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REPORT ON AN ORIGINAL FORM OF SULPHUR BURNER FOR DISINFECTION.

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The apparatus herein described has seemed, under experimental conditions, to satisfy the requirements it was designed to meet, namely, to put into a confined body of air a maximum concentration of sulphur dioxide from the minimum of sulphur in the minimum of time and with the minimum of labor and complications and the simplest and cheapest apparatus possible; and under a considerable variety of tests it has shown its decided superiority in general and in most particulars over the forms of apparatus now in common use.

This apparatus in its most approved form consists essentially of a double stack of long, narrow, flat, rectangular sheet-iron pans or shelves to contain the burning sulphur, arranged in the form of an inverted V. Each half of the double stack leans from the perpendicular at an angle of 60°, more or less (the individual pans being almost horizontal), in order to induce a strong current of air, flame, and burnt gases. Each pan in the stack, except the lowest, is heated by the flame of the one below it, whereby the combustion is made much more rapid and certain.

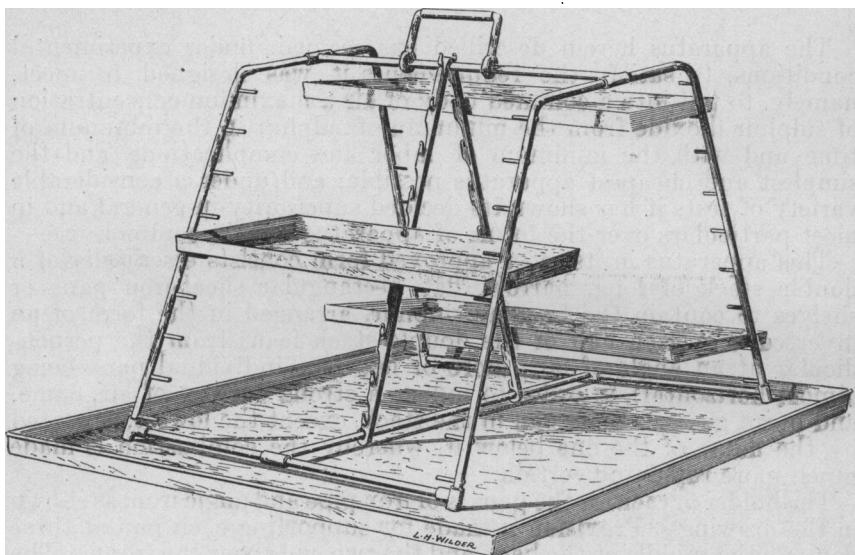
The holder or rack for the pans is of iron pipe and angle iron, as shown in the drawing. Provision is made for supporting each pan at three points—the middle of the back and the two ends near the front. The front points of support of the pans are along the four legs of the rack; the back points along the inverted V-shaped angle-iron brace in the center. The pans, trays, or shelves are of thin galvanized iron (No. 24 gauge has been found satisfactory), with sides and ends somewhat sloping to permit of nesting. The back side of each pan is somewhat deeper than the front and ends, and is perforated to accommodate the hook that forms the back support of the pan. The bottom of the pan slopes slightly downward to the back edge. There is also provided a large, flat, square safety pan for the burner to stand in, large enough in area and in capacity to catch and hold any or all of the sulphur in case of accident. These safety pans are best made of thin sheet iron, with the upper edges stiffened by being rolled over wire, and with the sides sloping to allow of nesting.

This simple arrangement was adopted only after considerable experimentation with more elaborate devices, including jackets,

chimneys, and specially shaped pans. These are all subject, in greater or less degree, to the objections that (1) they hinder the free access of air, and hence the flame is taller and more dangerous, and (2) they make the machine unnecessarily complicated, cumbersome, and costly. Moreover, it is found that the back-to-back *en echelon* arrangement of the shelves is all that is necessary to produce an abundance of draft, and in the open-stack burner, properly constructed and loaded, the free access of air on all sides keeps the flame down to a safe height.

OPERATION.

To load the burner or burners, the trays are placed on the floor in a row, long edges touching. Ground¹ sulphur in proper amount is poured into the pans, best from a coal scuttle. The charge is leveled by stroking with the hand and by slight shaking when the pans are being put into the rack. They should be from one to three quarters



Large stack-burner with 15 of the 18 pans removed to show construction.

full. For ignition, the sulphur is well moistened with alcohol, preferably in such a way that the surface shall be quite wet and the deeper layers as dry as possible. This moistening is conveniently done through a finely perforated rose jet, which may be fed through a rubber hose from a large container carried by a sling over the operator's shoulder.²

¹ An unsifted powder (made from the rolls by means of a mill or large mortar) ranging from $\frac{1}{4}$ -inch diameter down, the greater part being quite fine, is the best form of sulphur to use. It pours readily from a bucket, and holds the alcohol near the surface. Sublimed sulphur is nearly as good, and comes ready to use, but is more expensive and is a trifle less convenient to handle and less easy to ignite. Whole or roughly cracked rolls should not be used unless neither the ground nor the sublimed sulphur is available. Nevertheless, the stack-burner will burn the rolls (or any other form of sulphur) much better than will the pot.

² The methods described for the preparation of the sulphur and the application of the alcohol, are also applicable to the lighting of pots, pots so prepared passing to full combustion much more rapidly and certainly than those prepared by the customary methods. Indeed, attention to these details is much more important with the pots than with the stack burner, since the stack burner will burn well under conditions that will result in the failure of the pots.

The pans are then placed in the rack and lighted by a flame. Each shelf should be lighted¹ separately, because while the flames can spread slowly upward from shelf to shelf, the heat, under these conditions, volatilizes much of the alcohol before it ignites and valuable time is lost, the burner generating only slowly at the time when there is but little sulphur dioxide and it should be working at its most rapid rate.

RESULTS.

