.

Report from Rotterdam—No new cases of cholera.

Assistant Surgeon Wollenberg reports, September 9:

No new cholera cases in 5 days; 9 cases still in hospital. River clean.

NICARAGUA.

Report from Bluefields, fruit port—Stegomyia calopus present.

Acting Assistant Surgeon Layton reports:

Nine days ended August 19. Present officially estimated population, 2,500. General sanitary condition of this port and the surrounding country during the week, good. Mosquitoes are numerous, *Stegomyia calopus* being especially abundant.

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.
Aug. 15	Imperator.....	New Orleans, via Cape Gracias, Nicaragua.	20	11	.....
18	Tacoma.....	Colon	294	0	.....
19	Chelston	New York, via Prinzapulca, Nicaragua, and Mathewtown, Inagua, West Indies.	30	0	.....

PERU.

Report from Callao—Inspection and fumigation of vessels—Status of plague in Peru—Plague at Callao—Plague in Chile.

Acting Assistant Surgeon Gutierrez reports, August 10:

Week ended July 31. One steamship, having an aggregate personnel of 103 members of crew and 34 cabin and 53 steerage passengers, fumigated.

Week ended August 7. Three steamships, having an aggregate personnel of 242 members of crews and 60 cabin and 16 steerage passengers, fumigated.

The following is the latest report of plague in Peru received from the director de salubridad publica:

Department.	Cases July 16.	New.	Recov-ered.	Died.	Remained July 29.
Lima.....	1	3	1	0	3
Callao.....	1	0	0	1	0
Libertad.....	3	2	2	0	3
Cajamarca.....	1	0	1	0	0
Ica.....	1	0	0	0	1
Moquegua.....	0	6	3	2	1
Lambayeque.....	0	4	0	0	4
Arequipa.....	0	1	0	0	1
Piura.....	0	5	1	2	2

One fatal case of plague occurred at Callao August 4 and one August 7.

Bills of health report plague in Chile as follows:

Iquique, July 28, 7 cases isolated in the lazaretto; 1 case in the past 2 weeks.

PHILIPPINE ISLANDS.

Cholera in Manila—Recurrence of cholera in certain provinces—Inspection of vessels.

Chief Quarantine Officer Heiser reports, July 13 and 20:

Week ended July 10. No quarantinable disease reported for the city of Manila.

Cholera in the provinces.

Province.	Cases.	Deaths.	Province.	Cases.	Deaths.
Samar.....	4	1	Albay.....	131	120
Bulacan.....	1	1	Ambos Camarines.....	37	33
Pampanga.....	48	30	Total.....	237	193
Leyte.....	2	0			
Cebu.....	14	8			

Week ended July 17. One case of cholera, with 1 death, was reported for the city of Manila.

Cholera in the provinces.

Province.	Cases.	Deaths.	Province.	Cases.	Deaths.
Bulacan.....	16	13	Albay.....	92	38
Negros Oriental.....	6	3	Camarines.....	65	41
Pampanga.....	81	51	Tarlac.....	3	3
Cagayan.....	70	39	Total.....	343	193
Cebu.....	10	5			

Cholera in Manila.

From time to time during the past few months deaths have occurred in the city of Manila of persons who presented many of the clinical symptoms of cholera, but, upon a careful microscopical examination, both before and after death, no cholera spirillum was found. A body was brought to the city morgue June 11 which had a history resembling that of cholera, and from cultures made from material taken at the autopsy Passed Assistant Surgeon McLaughlin demonstrated the cholera vibrio of Koch. The organism differed somewhat from the typical form, in that it had more than the usual breadth. A diligent house-to-house inspection was made of the entire city of Manila for 3 days following July 11, but no further case was detected, nor have any further cases been found to date. Cholera made its appearance on or about July 9 in a threatening manner over widely scattered sections of the Philippine Islands. Cases in rapidly increasing numbers commenced to occur in the provinces of Isabela, Cagayan, Tarlac, Pampanga, Albay, Camarines, Samar, Leyte, Negros Oriental, and Cebu.

The sudden appearance of the disease in many places which were previously believed to be free from cholera has not yet been satisfactorily explained. It is surmised that a number of mild cases, and perhaps cholera carriers, were present in the communities in which the disease made its appearance, and that weather conditions—that is, the onset of the rainy season—favored the propagation and conveyance of the cholera spirillum. It is, of course, easy to understand that on dark, cloudy days the cholera organism would be in much better condition to continue external existence than on a bright, sunny day; that is to say, the chances for the cholera organism being conveyed by the fingers, linen, or other articles soiled with dejections would be very much increased if the organism could live under such conditions 10 hours or more, as against the shorter period which it is supposed to be able to exist in the bright sunshine. The outbreak in the provinces of Isabella and Cagayan has been traced in a fairly satisfactory manner to a large religious gathering which was held at Piat, many of the participants, upon returning to their homes, and even en route, being stricken with the disease.

The service has imposed incoming quarantine inspection upon all interisland vessels arriving at ports of entry from the infected districts.

Inspection of vessels.

Week ended July 10. Consular bills of health issued:

July 8 the British steamship *Gymeric*, with 39 in crew, en route from Seattle to Boston and New York, granted a supplemental bill of health after the usual inspection of crew and cargo. Vessel fumigated.

July 8 the British steamship *Titan*, with 87 in crew and 8 passengers, granted a bill of health for Seattle and Tacoma. Cargo inspected and passed while loading. Crew inspected on board prior to sailing. July 10 the British steamship *Kumeric*, with 68 in crew and 9 passengers, granted a bill of health for Tacoma via China and Japan ports. Crew inspected at the hour of sailing. Cargo inspected and certified.

Week ended July 17. Consular bills of health issued:

July 12 the U. S. revenue cutter *Tahoma*, with 70 in crew, en route from Baltimore to Seattle, granted a bill of health.

July 15 the U. S. army transport *Logan*, with 190 in crew and 1,140 passengers, granted a bill of health for San Francisco via Nagasaki and Honolulu. Vessel partially disinfected. Crew and steerage passengers bathed and their effects and baggage disinfected. Cargo and baggage inspected and either disinfected or passed. All persons on board inspected at the Mariveles quarantine station prior to sailing.