The ultimate test of any fumigating machine is its power to kill. Bacteriologic tests have not yet been made with our burner, but experiments were made on rats under conditions simulating as nearly as possible the conditions as found in practice, that is to say, the rat was placed in a long, narrow glass cylinder, or a flask with a long neck, communicating by a small opening with the room in which the sulphur was burned. With the open-stack burner, giving a maximum concentration² of about 7.4 per cent, the rats died in 20 to 35 minutes; with the pots, with the best system of charging and the unusually high concentration of 6 per cent, the rat did not die until 115 minutes. In the earlier experiments, in which the pots were charged with cracked roll sulphur in large pieces and the resulting concentration was very low—probably a very frequent result of pot disinfection—rats were not used, but it is believed that they would have had a good chance of survival. This is in accordance with the well-known facts that pot or furnace disinfection of vessels often fails to kill all the rats, and that a considerable number of roaches, etc., almost always escape by hiding in deep and narrow cracks.

Efficiency therefore demands high concentrations rapidly produced.

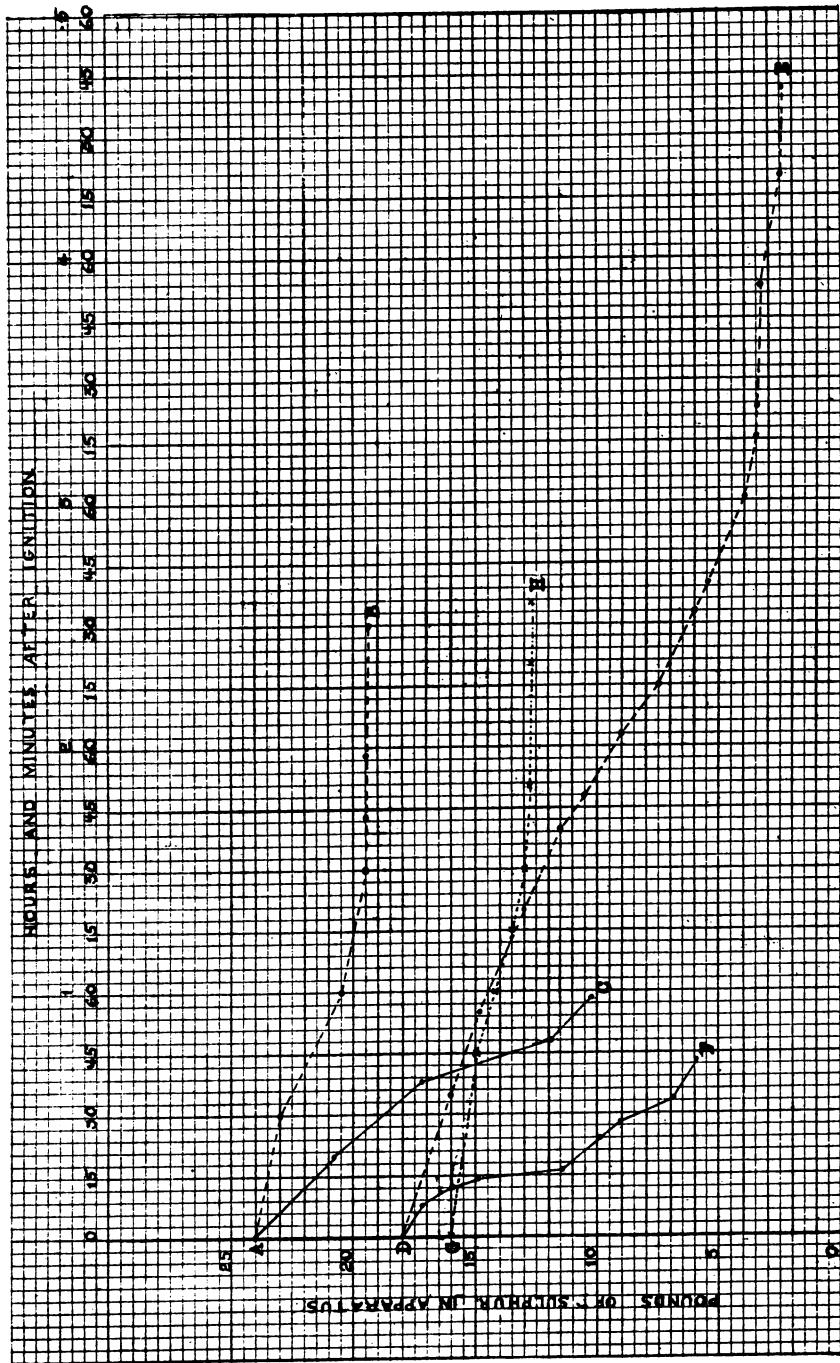
A marked feature of the operation of the stack-burner, as contrasted with the pots, is that the quick combustion of a heavy charge in the stack burner results in a considerable (though not excessive) rise in the temperature of the room, with consequent expansion and forcing of the poisonous gas through every possible outlet, together with a vigorous circulation of the air of the room—hence a marked increase in the penetrating power. In experimenting with the various forms of stack-burner, the experimenters, working in the room next outside of the zinc-lined room in which the combustions were made, were always much inconvenienced and at times driven from the room by the gas which escaped, under evident pressure, in spite of the most careful putting and pasting of all cracks. When the pots were used and the conditions of increased temperature and pressure prevailed to a less degree, the leakage was much less.

As regards rapidity of combustion and concentration of sulphur dioxide, these are best shown by Charts I and II, respectively. In these the solid lines indicate the results obtained with some form of the stack-burner, while the dotted lines indicate the results obtained

¹ A small gasoline or alcohol blow-torch is probably the best lighter, being portable, powerful, and resistant to draft. A well-charged and primed stack-burner can be ignited in a very few seconds by passing the flame over the faces of the stack, and any shelf that refuses to ignite at once can be vigorously and efficiently assisted by the steady application of the flame for 5 or 10 seconds.

² Of course, the atmosphere of the confined space in which the rat died during a given experiment contained a much lower proportion of SO₂ than the maximum in the large room where the sulphur was burning during that experiment, especially as the rats all died long before the maximum concentration was reached. Nevertheless, in practical disinfection these apparently excessive concentrations are necessary for thorough extermination, because the vermin hide from the sulphur dioxide in the narrowest and deepest holes they can find, and rapidity and depth of penetration (diffusion and convection) of gases is favored by concentration (large difference in percentage composition).

CHART I.—Showing amount and rate of combustion of sulphur in stack-burners (solid lines) and pots (dotted lines).

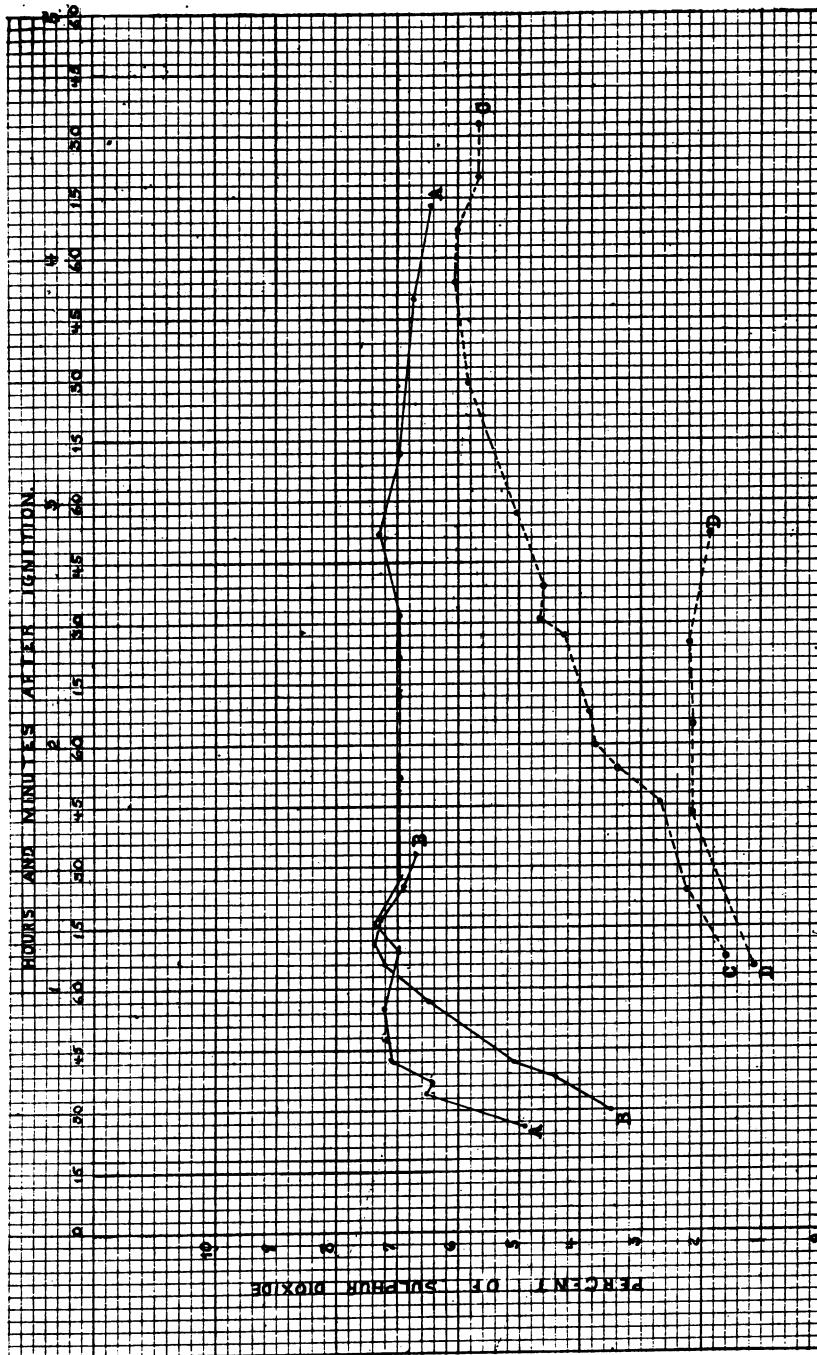


Curve A-C, stack-burner, 14 pounds out of 24 burned in 1 hour.
 Curve D-F, stack-burner, 13 pounds out of 18 burned in 45 minutes.

Curve A-B, 3 pots, $\frac{43}{4}$ pounds out of 24 burned in $2\frac{1}{2}$ hours.
 Curve G-H, 2 pots, $\frac{31}{4}$ pounds out of 16 burned in $2\frac{1}{2}$ hours.

Curve D-E, 2 pots, 15½ pounds out of 18 burned in 4 hours.
 Stack-burners were extinguished abruptly by exhaustion of air; pots died out gradually by cooling and solidification.

CHART II.—Showing percentage of sulphur dioxide in air of room from stack-burners (solid lines) and pots (dotted lines).



Curve A-A, 24 pounds of sulphur ignited in stack-burner.
 Curve B-B, 18 pounds of sulphur ignited in stack-burner.

Curve C-C, 18 pounds of sulphur ignited in 2 iron pots.
 Curve D-D, 24 pounds of sulphur ignited in 3 iron pots.

with the pots, as noted on the charts. Horizontal distances from left to right indicate time from the moment of ignition; vertical distances upward indicate (in Chart I) the weight of sulphur remaining unburnt, and (in Chart II) the percentage concentration of sulphur dioxide in the air of the room. Thus, of the two lines starting from A in Chart I, A-C represents the loss of weight of a 24-pound charge of sulphur burned in one form of the stack-burner (a pyramidal, jacketed form, with central draft), while A-B represents the loss of weight of a charge of 24 pounds of sulphur burned when equally distributed in 3 iron pots. It will be seen that the pots burned between 4 and 5 pounds in 90 minutes, and then continued to smolder without appreciable loss of weight for an hour more; when the experiment was terminated by opening the room 1 of the pots was still flickering, while the other 2 had gone out.¹ On the other hand, the burner consumed nearly 14 pounds within an hour, the rate of combustion continuing to increase until shortly before the flame was extinguished by the accumulating sulphur dioxide.