July 15 the British steamship *Seminole*, with 70 in crew, en route from Hongkong to San Francisco, granted a supplemental bill of health. Cargo inspected and certified as loaded. Crew inspected at the hour of sailing. July 16 the British steamship *Seneca*, with 46 in crew and 3 passengers, en route from Hongkong to New York, was granted a supplemental bill of health. Personnel and cargo inspected and passed. July 16 the British steamship *Kaifong*, with 65 in crew and 9 passengers, en route from Amoy to Cebu, granted a supplemental bill of health. Crew and passengers bathed and their

effects disinfected at the Mariveles quarantine station. July 17 the British steamship *Taming*, with 68 in crew, en route from Hongkong to Cebu, granted a supplemental bill of health. July 17 the British steamship *Largo Law*, with 35 in crew, en route from Newcastle to Cebu, granted a supplemental bill of health after the usual inspection of cargo and personnel.

RUSSIA.

Report from Libau—Status of cholera in Russia—Cholera case imported at Stockholm, Sweden, from Russia—Epidemic plague in the Ural district—Examination of emigrants.

Acting Assistant Surgeon De Forest reports, August 21:

Cholera in Russia week ended August 20.

Date.	Place.	Cases.	Deaths.
Aug. 14-20.....	St. Petersburg.....	201	71
Do.....	Jaroslav.....	28	16
Do.....	Rubinsk.....	12	11
Do.....	Riga.....	19	8
Do.....	Gadjatsch.....	50	16
Do.....	Krementschug.....	31	11
Do.....	Archangel.....	21	4
Do.....	Kem.....	27	20
Do.....	Jekaterinenburg.....	2	1
Do.....	Novgorod.....	27	17
Do.....	Nishni-Novgorod.....	1	1
Since beginning of epidemic in May.....	Pskov.....	42	7
Aug. 14-20.....	Talabsk.....	5	18
Do.....	Polotzk.....	45	4
Do.....	Tver.....	7	33
Do.....	Vologda.....	44	1
Do.....	Foltava.....	2	1
Do.....	Mologa.....	1	1
Do.....	Cronstadt (present).....	3	3
Do.....	Holmogory.....	4	1
Do.....	Dorpat.....	1	1
Do.....	Perm.....	1	1
Do.....	Courland (to August 8).....	40	21
Do.....	Dmitrokovschtschina.....	1	2
Do.....	Mohilev (Butrimovo).....	5	2
Do.....	District of Volmar (near Riga).....	1	1
Do.....	Vitebsk.....	43	20

At Stockholm, Sweden, a cholera case was imported on a vessel arriving from St. Petersburg. Cholera is now generally diffused throughout Russia.

Plague was reported August 8 at Kirgisenaul in the Ural district. The epidemic began August 5, and to August 8 there had been 19 cases, with 18 deaths. The case reported August 8 died August 13. The infected district is surrounded by a military cordon.

The steamship *Russia* sailed August 18 for New York with 858 steerage and 75 cabin passengers. All were in good condition at time of sailing; 323 pieces of baggage disinfected. No article of food of any description is permitted to be taken on board by the emigrants. A card stating this prohibition is given to each emigrant and posted in emigrants' lodging houses.

VENEZUELA.

Reports from La Guaira—Inspection of vessels—Examination of rats for plague infection—Rat fleas—Leper hospitals—Plague at Caracas.

Acting Assistant Surgeon Kellogg reports, August 15 and 22:

Week ended August 15.

BILLS OF HEALTH ISSUED.

Date.	Vessel.	Crew.	Passengers in transit.	Passengers taken.	Destination.
Aug. 9	Zulia.....	49	1	7	New York.
9	Peru.....	161	129	0	Colon.

Rats examined bacteriologically 17
 Plague rats 0

Rats identified:

Mus norvegicus 9
Mus alexandrinus 5
Mus rattus 3

17

Rats identified as to sex:

Male 8
 Female 9

17

Fleas identified (from 4 rats):

Pulex cheopis 13
Pulex irritans 1

14

Mosquitoes are not numerous, the varieties present being chiefly *Stegomyia* and *Culex*.

Leper hospitals at La Guaira and Maracaibo.—The leper hospital at La Guaira, which is filled to its capacity, accommodates 125 patients. It is situated at a distance of about 5 miles from La Guaira on high ground overlooking the sea, and is built of stone and cement, with tiled roofs. It is a one-story structure, and built around 3 large courts or inner gardens which are planted thickly with bananas, papayas, and other tropical fruits, furnishing in addition to the fruit grown, a most attractive retreat for the patients. The institution receives medical attention from a visiting physician.

All degrees of both nerve and nodular leprosy are to be seen here and an excellent field is afforded for the study of this disease. There is another lazaretto at Maracaibo, containing 500 patients. There are many lepers at large throughout the country.

Plague at Caracas.—A case of plague was reported August 7 at Caracas, and August 15, 2 cases with 1 death were reported. This makes a total of 25 cases with 7 deaths since the beginning of May, 1909.

The Caracas authorities report the examination of 38 rats during the week ended August 7, with negative results. From August 7 to 9, 1,458 rats were burned.

Week ended August 22.

BILLS OF HEALTH ISSUED.

Date.	Vessel.	Crew.	Passengers in transit.	Passengers taken.	Destination.
Aug. 18	Montevideo.....	120	185	46	Porto Rico.
19	Prins Mauritz.....	40	6	9	New York.
20	Brasile.....	126	101	0	Colon.
21	Belgian.....		0	0	Galveston.

Rats examined bacteriologically.....	7
Plague rats.....	0
Rats identified: <i>Mus norvegicus</i>	7
Rats identified as to sex:	
Male.....	2
Female.....	5
	7

Plague at Caracas.—One case of pneumonic plague, with 1 death, occurred at Caracas August 16. The usual measures are continued.