The stack-burners will efficiently burn sulphur of too poor quality to give any satisfaction in the pots. In the pot the impurities tend to concentrate on the surface and cut off the feeble heat radiated from above, whereas in the stack the sulphur is rapidly distilled as pure, concentrated vapor by the intense heat from below.² For the same reason the stack-burners, when supplied with enough oxygen, burn the shelves clean of sulphur (except for perhaps a little in some of the corners and a thin glaze in places on the bottom shelf) the impurities remaining as a loose, sulphur-free ash.

If it is desired to charge steam as well as sulphur dioxide into the room, it is easy to substitute water for the sulphur in the top pans, or to support a broad, flat pan of water above, so that the flame will play on it from beneath. This also serves as a baffle and cooler, and hence tends to make the working of the apparatus still safer.³

Neither the pots nor the stack-burners, open or jacketed, have in our experience, given any trouble from "sublimation," the greatest

¹ One of the most exasperating tricks of the pots is their going out when there would seem to be every reason for their staying lighted. This and the better behavior of the stack-burner are, at least in part, explained by the properties of liquid sulphur at different temperatures. Just above the melting point (about 115° C.) sulphur is a transparent, light yellow, very fluid liquid, which (like the solid sulphur) will not burn without the application of considerable heat. As the temperature is raised the liquid becomes darker, more viscous, and more easily ignited, until at (and above) 230° C. ignition in the air is spontaneous. At higher temperatures the sulphur again becomes thinner, and boils at about 450° C. In the stack-burner the temperature of the sulphur rapidly rises to and above the point of spontaneous ignition, and soon the vapor is rapidly forming and burning. In the pot, however, the heat being applied slowly and inefficiently from above, the sulphur melts and passes through the less inflammable stage very slowly, and any slight disturbance (such as motion of the vessel) is apt to throw an excess of the thin, cold liquid or a toppling mass of the solid sulphur into the feeble flame, and to put it out, much as would a dash of water or a shovelful of gravel. The proposal to substitute, for the compact pots, flat pans containing a single broad, shallow layer of sulphur, is not scientific and has been largely ignored by practical men, by reason of the slowness of spread and the ease of extinction of the flame, due to the above-described properties of sulphur.

² To test the open stack-burner to the limit in this particular, it was charged with an intimate mixture of 1 part of ground sulphur and 4 parts of ordinary mortar sand (the sand happening to be somewhat damp), the mixture representing a poor sulphur *ore*. With a liberal application of alcohol this mixture burned until about two-thirds to three-fourths of the sulphur was consumed. The bottom shelf in this experiment was charged with unmixed sulphur, as the mixture would not burn without heat from below.

³ It is usually stated that if it is desired to disinfect with moist sulphur dioxide enough steam can be generated for the purpose by setting the burning pots in water (warm or cold). No experiments were conducted to determine this point, but any such procedure would be inadequate. Water requires a great deal of heat to evaporate it. It has higher "latent" and "specific" heats than any other common substance, while sulphur liberates relatively but little heat on combustion. In order, therefore, to evaporate any notable amount of water by the burning of sulphur, the water to be evaporated must be held above the flame in a flat shallow vessel of considerable area. On the other hand, the alcohol used in ignition produces on combustion about three-fourths of its weight of water, which may sometimes be seen condensed on the cooler parts of the room and may produce a useful local concentration of the disinfectant.

drawback to the present types of furnace. The probable explanation of this is as follows:

Sulphur in burning gives off much more heat than is necessary to convert it from a solid to a vapor. Therefore a mass of burning sulphur, especially if confined, tends to rise rapidly in temperature until much more sulphur vapor is given off than can be burned at or near the surface of the mass. If this excess of sulphur vapor is discharged into the air immediately or within a short distance (before it cools below the point of ignition) it will ignite spontaneously and burn with a flame; this takes place in the pot and the stack-burner, open or inclosed. But in the furnace the excess of sulphur vapor is shut off from access of oxygen and cooled to condensation during its passage through the long hose. It would seem easy to remedy sublimation in the furnace by a simple modification of the air currents, whereby the air supply would be divided, part going, as at present, to maintain combustion in the boiling liquid, and part to oxidize the excess of sulphur vapor in the escaping gases. Experiments to this end will be undertaken as soon as practicable.

During fumigation the sulphur-dioxide-concentration of the inside air should be determined chemically at frequent intervals. This is a very simple procedure. The air is drawn from the interior by means of an aspirator (suction bottle), the amount of air being measured by the amount of water escaping from the aspirator into a measuring glass. On its way to the aspirator the sulphur-dioxide-charged air is passed through an absorption flask containing 10 cubic centimeters of tenth-normal iodine solution, the flow being stopped at the moment the iodine is decolorized and the amount of water used in aspiration noted. A table (see appendix) gives the percentage concentration corresponding to any given quantity of water. Some such exact method—and this is about the simplest, quickest, and easiest—is the only practicable way to tell how the combustion is progressing and whether the maximum concentration produced is adequate (since even with an altogether inadequate concentration of sulphur dioxide we noted at times a deceptively dense smoke and plenty of smell). This analysis may, moreover, often result in saving much time, since in case the concentration were found only slightly deficient, the deficiency could be quickly made up by liquid sulphur dioxide, whereas it would otherwise be necessary to open and clear the compartment and repeat the whole process *ab initio*, with equally great chances for a second failure.

METHODS OF INVESTIGATION.

The sulphur was burned inside a zinc-lined room, all cracks being closed as tightly as possible. Little leakage occurred except during high winds, or in consequence of increased pressure due to rapid rise of temperature, caused by the rapid combustion in the stack-burner, as mentioned above; but inasmuch as more or less leakage always occurs during fumigation, it is believed that conditions were fairly comparable with those met with in practice.

The loss of weight during combustion was measured by swinging the pots or burners from a wire passing through a cotton-stuffed hole in the ceiling, where it was fastened to a special spring balance above. This balance was provided with a long, light wooden arm, to the end of

which was attached a cord carrying a metal pointer, which indicated against a scale graduated in pounds, located on the wall of the room (next to the zinc room) in which the inside air analyses were made.