The following statistics relative to plague cases to August 1 were received from the president of the sanitary commission:

Total cases of plague.....	21
Bubonic form.....	18
Septicemic form.....	2
Pneumonic form.....	1
Location of buboes:	
Axillary.....	1
Cervical.....	3
Right inguinal.....	8
Left inguinal.....	3
Both inguinal regions.....	3
	18
Treatment of cases:	
Extirpation of glands with administration of Yersin's serum (died, 2).....	13
With serum alone (died, 5).....	8
	21

To August 1 a total of 38,500 rats and mice had been destroyed in Caracas; 217 rats were examined bacteriologically, of which number 3 were found infected.

Yellow fever at Maiquetia.

Acting Assistant Surgeon Kellogg reports, August 21:

During the week ended August 21 a case of yellow fever occurred in the outskirts of Maiquetia. Proper precautions are being taken to prevent spread.

Maiquetia is a town and watering place on the coast of Venezuela, a short distance west of La Guaira. A fatal case of yellow fever occurred at Maiquetia May 24, 1909. There was no spread. (See Public Health Reports, June 18, 1909, p. 884.)

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

AUSTRALIA—*New South Wales*—*New Castle*.—Month of June, 1909. Estimated population, 53,100. Total number of deaths, 50, including diphtheria 2, and 3 from tuberculosis.

BRAZIL—*Pernambuco*.—Four weeks ended June 30, 1909. Estimated population, 210,000. Total number of deaths, 663, including enteric fever 2, measles 4, smallpox 10, yellow fever 5, and 100 from tuberculosis.

CUBA—*Matanzas*.—August 1 to 20, 1909. Estimated population, 36,000. Total number of deaths, 48, including enteric fever 1, and 5 from tuberculosis.

Sagua la Grande.—Estimated population, 28,030. Total number of deaths 42. No deaths from contagious diseases.

FRANCE—*Marseille*.—Month of July, 1909. Estimated population, 517,498. Total number of deaths 853, including diphtheria 5, enteric fever 22, measles 10, scarlet fever 10, whooping cough 3, and 97 from tuberculosis.

Nice.—Month of July, 1909. Estimated population, 150,881. Total number of deaths 206, including enteric fever 2, whooping cough 1, and 22 from tuberculosis.

GREAT BRITAIN—*England and Wales*.—The deaths registered in 76 great towns in England and Wales during the week ended August 14, 1909, correspond to an annual rate of 11.5 per 1,000 population, which is estimated at 16,445,281.

London.—One thousand and forty-seven deaths were registered during the week, including measles 22, scarlet fever 9, diphtheria 10, whooping cough 12, tuberculosis 158, enteric fever 2, and 39 from diarrhea. The deaths from all causes correspond to an annual rate of 11.3 per 1,000. In Greater London 1,498 deaths were registered. In the "outer ring" the deaths included 5 from measles, 2 from scarlet fever, 6 from diphtheria, and 4 from whooping cough.

Ireland.—The average annual death rate represented by the deaths registered during the week ended August 14, 1909, in the 21 principal town districts of Ireland was 14.0 per 1,000 of the population, which is estimated at 1,142,308. The lowest rate was recorded in Wexford, viz, 4.7, and the highest in Galway, viz, 38.8 per 1,000.

Scotland.—The deaths registered in 8 principal towns during the week ended August 14, 1909, correspond to an annual rate of 12.6 per 1,000 of the population, which is estimated at 1,839,038. The highest rate of mortality was recorded in Leith, viz, 16.4, and the lowest in Edinburgh, viz, 11.3 per 1,000. The aggregate number of deaths registered from all causes was 452, including diphtheria 2, enteric fever 5, measles 4, scarlet fever 5, and 9 from whooping cough.

ITALY—*Genoa*.—Two weeks ended July 31, 1909. Estimated population, 279,163. Total number of deaths, 197 including enteric fever 2, measles 1, scarlet fever 1, and 18 from tuberculosis.

Two weeks ended August 15. Total number of deaths 176, including enteric fever 5, measles 2, and 15 from tuberculosis.

SOUTH AFRICA—*Kimberley*.—Month of July, 1909. Estimated population, 44,141. Total number of deaths 58. No deaths from contagious diseases.

SPAIN—*Malaga*.—Month of June, 1909. Estimated population, 135,000. Total number of deaths 307, including diphtheria 4, enteric fever 1, measles 1, and 24 from tuberculosis.

Month of July, 1909. Total number of deaths 264, including diphtheria 3, enteric fever 1, measles 1, scarlet fever 1, and 21 from tuberculosis.

TASMANIA—*Hobart Town*.—Month of May, 1909. Estimated population, 184,552. Total number of deaths, 132, including diphtheria 1, and 1 from measles.

Month of June, 1909. Total number of deaths, 135, including diphtheria 3, and 6 from enteric fever.

Cholera, yellow fever, plague, and smallpox, from June 26 to September 10, 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:				
Amoy.....	June 13-24.....		75	
Hankow.....	July 17.....	1	1	
Kang Thau.....	Apr. 1-June 30....	4	2	
Swatow.....	May 11-29.....			Present in vicinity.
Germany:				
Konigsberg.....	July 21.....		1	
India:				
Bombay.....	May 30-Aug. 3....		170	
Calcutta.....	May 16-July 24....		360	
Madras.....	May 29-July 16....		5	
Negapatam.....	May 8-14.....		4	
Rangoon.....	May 16-July 24....		29	
Indo-China:				
Saigon.....	May 9-July 17....	20	14	
Netherlands, The:				
Rotterdam.....	Aug. 26.....	2		
Philippine Islands:				
Manila.....	July 11-17.....	1	1	Fourth quarter 1908, 308 cases and 190 deaths; first quarter 1909, 1 death (imported).
Provinces.....				Fourth quarter 1908, 7,330 cases and 4,292 deaths; first quarter 1909, 2,221 cases and 1,405 deaths.
Albay.....	June 27-July 17...	282	212	
Ambos Camarines.....	July 4-17.....	102	74	
Bulacan.....	July 4-17.....	17	14	
Cagayan.....	July 11-17.....	70	30	
Cebu.....	May 16-July 17....	42	21	
Dapitan.....	May 9-15.....			Present.

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

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Philippine Islands—Continued.				
Provinces—Continued.				
Iloilo.....	May 23-June 19....	28	18	
Leyte.....	June 6-July 10....	16	10	
Moro.....	May 29-July 3....	9	9	
Mountain.....	June 20-26.....	27	15	
Negros Occidental.....	May 9-15.....	8	2	
Negros Oriental.....	May 16-July 17....	111	74	
Pampanga.....	May 9-July 17....	206	133	
Pangasinan.....	June 13-19.....	1	1	
Samar.....	May 9-July 10....	42	26	
Sorsogon.....	May 9-15.....	8	2	
Tarlac.....	July 4-10.....	3	3	
Russia.....				August 27, 1909.
				July 23, present in Drissa, Kostroma, Kreutzburg, Mahlgaben, Muravjevo, Onega, Pinnaga, Polotzk, Radsiwilischki, Reval, Schaulen, and Tver.
Archangel.....	June 26-Aug. 13....	296	165	
Baku, government.....	July 4-10.....	1	1	
Chmalysk, district.....	July 1.....	1	1	
Courland.....	July 5-Aug. 8....	58	29	
Cronstadt.....	June 30-Aug. 24....	59	25	
Eastland, government.....	July 1.....	1	1	
Finland—				
Mariengam.....	June 23-24.....	1	1	
Viborg.....	July 9-16.....	1	1	
Gadjatschesk.....	Aug. 13-20.....	50	16	
Hungerburg.....	July 30.....	1	1	Present.
Jaroslav.....	July 4-Aug. 24....	85	44	
Kief.....	July 30.....	1	1	Do.
Kretsky, district.....	July 1.....	1	1	
Mitau.....	July 15.....	2	1	
Moscow.....	July 9-24.....	6	2	
Novgorod, government.....	July 4-Aug. 24....	168	51	
Olonets, government.....	June 20-July 31....	9	6	
Polotzk.....	June 27-Aug. 24....	342	119	
Pskov.....	July 1-Aug. 24....	52	11	
Riga.....	July 1-Aug. 24....	137	44	
Rjasin.....	June 24-July 16....	3	3	Do.
Rubinsk.....	July 30-Aug. 24....	83	45	
Simbirska.....	July 13.....	2	2	
St. Petersburg, government.....	June 9-July 31....	474	169	
St. Petersburg.....	June 2-Aug. 24....	4,050	1,490	
Vilna.....	July 11-Aug. 8....	6	1	
Vitebsk, government.....	July 9-Aug. 24....	619	213	
Vologda, government.....	May 31-Aug. 24....	353	236	
Siam:				
Bangkok.....	Apr. 25-May 28....	1	1	
Straits Settlements:				
Singapore.....	May 9-June 5....		18	

YELLOW FEVER.

Barbados, general.....	June 13-20.....	1	1	St. Joseph Priash, Dec. to June, 14 deaths not previously reported.
Brazil:				
Bahia.....	May 22-July 2....	34	15	
Manaos.....	May 23-Aug. 7....	31	9	
Para.....	May 30-Aug. 7....	31	31	
Pernambuco.....	Apr. 15-June 30....		8	
British Guiana:				
Suddle.....	July 22.....	1	1	35 miles from Georgetown.
Ecuador:				
Guayaquil.....	May 23-July 31....		34	
Mexico:				
Merida.....	June 5-Aug. 14....	3	1	
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.
Venezuela:				
Maiquetia.....	Aug. 15-21.....	1	1	

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

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Australia:				
Adelaide.....	Apr. 30-June 12....	2	2	And vicinity.
Mackay.....	Jan. 21-June 6....	2	2	
Sydney.....	Apr. 18-May 29....	5	1	
Azores:				
Terceira.....	June 16.....	3	1	
Brazil:				
Bahia.....	June 5-July 16....	14	7	
Rio de Janeiro.....	May 17-July 10....	2	1	
Chile:				
Antofagasta.....	May 9-30.....	13	5	July 10, 4 cases in the lazaretto.
Iquique.....	May 20-July 16....	17	8	July 16, 7 cases in the lazaretto.
Magillones.....	May 4.....			Still present.
China:				
Amoy.....	June 1-July 24.....		562	
Canton.....	May 9-July 24.....	310	199	
Chang-Foo.....	July 23.....			Epidemic.
Chinchew.....	May 22.....			Do.
Hongkong.....	May 2-July 24.....	86	77	
Kang-be.....	July 24.....	61	59	
Kang Thau.....	Apr. 1-June 30.....	117	59	
Pollam.....	May 23-29.....	8	7	
Swatow district.....	May 16-July 1.....		350	July 1, 200 cases still present in Touchowfu and Yin Shan; July 19, present in Swatow.
Ecuador:				
Chunchi.....	June 1-30.....	3	1	
Guayaquil.....	May 23-July 31.....		32	
Huigra.....	May 1-June 15.....	16	3	
Egypt:				
Alexandria.....	May 30-July 30.....	10	8	
Port Said.....	May 29-Aug. 2.....	11	3	
Provinces—				
Assiout.....	May 14-Aug. 12.....	43	8	
Beherach.....	June 1-July 15.....	28	10	
Galyoobeeyeh.....	June 2-Aug. 10.....	4	2	
Garbieh.....	June 2-Aug. 12.....	32	14	
Fayoum.....	June 3-23.....	15	6	
Menouf.....	Jan. 18-Aug. 8.....	86	17	
German East Africa:				
Muanza district.....	Apr. 30-May 22.....		12	
Hawaii:				
Hilo.....	Aug. 19-20.....	1	1	
Honolulu.....	July 20.....	1		The case arrived on the s. s. Korea, had been ill 11 days, and probably received infection at Hongkong.
Olaa plantation.....	Aug. 20-22.....	3	2	
India:				
Bombay Presidency and Sind.....	May 16-July 17....	1,483	1,260	
Madras Presidency.....	May 16-July 17....	521	312	
Bengal.....	May 16-July 17....	725	623	
United provinces.....	May 16-July 17....	1,500	1,396	
Punjab.....	May 16-July 17....	7,030	6,042	
Burman.....	May 16-July 17....	642	608	
Central provinces, including Berar.....	May 16-July 17....	48	37	
Mysore State.....	May 16-July 17....	424	313	
Rajputana and Ajmer-Merwara.....	May 16-July 17....	998	834	
Kashmir.....	May 16-June 12....	4	3	
Grand total.....		13,375	11,388	
Bahrien Island, Persian Gulf.....	May 29-June 4.....		4	
Indo-China:				
Saigon.....	May 9-July 17....	37	34	
Japan:				
Formosa.....	May 23-July 17....	223	156	In south and central parts.
Kobe.....	May 30-July 17....	12	8	
Osaka.....	July 4-10.....	1	1	
Shikoku, island.....	July 17-Aug. 3.....	3	1	Still present.
Tokyo.....	June 26.....	3		
Yokohama.....	May 25-July 12....	18	12	
Mauritius.....	Apr. 1-May 31.....	9	9	
Peru:				
Arequipa, department.....	May 8-July 29.....	11	2	
Chala.....	July 3-15.....			Present.
Mollendo.....	July 3-15.....			Do.
Cajamarca, department.....	May 8-July 15.....	20	6	
Callao, department.....	May 8-July 29.....	8	2	
Callao.....	June 20-July 15.....			Do.