The air for analysis was withdrawn through a hole in the wall, the tube inside giving off 3 long branches, extending to the floor, the ceiling, and to a side wall about 5 feet above the floor, respectively. The air in the center of the room was not represented in the analysis, because the animals to be destroyed are crawling rather than winged, and any winged animals soon fall to the floor or alight on the walls. The estimation of the concentration of sulphur dioxide in the air of the room was based on the volume of air necessary to decolorize 10 cubic centimeters of N/10 iodine, as previously described. These estimations were made at intervals during the combustions, being made as rapidly as possible near the time of the maximum concentration. It is evident that any attempt at painful exactness would have been out of place, but all conditions were practically comparable, and the differences noted were so wide that the conclusions are obvious.

APPENDIX.

Table showing the number of cubic centimeters of air (containing the percentage of sulphur dioxide indicated in the last column) required to decolorize 10 cubic centimeters of tenth-normal iodine solution.

[Adapted from Lunge; 0° C. and 760 mm. pressure.]

Volume of water from aspirator— volume of air minus 11.16 cc. (SO ₂). ¹	Volume per cent of sulphur dioxide in air.	Volume of water from aspirator— volume of air minus 11.16 cc. (SO ₂). ¹	Volume per cent of sulphur dioxide in air.
100	10.00	361	3.00
113	9.00	395	2.75
128	8.00	455	2.50
148	7.00	484	2.25
160	6.50	546	2.00
175	6.00	628	1.75
192	5.50	733	1.50
212	5.00	881	1.25
237	4.50	1,105	1.00
268	4.00	1,479	.75
308	3.50	2,221	.50

¹ Ten cc. of tenth-normal iodine is decolorized by 11.16 cc. of SO₂ gas, measured at 0° and 760 mm. (correction for temperature and pressure ordinarily not necessary). The volume of water is less than the volume of aspirated air, because the iodine removes the SO₂—11.16 cc. in each case.

UNITED STATES.

MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HYGIENE.

NEW BEDFORD, MASS.

POLIOMYELITIS—NOTIFICATION, ISOLATION, DISINFECTION.

[Regulation board of health adopted Sept. 21, 1910.]

Whereas, anterior poliomyelitis (infantile paralysis) is declared by the state board of health a disease dangerous to the public health, it is hereby

Ordered, That pupils, teachers, and janitors of public and parochial schools, members of households where such cases exist, be prohibited from attending public and parochial schools during such illness, as a means of preventing the spread of the disease, and that the premises where cases have existed be placarded, and after recovery or death the same be disinfected as provided by law, chapter 269 of the acts of 1910.

Ordered, That houses where such cases exist be placarded, warning the public of the disease, and that the period of quarantine be four weeks from the date the case is reported to the board of health.

LYNN, MASS.

MILK—TEMPERATURE AND BACTERIAL CONTENT.

[Regulation 38, board of health, adopted Sept. 7, 1910.]

No person, by himself or by his servant or agent, or as the servant or agent of any other person, firm, or corporation, shall in the city of Lynn sell, exchange, or deliver, or have in his custody or possession with intent to sell, exchange, or deliver any milk, skimmed milk, or cream which contains more than 500,000 bacteria per cubic centimeter, or which has a temperature higher than 50° F.

PROVIDENCE, R. I.

PROTECTION OF FOOD STUFFS—MARKETS.

[Rule, board of aldermen, passed Nov. 3, 1910.]

(1) Raw or uncooked meat, poultry, game, fish, and sea food shall not be kept or offered for sale in or near an open window or doorway, outside of a building or in any street, private way, or public place in the city of Providence, unless so covered or screened as to be protected from dust and flies and from contact with animals, and no such article intended to be used as food shall be exposed or displayed in any street, private way, or public place, or in front of any place of business, unless the bottom of the box or other receptacle containing such article is raised at least 2 feet above the sidewalk, platform, or landing upon which such receptacle rests. No such articles shall be carried through any street, private way, or public place in said city unless properly protected or screened from dust and flies. Every person, being the occupant as owner, lessee, or otherwise of any room, stall, building, or place in the city where any meat, poultry, game, fish, sea food, milk, butter, vegetables, fruit, confectionery, bakers' products, or other articles intended for human food shall be kept or offered for sale, shall maintain such room, stall, building, or place and its appurtenances in a clean and sanitary condition. Every peddler of food stuffs from wagons or carts in said city shall keep in his wagon or cart a suitable receptacle for the wastes of his business, such wastes to be disposed of in a manner that shall not create a nuisance.

(2) Meat cutters or other attendants in meat shops, who handle raw or uncooked meat, shall be cleanly dressed, and their hands and outer garments shall be kept clean. They shall not wrap any such meat in a newspaper or any part thereof, or in

wrapping paper that is soiled or has been used for any other purpose, but shall wrap the same in fresh, clean wrapping paper. No refuse, scraps, bones, rancid fat, or decaying flesh shall be kept in any ice box in any meat shop with any such fresh meat.

(3) Live poultry shall not be kept in the same room or compartment in which meat is kept or offered for sale; nor shall live poultry be kept in any room or compartment adjoining such room or compartment if the conditions are such that the room or compartment in which the live poultry is kept ventilates or is liable to ventilate into said other room or compartment, so that the odors from the fowls and their inclosures may contaminate the meat.

(4) Any person violating any provision of these rules shall be fined not less than five nor more than twenty dollars for every violation thereof.

CAMDEN, N. J.

SPITTING.

[Ordinance passed by board of health Apr. 25, 1910.]

SECTION 1. *Be it ordained by the board of health of the city of Camden*, That spitting or expectorating upon the sidewalk of any street, alley, thoroughfare, square, park, or other public place in the city of Camden, or upon the floor, walls, seats of any room, hall, or office in any hotel or other part of any tenement or lodging house which is used in common by the guests or inmates thereof, or upon the floor, walls, or other part of any theater, store, factory, or of any building which is used in common by the public, or upon the floor of any ferryboat, street car, or railroad car, or other public conveyance, or upon the floor of any ferryhouse, depot, station, or upon the station platform or stairs of an elevated railroad or other common carrier, or into the street from the cars, stairs, or platform of an elevated railroad, is hereby forbidden.