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

PLAQUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Peru—Continued.				
Ica, department.....	July 3-15.....	1	—	
Lambayeque, department.....	May 8-July 29.....	18	10	
Eten.....	July 15.....	—	—	Present.
Liberated, department.....	May 8-July 29.....	13	7	
Salaverry.....	July 15.....	—	—	Do.
Lima, department.....	May 8-July 29.....	16	8	
Cerro Azul.....	July 15.....	—	—	Do.
Moquegua, department.....	July 16-29.....	6	2	
Ilo.....	July 15.....	—	—	Do.
Pescadores Islands.....	June 27-July 3.....	4	—	From s. s. Lodore
Piura, department.....	June 18-July 29.....	16	10	
Paíta.....	June 20-July 15.....	—	—	Present.
Russia:				
Kirgisenaul.....	Aug. 5-8.....	19	18	In the Ural district.
Siam:				
Bangkok.....	Apr. 25-June 28.....	13	13	
Trinidad:				
Port of Spain.....	June 13-July 18.....	6	5	
Turkey in Asia:				
Adalia.....	June 25-July 29.....	5	—	
Beirut.....	June 25-July 4.....	1	—	In Harrett Aryk.
Uruguay:				
Montevideo.....	May 1-June 30.....	—	2	
Venezuela:				
Caracas.....	June 18-Aug. 16.....	13	3	
Zanzibar.....	July 26.....	1	—	

SMALLPOX.

Algeria:				
Algiers.....	May 1-July 31.....	27	15	
Bona.....	June 1-July 31.....	35	17	
Argentina:				
Buenos Aires.....	Mar. 1-May 31.....	—	16	
Rosario.....	Apr. 1-May 31.....	2	2	
Austria:				
Galicia.....	June 6-July 31.....	6	—	
Silesia.....	June 20-Aug. 7.....	17	—	
Belgium:				
Antwerp.....	July 18-24.....	4	—	
Brazil:				
Bahia.....	May 22-July 16.....	23	7	
Pernambuco.....	Apr. 1-June 30.....	—	38	
Rio de Janeiro.....	May 17-Aug. 1.....	63	28	
Santos.....	May 10-16.....	—	1	
Sao Paulo.....	May 10-July 18.....	—	12	
Canada:				
British Columbia—				
Vancouver.....	June 1-July 31.....	—	—	
Nova Scotia—				
Halifax.....	June 13-Aug. 7.....	5	—	
Quebec—				
Montreal.....	June 17.....	—	—	2 cases additional at Grosse Isle on s. s. Virginian.
Ceylon:				
Colombo.....	May 23-29.....	2	—	
Chile:				
Valparaiso.....	May 16-Aug. 7.....	—	—	Present.
Santiago.....	May 29.....	—	—	Still present.
China:				
Amoy.....	June 1-July 10.....	24	31	May 9-15: present.
Hankow.....	Apr. 25-June 12.....	—	—	Present among natives.
Hongkong.....	May 2-June 26.....	16	12	
Kang Chau.....	Apr. 1-June 30.....	7	1	
Shanghai.....	May 10-July 11.....	—	7	Among natives.
Tientsin.....	June 27-July 3.....	1	2	
Egypt, general.....	Apr. 30-July 8.....	1,156	271	
Cairo.....	May 21-July 29.....	—	14	
Suez.....	May 21-July 8.....	46	3	
Ecuador:				
Guyaquil.....	June 1-30.....	2	—	
France:				
Marseille.....	June 1-30.....	—	5	
Nantes.....	July 1-31.....	1	—	
Paris.....	May 23-Aug. 9.....	38	2	
Toulon.....	July 25-31.....	—	1	
Germany, general.....	May 30-Aug. 14.....	20	—	
Gibraltar.....	Aug. 8.....	1	—	
Great Britain:				
Cardiff.....	July 6.....	1	—	
Liverpool.....	June 21-26.....	2	—	Case, June 22, from s. s. Canada.