SEC. 2. *Be it ordained*, That every corporation, proprietor, or other person owning, operating, or controlling any such building, store, factory, ferryboat, street car, or railroad car or other public conveyance, ferryhouse, depot, or station, station platform or stairs of an elevated railroad or other common carrier, are hereby required to keep permanently posted in each of said places a sufficient number of notices forbidding spitting, according to the provisions of section 1 of this ordinance.

SEC. 3. *Be it ordained*, That every corporation, proprietor, or other person owning, operating, or controlling any store, factory, theater, or other building or room which is used in common by the public, or any street or railroad car or other public conveyance, or any depot or railroad station, shall provide a sufficient number of non-absorbent receptacles for expectoration, and shall provide for satisfactory cleansing and disinfection thereof at least once in 24 hours.

SEC. 4. It is hereby made the duty of every corporation, proprietor, or other person owning, operating, or controlling any manufacturing concern in the city of Camden, in which two or more persons are employed, to provide a sufficient number of non-absorbent receptacles for spitting.

SEC. 5. Any person violating any of the provisions of the four preceding sections of this ordinance shall, on conviction thereof, be fined in any sum not less than \$1 and not more than \$5 for the first offense, and in any sum not less than \$5 and not more than \$10 for each and every subsequent violation of the provisions of said four sections; and on failure to pay said fine shall be committed to the county jail for a period not exceeding 30 days.

SEC. 6. Be it ordained that the following placard shall be exposed by the proprietors, agents, or other persons in charge of said public buildings or conveyances:

“Spitting herein prohibited in this building or conveyance under a penalty of five dollars fine or thirty days’ imprisonment. By order of the board of health, Camden, N. J.”

SEC. 7. Be it ordained that this ordinance shall take effect immediately.

MINNEAPOLIS, MINN.

HOTELS, RESTAURANTS, BOARDING HOUSES—REGULATION AND INSPECTION.

[Ordinance approved Dec. 22, 1910.]

Providing for the inspection, regulation, and licensing of hotels, restaurants, cafés, boarding houses, inns, taverns, and other public eating houses and places in the city of Minneapolis, for the preservation and the prevention and suppression of disease in said city.

SECTION 1. The word “hotel” as used in this ordinance shall be construed as meaning any place where persons are permitted to eat and are furnished with a bed in which

to sleep in consideration of a fixed price therefor. The word "restaurant," or "café," as used in this ordinance, shall be construed as meaning any place where a person or persons, other than the employees of such restaurant or café, in consideration of a fixed price, are provided with food to eat but are not furnished with a room or bed in which to sleep. The words "inns" and "taverns," as used in this ordinance, shall be construed as meaning all other public places where boarders are furnished with a meal or meals, either by the day, week, or month, with or without being provided with a sleeping apartment. The words "hotel, restaurant, café, inn, tavern or other public eating houses or places," as used in this ordinance, shall not be construed to mean a private residence occupied by a family where boarders are kept under private arrangement and are not catering to the general public for patronage.

No building or part of any building or any place in the city of Minneapolis shall be used as a hotel, restaurant, café, boarding house, inn, tavern, or public eating house or place, as herein defined, unless the proprietor of such hotel, restaurant, café, boarding house, inn, tavern, or public eating house or place has obtained a license therefor as herein provided.

SEC. 2. Any person, company, or corporation desiring a license to conduct or operate as a hotel, restaurant, café, boarding house, inn, tavern, or public eating house or place, any building or any part of any building or any place in the city of Minneapolis, shall file with the commissioner of health of said city a written application to the city council for such license, giving in such application the full name and address of the proprietor of the proposed hotel, restaurant, café, boarding house, inn, tavern, or public eating house or place, the name of the owner of the premises and the location of the building or buildings or portion thereof or place intended to be used as a hotel, restaurant, café, boarding house, inn, tavern, or public eating house or place in said city. Upon the filing of any such application for a license, the premises and place therein described shall be inspected by the commissioner of health or his deputies, who shall keep a permanent record of such inspection. The commissioner of health shall present to the city council all applications for such license. Such license shall be issued to the applicant by the commissioner of health when authorized and directed by the city council so to do, upon the presentation by the applicant to the commissioner of health of a receipt from the city treasurer showing payment into the city treasury of the license fee required for such license. The license fee for such license is hereby fixed and established at \$5 per annum for each hotel, restaurant, café, boarding house, inn, tavern, or public eating house and place in the city of Minneapolis. All licenses issued under this ordinance shall be in force for one year after the issuance of the same, unless sooner revoked.

SEC. 3. The commissioner of health and his deputies shall at all times have the right to enter into and upon and inspect any and all hotels, restaurants, cafés, boarding houses, inns, taverns, and other public eating houses and places in the city of Minneapolis whenever the commissioner of health shall deem the same necessary for the preservation of health and the prevention and suppression of disease in said city.

SEC. 4. The owner, proprietor, and person in charge of any hotel, restaurant, café, boarding house, inn, tavern, or other public eating house or place in the city of Minneapolis shall, in conducting the same, comply with and conform to each and all of the following rules and regulations, to wit:

(a) Kitchen and dining room floors shall be tongued and grooved, or covered with linoleum or other substance in order to prevent deposit and accumulation of filth or dirt in crevices.

(b) No garbage or filth shall be allowed to stand or accumulate about the premises for a longer period than 24 hours.

(c) Milk and butter shall be kept in an ice box separate from that in which meat, vegetables, and other articles of food are kept.

(d) Ice boxes and refrigerators must be thoroughly cleansed and put in a pure and sanitary condition at least once every three days.

(e) All kitchen and dining room floors shall be carefully mopped and cleaned or oiled at least once every three days.

(f) All knives, forks, spoons, dishes, and other tableware shall be thoroughly sterilized with steam or boiling water each time after they are used.

(g) All kitchens and dining rooms shall be thoroughly screened and protected from dust and flies.

(h) All furniture, counters, cellars, closets, and the surrounding premises must be kept and maintained in a good sanitary condition.