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

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Bombay.....	May 26-Aug. 3.....	.....	76	
Calcutta.....	May 16-July 17.....	.....	124	
Madras.....	May 22-July 23.....	.....	12	
Rangoon.....	May 12-July 24.....	.....	24	
Indo-China:				
Saigon.....	May 9-July 10.....	20	14	
Italy, general.....	May 31-Aug. 19.....	54	.....
Genoa.....	June 1-Aug. 15.....	13	.....
Naples.....	May 31-Aug. 15.....	254	41	
Ottiana.....	June 23.....	1	.....
Rome.....	Mar. 7-13.....	1	1	
Japan:				
Formosa.....	June 13-19.....	1	.....	From s. s. Selja.
Moji.....	June 6.....	1	.....
Osaka.....	Jan. 1-May 31.....	3	.....
Yokohama.....	June 1-7.....	1	.....
Java:				
Batavia.....	May 6-July 24.....	17	.....
Mauritius:				
Port Louis.....	Apr. 1-30.....	1	1	
Mexico:				
Aguascalientes.....	June 21-27.....	.....	1	
Chihuahua.....	Aug. 16-22.....	1	.....
Guadalajara.....	June 11-Aug. 19.....	.....	3	
Mexico.....	May 16-July 10.....	.....	71	
Monterey.....	June 14-Aug. 8.....	.....	24	
Veracruz.....	June 1-Aug. 22.....	10	3	Aug. 12; 6 cases imported from Medellin.
Norway, general.....	Apr. 1-May 30.....	3	.....
Panama:				
Canal Zone—				
Ancon.....	Mar. 1-31.....	1	.....	At Culebra Island quarantine station; from a vessel.
Persia:				
Shiran.....	May 1-31.....	.....	.....	Present.
Turbat-i-Haidari.....	May 1-31.....	.....	.....	Do.
Peru:				
Lima.....	July 4-10.....	1	.....	In the lazaretto.
Philippine Islands:				
Manila.....	May 9-June 19.....	16	6	Fourth quarter, 1908, 28 cases and 8 deaths; first quarter, 1909, 55 cases and 16 deaths.
Portugal:				
Lisbon.....	May 30-Aug. 14.....	93	.....
Russia:				
Libau.....	May 6-Aug. 1.....	4	.....
Moscow.....	May 16-Aug. 7.....	326	97	
Odessa.....	May 30-Aug. 7.....	24	1	
Riga.....	June 6-Aug. 14.....	50	.....	May 1-30, 5 deaths.
St. Petersburg.....	May 16-Aug. 6.....	286	61	
Warsaw.....	Apr. 25-July 11.....	.....	12	
Siam:				
Bangkok.....	Apr. 25-June 28.....	2	1	
Siberia:				
Vladivostok.....	May 15-June 3.....	4	1	
Spain:				
Barcelona.....	June 1-Aug. 16.....	.....	44	
Huelva.....	May 1-July 31.....	.....	21	
Madrid.....	May 1-July 31.....	.....	238	
Seville.....	May 1-June 30.....	.....	2	
Tarragona.....	July 20-26.....	.....	1	
Valencia.....	May 30-Aug. 14.....	58	3	
Vigo.....	May 23-Aug. 14.....	.....	10	
Straits Settlements:				
Singapore.....	May 16-July 10.....	.....	2	
Switzerland:				
Aargau, canton.....	June 20-26.....	1	.....
Fribourg, canton.....	June 13-19.....	1	.....
Geneva, canton.....	May 30-June 26.....	9	.....
Tripoli:				
Tripoli.....	May 23-Aug. 7.....	58	12	
Turkey in Asia.....	July 19.....	.....	.....	Present in interior.
Bagdad.....	May 9-June 26.....	.....	.....	Present.
Bassorah.....	May 23-June 26.....	.....	.....	Do.
Hadjin.....	July 19.....	.....	.....	Do.
Smyrna.....	May 7-July 1.....	.....	28	
Turkey in Europe:				
Constantinople.....	May 31-Aug. 1.....	.....	8	
Uruguay:				
Montevideo.....	Apr. 1-June 30.....	.....	5	

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.....	Aug. 14	181,918	37											1
Acapulco.....	do.	5,000	9											
Aden.....	July 5	43,974	16	4										
Do.....	July 12	43,974	24	2										
Do.....	July 19	43,974	15	4										
Do.....	July 26	43,974	24	4										
Do.....	Aug. 2	43,974	20	5										
Agua Calientes.....	Aug. 22	40,000	67	2					1					1
Aix-la-Chapelle.....	July 31	160,061	59	4								1	3	1
Amsterdam.....	Aug. 7	565,553	105	12								1	1	7
Do.....	Aug. 14	565,553	116	17						2		1	1	
Antwerp.....	Aug. 7	323,921	70	4								1	1	1
Asuncion, Paraguay.....	June 12	75,000	19	3									3	1
Do.....	June 19	75,000	17	4										
Do.....	June 26	75,000	18	2										
Do.....	July 3	75,000	25	3						1				
Do.....	July 10	75,000	22	2										
Athens.....	Aug. 7	241,058	69	7					1	10				
Baracoa.....	Aug. 14	27,000	3	1										
Barcelona.....	Aug. 9	600,000	280	16				4		15		5		1
Do.....	Aug. 16	600,000	310	20				7		8		4		1
Barmen.....	July 31	162,100	34	4								1		
Basel.....	Aug. 7	131,000	18	2										
Belfast.....	Aug. 14	386,576	105	16								1		
Belgrade.....	July 31	80,000										2		
Belize.....	Aug. 19	9,113	2											
Berlin.....	July 31	2,100,209	497	65					2	11		8	12	8
Birmingham.....	Aug. 14	558,336	122						1	3		2	2	1
Bluefields.....	do.	2,500	2											
Bremen.....	Aug. 7	235,648	50	5								1		
Do.....	Aug. 14	235,648	39	6										
Breslau.....	Aug. 7	335,186	180	19								1	1	4
Bristol.....	Aug. 14	377,642	10	6							1	2		1
Bombay.....	July 27	977,822	569	30	15	25		5		1				
Do.....	Aug. 3	977,822	557	33	38	37		5		2			1	
Bordeaux.....	Aug. 7	253,000	67	11						1				1
Do.....	Aug. 14	253,000	84	15										
Brussels.....	Aug. 7	704,975	155	13						1	1	4	2	1
Cairo.....	July 15	701,806	633	27				1	11	7		13	29	
Do.....	July 22	701,806	582	20					5	9		9	20	
Do.....	July 29	701,806	569	31					14	7		11	19	
Calcutta.....	July 19	947,798	401	23	33	19		2					1	
Do.....	July 24	847,796	399	23	17	17							1	
Canton.....	do.	1,000,000	250	25	7					5				
Cartagena.....	Aug. 7	30,000	9	2										
Do.....	Aug. 14	30,000	118											
Chemnitz.....	Aug. 7	276,940	74	7							1	1		
Chihuahua.....	Aug. 15	37,000	50	3						3				1
Do.....	Aug. 22	37,000	50	2						1				
Christiania.....	do.	236,000	51							1			2	
Coburg.....	do.	23,322	5											
Cognac.....	Aug. 14	19,483	7	1						1				
Cologne.....	Aug. 7	472,087	146	18							3	2	2	3
Colombo.....	May 15	183,872	99	18						1				
Do.....	July 17	183,872	116	16						2			1	
Colon.....	Aug. 14	16,000	2											
Constantinople.....	Aug. 8	1,000,000	247	22					14				4	
Copenhagen.....	July 31	448,000	108	16							2		2	3
Cochimbo.....	July 31	12,000	11											
Curacao.....	Aug. 20	30,000	11											
Damascus.....	Aug. 7	250,000	50											
Denia.....	do.	12,431	1											
Do.....	Aug. 14	12,431	1	1										
Dresden.....	do.	545,900	134	18						1		1	2	1
Do.....	do.	545,900	157	21									2	
Dublin.....	do.	394,525	113	19									1	2
Dundee.....	do.	169,409	37							1		1		1
Edinburgh.....	do.	355,366	77	6									1	5
Erfurt.....	Aug. 7	107,348	31	2							1		1	

a Received out of date.