(i) Every room used for the manufacture, storage, or sale of food products shall be light, dry, and airy, its walls and floors shall be so constructed as to exclude rats and other vermin, and shall be at all times free from moisture and kept in good repair. Its floors shall have a smooth surface constructed of wood, cement, or tiles laid in cement,

save that when the floor is more than 4 feet below the level of the street, or adjacent ground, it shall never be constructed of wood.

(j) No water-closet, earth closet, privy, or ash pit shall communicate directly with any bake room or kitchen of any hotel, restaurant, café, boarding house, inn, tavern, or other public eating house or place.

SEC. 5. All licenses granted or issued under this ordinance shall be subject to revocation at any time by the city council, in its discretion, or by the mayor.

SEC. 6. Any person violating any of the provisions of this ordinance shall, on conviction thereof before the municipal court of the city of Minneapolis, be punished by a fine not to exceed \$50 nor less than \$10 for each offense or upon default in the payment of such fine, by imprisonment not to exceed 60 days.

SEC. 7. This ordinance shall take effect and be in force from and after April 1, 1911.

REPORTS TO THE SURGEON GENERAL, PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

PLAQUE-PREVENTION WORK.

DISTRIBUTION OF POISON.

In connection with the making of a squirrel-free zone around the cities in California on San Francisco Bay, 23 acres of land in Alameda County were covered with poison during the week ended March 11, 1911.

Record of Plague Infection.

Places.	Date of last case of human plague.	Date of last case of rat plague.	Date of last case of squirrel plague.	Total number of rodents found infected since May, 1907.
California:				
Cities—				
San Francisco.....	Jan. 30, 1908.....	Oct. 23, 1908.....	None.....	398 rats.
Oakland.....	Oct. 26, 1909.....	Dec. 1, 1908.....	.....do.....	126 rats.
Berkeley.....	Aug. 28, 1907.....	None recorded.....	.....do.....	None.
Los Angeles.....	Aug. 11, 1908.....	None.....	Aug. 21, 1908.....	1 squirrel.
Counties—				
Alameda (exclusive of the city of Oakland).....	Sept. 26, 1909.....	(Wood rat, Oct. 17, 1909.)	Feb. 1, 1911.....	94 squirrels.
Contra Costa.....	July 21, 1908.....	None.....	Sept. 10, 1910.....	1 wood rat. 247 squirrels.
Merced.....	None recorded.....	.....do.....	June 6, 1910.....	2 squirrels.
Monterey.....	.....do.....	.....do.....	.....do.....	4 squirrels.
San Benito.....	June 5, 1910.....	.....do.....	July 11, 1910.....	20 squirrels.
San Joaquin.....	None recorded.....	.....do.....	Jan. 9, 1911.....	11 squirrels.
San Luis Obispo.....	.....do.....	.....do.....	Jan. 29, 1910.....	1 squirrel.
Santa Clara.....	Aug. 23, 1910.....	.....do.....	Oct. 5, 1910.....	23 squirrels.
Santa Cruz.....	None recorded.....	.....do.....	May 17, 1910.....	3 squirrels.
Stanislaus.....	.....do.....	.....do.....	May 21, 1910.....	5 squirrels.
Washington:				
Seattle.....	Oct. 30, 1907.....	Feb. 8, 1910.....	None.....	22 rats.

Rats Collected and Examined for Plague Infection.

Place.	Week ended—	Found dead.	Total collected.	Examined.	Found infected.
California:					
Cities—					
Berkeley.....	Mar. 11.....	.....	1 89	63	.....
Oakland.....	.....do.....	25	2 644	543	.....
San Francisco.....	.....do.....	11	3 1,673	1,215	.....
Counties—					
Mariposa.....	.....do.....	.....	4 8	8	.....
Total.....	.....	36	2,414	1,829	.....

¹ Identified, *Mus norvegicus* 65, *Mus musculus* 24.

² Identified, *Mus norvegicus* 564, *Mus rutilus* 4, *Mus musculus* 76.

³ Identified, *Mus norvegicus* 1,065, *Mus rutilus* 141, *Mus musculus* 333, *Mus alexandrinus* 144.

⁴ Identified, *Mus musculus* 8.

Examination of Rats from Steamships.

During the week ended March 11, 1911, there were examined at the Federal laboratory at San Francisco, Cal., 7 rats from the steamship *Queen* and 26 from the steamship *Mariposa*. No plague-infected rats were found.

Squirrels Collected and Examined for Plague Infection.

Place.	Week ended—	Trapped and shot.	Found dead.	Examined.	Found infected.
California:					
Counties—					
Alameda.....	Mar. 11	98	2	100	.....
Fresno.....	do.....	18	.....	18	.....
Imperial.....	do.....	208	.....	203	.....
Kern.....	do.....	16	.....	16	.....
Los Angeles.....	do.....	127	.....	125	.....
Madera.....	do.....	34	.....	34	.....
Mariposa.....	do.....	13	.....	13	.....
Merced.....	do.....	14	.....	14	.....
Monterey.....	do.....	81	.....	81	.....
Riverside.....	do.....	16	.....	16	.....
San Joaquin.....	do.....	227	7	230	.....
San Luis Obispo.....	do.....	78	.....	78	.....
Santa Clara.....	do.....	89	1	89	.....
Stanislaus.....	do.....	127	1	128	.....
Yolo.....	do.....	22	.....	22	.....
Total.....		1,168	11	1,167	.....

Other Animals Collected and Examined.

Place.	Week ended—	Animals collected.	Examined.	Found infected.
California:				
Counties—				
Fresno.....	Mar. 11	1 rabbit.....	1	.....
Imperial.....	do.....	21 rabbits, 1 kangaroo rat, 2 cats (domestic).	24	.....
Mariposa.....	do.....	5 rabbits.....	5	.....
Merced.....	do.....	2 rabbits.....	2	.....
San Luis Obispo.....	do.....	8 gophers, 9 kangaroo rats.....	17	.....
Santa Clara.....	do.....	7 gophers.....	7	.....
Stanislaus.....	do.....	8 rabbits, 1 gopher.....	9	.....
Yolo.....	do.....	4 gophers.....	4	.....
Total.....			69	.....