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.
Flushing.....	Aug. 14	21,208	5											
Do.....	Aug. 21	21,208	7											
Frankfort on the Main.....	July 31	366,200	84							1			3	
Do.....	Aug. 7	366,200	77											
Geneva.....	July 24	121,500	28									1		
Georgetown.....	do.....	56,000	43	7										
Do.....	July 31	56,000	40	2					2					
Do.....	Aug. 7	56,000	48	8										
Gibraltar.....	Aug. 8	26,830	7											
Do.....	Aug. 15	26,830	6											
Glasgow.....	Aug. 20	872,021	216						1	4	2	1	3	1
Gothenberg.....	Aug. 7	162,400	28	3					1	1	1	1		2
Do.....	Aug. 14	162,400	38	7						1	1	1		
Greenock.....	do.....	72,800	18											1
Guadalajara.....	Aug. 12	125,000	90							1	3			
Do.....	Aug. 19	125,000	96					1	1	1				
Guayaquil.....	July 31	75,000	56	9	5		2							2
Halifax.....	Aug. 21	40,787	25	4										
Hamburg.....	Aug. 7	872,252	188	14						1	5	5		
Hamilton, Bermuda.....	Aug. 17	20,206	4											
Do.....	Aug. 24	20,206	3											
Havre.....	Aug. 7	132,438	65	18						1			1	
Hongkong.....	July 17	315,616			2									
Do.....	July 24	315,616			5									
Konigsberg.....	do.....	239,100	86	13						1			4	5
La Guaira.....	Aug. 7	10,000	14	3						1	1			
Do.....	Aug. 14	10,000	7											
Lausanne.....	July 24	60,000	14							1				
Leeds.....	Aug. 14	484,012	119	13								1	6	2
Leipzig.....	Aug. 7	537,686	152	16								3	2	2
Leith.....	Aug. 14	85,721	27											1
Libau.....	Aug. 15	90,000									1	3		
Lisbon.....	June 20	406,869	170	23						2		3		1
Liverpool.....	Aug. 14	760,357	214	14							3		4	
Lubeck.....	do.....	97,000	23	3										4
Madras.....	July 23	509,346	388					1					1	
Do.....	July 30	509,346	353										4	
Magdeburg.....	Aug. 7	249,878	63	2									1	
Managua.....	July 24	22,278	17	1										
Do.....	July 31	22,278	20	1										
Do.....	Aug. 7	22,278	20	3										
Manaos.....	July 31	52,000	28				1		1					
Do.....	Aug. 7	52,000	32	1		1								
Manchester.....	Aug. 14	654,584	169	16						2	1		3	2
Manheim.....	July 31	183,317	6	4						1			1	
Manzanillo.....	do.....	1,700	2											
Do.....	Aug. 7	1,700	5											
Do.....	Aug. 14	1,700	2											
Do.....	Aug. 21	1,700	2											
Moncton.....	do.....	13,500	8	1										
Monrovia.....	July 24	7,000	2											
Moscow.....	July 31	1,335,104	1,113	70				14			19	15	22	5
Do.....	Aug. 7	1,335,104	952	80				4	1	7	11	6	20	4
Matamoras.....	Aug. 14	8,000	1											
Milan.....	do.....	9,000	175	31									7	
Moncton.....	Aug. 28	13,500	3											
Munich.....	July 17	566,000	159	25							1	1	5	
Do.....	July 31	566,000	178	21							1		7	3
Do.....	Aug. 7	566,000	154	28								2	5	1
Monterey.....	Aug. 22	100,000	88	7						1				
Nantes.....	Aug. 15	161,908	65	15										
Naples.....	Aug. 14	393,729	264					6						
Nuevo Laredo.....	Aug. 21	5,000	4											
Newcastle-on-Tyne.....	Aug. 14	281,584	67								1		2	
Odessa.....	Aug. 7	520,000	260	17						2	10	1	3	
Ottawa.....	Aug. 21	80,200	39								1			
Palermo.....	Aug. 7	335,000	166	5					1		1		7	2
Para.....	do.....	185,000	63	3			2							
Do.....	Aug. 14	185,000	60	6										
Paris.....	Aug. 9	2,776,394	782	171						5	1	3	10	3
Plymouth.....	Aug. 14	124,180	33							1		1		
Port Elizabeth.....	July 31	32,959	12	3										

Weekly mortality table, foreign and insular cities—Continued.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—										
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Prague.	Aug. 7	229,965	115	27										
Quebec.	Sept. 28	81,000	2							1	3		1	
Do	Aug. 21	81,000												
Queenstown.	Aug. 14	7,684	1									1		
Rangoon.	July 24	252,155	211	7	21			3						
Riga.	Aug. 7	350,000				12								
Do	Aug. 14	350,000				11								
Rio de Janeiro.	July 18	811,443	263	52				4						1
Do	July 24	811,443	240	54				3				1	1	1
Do	Aug. 1	811,443	228	57				1						
Rotterdam.	Aug. 14	414,950	109											
Do	Aug. 21	414,950	99							1				
Saigon.	July 17	206,000	15		14	1								
St. John, N. B.	Aug. 21	40,711	12	1						2				
St. Petersburg.	July 31	1,248,122	935	107		200		8	1	5	5	13	37	9
Do	Aug. 6	1,678,000	821	106		116					12	13	31	13
St. Stephen, N. B.	Aug. 28	2,840	1											
Santa Cruz de Teneriffe.	Aug. 7	46,000	14	2										
Do	Aug. 14	46,000	10	1										
Santiago de Cuba.	Aug. 21	53,614	16	4										
Scheidam.	Aug. 7	31,620	9											
Do	Aug. 15	31,620	13	1										
Singapore.	July 17	260,000	193	23						2				
Southampton.	Aug. 14	124,667	20	1								1		
South Shields.	do	117,627	30	5								2		1
Stettin.	Aug. 7	230,000	80	11								2	2	1
Do	Aug. 14	230,000	72	1								1	1	1
Stockholm.	July 31	339,582	83	13						1			1	
Do	Aug. 7	339,582	67	16								1	1	1
Sunderland.	do	159,137	25	2								1	1	
Tamatave.	July 10	7,086	2											
Do	July 17	7,086	1											
Do	July 24	7,086	7											
Tarragona.	Aug. 14	20,400	7											
Tegucicalpa.	Aug. 10	20,400	12											
Trieste.	Aug. 7	217,706	114							1	1			
Tripoli.	July 31	42,000	3											
Do	Aug. 7	42,000		4				2						
Turin.	Aug. 6	381,439	116	8						2			1	1
Valencia.	Aug. 7	240,000	85	8									1	
Do	Aug. 14	240,000	89	7						3			1	
Veracruz.	Aug. 22	32,000	22	8										
Vevay.	July 24	14,500	1											
Victoria.	Aug. 21	30,000	4											
Vienna.	Aug. 7	2,064,037	493	88						1	4		3	3
Do	Aug. 14	2,064,037	582	106						2	4	1	3	3
Vigo.	do	40,000	10					2						
Warsaw.	June 26	764,054	304	48				2	1		11		4	
Do	July 3	764,054	244	33				1			2		7	
Do	July 10	764,054	295	25				1		2	8	2	3	1
West Hartlepool.	Aug. 14	66,750	20								1			
Winnipeg.	Aug. 21	122,000	24	1										

The following cases of and deaths from smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended September 10, 1909:

SMALLPOX—UNITED STATES.

	Date.	Cases.	Deaths.	Remarks.
Iowa:				
Cedar Rapids.....	Aug. 1-31	1	.....
Louisiana:				
New Orleans.....	Aug. 21-28.....	1	.....
Minnesota:				
Duluth.....	Aug. 20-27.....	1	.....
Montana:				
Butte.....	Aug. 12-26.....	6	.....
Ohio:				
Dayton.....	Aug. 21-28.....	7	.....
Toledo.....	July 31-Aug. 7.....	1	.....
Oregon (4 counties).....	May 1-31.....	31	.....
Utah (11 counties).....	July 1-31.....	110	1	

SMALLPOX—FOREIGN.

Algeria:				
Bona.....	July 1-31.....	19	10	
Brazil:				
Pernambuco.....	June 1-15.....		11	
Rio de Janeiro.....	July 25-Aug. 1.....	3	1	
Ceylon:				
Colombo.....	May 8-15.....	1	.....
Chile:				
Valparaiso.....	June 26-Aug. 7.....			Present.
China:				
Tientsin.....	June 26-July 3.....	1	2	
Egypt:				
Cairo.....	July 10-29.....	1	1	
India:				
Bombay.....	July 20-Aug. 3.....		10	
Madras.....	July 16-23.....		1	
Rangoon.....	July 17-24.....		3	
Italy:				
Genoa.....	Aug. 1-15.....	1	.....
Naples.....	Aug. 8-15.....	22	6	
Java:				
Batavia.....	July 18-24.....	2	.....
Mexico:				
Chihuahua.....	Aug. 15-22.....	1	.....
Guadalajara.....	Aug. 12-19.....	1	.....
Veracruz.....	Aug. 15-22.....	2	.....	Imported.
Persia:				
Shiraz.....	June 7.....			Present.
Russia:				
Moscow.....	July 24-31.....		14	
Do.....	Aug. 7-14.....	8	2	
Odessa.....	Aug. 1-7.....	2	.....
Riga.....	Aug. 7-14.....	8	.....
St. Petersburg.....	July 24-Aug. 6.....	28	10	
Warsaw.....	June 19-July 3.....		3	
Spain:				
Barcelona.....	Aug. 9-21.....		11	
Valencia.....	July 31-Aug. 14.....	7	.....
Vigo.....	Aug. 7-14.....		2	
Tripoli:				
Tripoli.....	Aug. 1-7.....	8	2	

YELLOW FEVER.

	Date.	Cases.	Deaths.	Remarks.
Venezuela: Maiquetia.....	Aug. 14-21.....	1	.....	In suburbs.

CHOLERA—INSULAR.

Philippine Islands:				
Manila.....	July 10-17.....	1	1	
Provinces.....	July 3-10.....	580	386	

CHOLERA—FOREIGN.

China:				
Hankow.....	July 10-17.....	1	1	
India:				
Bombay.....	July 20-Aug. 3.....	.....	37	
Calcutta.....	July 18-24.....	.....	17	
Indo-China:				
Saigon.....	July 10-17.....	1	1	
Russia, general.....	Aug. 13-20.....	664	289	
St. Petersburg.....	Aug. 13-20.....	201	71	

PLAGUE.

Chile:				
Iquique.....	July 28.....	7	.....	In lazaretto.
China:				
Hongkong.....	July 10-24.....	10	7	
India:				
Bombay.....	July 20-Aug. 3.....	.....	53	
Calcutta.....	July 17-24.....	.....	17	
Indo-China:				
Saigon.....	July 10-17.....	16	14	
Peru, general.....	July 31-Aug. 7.....	21	5	
Callao.....	Aug. 4-7.....	1	1	
Russia:				
Ural district.....	Aug. 5-13.....	19	19	
Venezuela:				
Caracas.....	Aug. 7-16.....	4	2	

By authority of the Secretary of the Treasury:

WALTER WYMAN,

Surgeon-General,

United States Public Health and Marine-Hospital Service.