SMALLPOX IN THE UNITED STATES.

In the following tables the States indicated by an asterisk are those from which reports of smallpox are received only from certain city and, in some cases, county boards of health. In these States, therefore, the recorded cases and deaths should not be taken as showing the general prevalence of the disease. In the States not marked by an asterisk the reports are received monthly from the State boards of health and include all cases reported throughout the State.

Reports Received During Week Ended March 31, 1911.

Places.	Date.	Cases.	Deaths.	Remarks.
District of Columbia.....	Mar. 12-18.....	2.....		
Illinois:				
Counties.....				Received out of date.
Coles.....	Dec. 1-31.....	4.....		
Cook, exclusive of Chicago.....	Dec. 1-31.....	1.....		
Chicago.....	Dec. 1-31.....	6.....		
Effingham.....	Dec. 1-31.....	1.....		
Jasper.....	Dec. 1-31.....	4.....		
Jefferson.....	Dec. 1-31.....	4.....		
Kane.....	Dec. 1-31.....	2.....		
Madison.....	Dec. 1-31.....	1.....		
Peoria.....	Dec. 1-31.....	2.....		
Perry.....	Dec. 1-31.....	2.....		
Union.....	Dec. 1-31.....	5.....		
Total for State.....		32.....		
Kansas:				
Counties—				
Allen.....	Jan. 1-31.....	1.....		
Anderson.....	Jan. 1-31.....	1.....		
Brown.....	Jan. 1-31.....	8.....		
Butler.....	Jan. 1-31.....	1.....		
Cherokee.....	Jan. 1-31.....	5.....		
Clay.....	Jan. 1-31.....	6.....		
Dickinson.....	Jan. 1-31.....	7.....		
Doniphan.....	Jan. 1-31.....	1.....		
Douglas.....	Jan. 1-31.....	1.....		
Harper.....	Jan. 1-31.....	5.....		
Jewell.....	Jan. 1-31.....	17.....		
Kearny.....	Jan. 1-31.....	5.....		
Leavenworth.....	Jan. 1-31.....	2.....		
Lyon.....	Jan. 1-31.....	1.....		
Marion.....	Jan. 1-31.....	2.....		
Marshall.....	Jan. 1-31.....	34.....		
Montgomery—				
Coffeyville.....	Jan. 1-31.....	1.....		
Morton.....	Jan. 1-31.....	8.....		
Norton.....	Jan. 1-31.....	1.....		
Pottawatomie.....	Jan. 1-31.....	9.....		
Riley.....	Jan. 1-31.....	8.....		
Russell.....	Jan. 1-31.....	1.....		
Saline.....	Jan. 1-31.....	10.....		
Sedgwick—				
Wichita.....	Jan. 1-31.....	1.....		
Shawnee, exclusive of				
Topeka.....	Jan. 1-31.....	2.....		
Topeka.....	Jan. 1-31.....	1.....		
Washington.....	Jan. 1-31.....	4.....		
Wyandotte, exclusive of Kansas City.....	Jan. 1-31.....	6.....		
Kansas City.....	Jan. 1-31.....	11.....		
Total for State.....		160.....		
*Kentucky:				
Lexington.....	Mar. 12-18.....	1.....		
Paducah.....	May 12-18.....	3.....		
Total for State.....		4.....		
Louisiana:				
New Orleans.....	Mar. 12-18.....	13.....		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received During Week Ended March 31, 1911.

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received During Week Ended March 31, 1911.

Place.	Date.	Cases.	Deaths.	Remarks.
Washington—Continued.				
Counties—Continued.				
Pacific.....	Jan. 1-31.....	1.....		
Pierce, exclusive of Tacoma.....	Jan. 1-31.....	4.....		
Tacoma.....	Jan. 1-31.....	4.....		
Skagit.....	Jan. 1-31.....	12.....		
Snohomish.....	Jan. 1-31.....	4.....		
Spokane.....	Jan. 1-31.....	2.....		
Walla Walla.....	Jan. 1-31.....	1.....		
Whatcom.....	Jan. 1-31.....	21.....		
Yakima.....	Jan. 1-31.....	1.....		
Total for State.....		87.....		

Reports Received from December 31, 1910, to March 24, 1911.

For reports received from June 25, 1910, to Dec. 30, 1910, see Public Health Reports for Dec. 30, 1910. In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.)

Places.	Date.	Cases.	Deaths.	Remarks.
*Alabama: Montgomery.....	Dec. 11-Mar. 11.....	15.....		
California: Counties—				
Alameda.....	Dec. 1-31.....	3.....		
Imperial.....	Dec. 1-31.....	1.....		
Humboldt.....	Dec. 1-Jan. 31.....	2.....		
Kern.....	Dec. 1-31.....	1.....		
Los Angeles.....	Dec. 1-31.....	1.....		
Mariposa.....	Jan. 1-31.....	1.....		
Riverside.....	Jan. 1-31.....	1.....		
San Bernardino.....	Jan. 1-31.....	3.....		
San Diego.....	Dec. 1-Jan. 31.....	15.....	1.....	
San Francisco.....	Dec. 1-Jan. 31.....	10.....		
San Joaquin.....	Dec. 1-31.....	2.....		
Ventura.....	Jan. 1-31.....	9.....		
Total for State.....		49.....	1.....	
Colorado: Counties—				
Adams.....	Dec. 1-Jan. 31.....	6.....		
Arapahoe.....	Dec. 1-Jan. 31.....	15.....		
Archuleta.....	Dec. 1-Jan. 31.....	20.....		
Boulder.....	Dec. 1-Jan. 31.....	21.....		
Conejos.....	Dec. 1-31.....	2.....		
Costilla.....	Jan. 1-31.....	5.....		
Denver.....	Dec. 1-Jan. 31.....	152.....		
Eagle.....	Jan. 1-31.....	1.....		
El Paso.....	Dec. 1-31.....	1.....		
Fremont.....	Dec. 1-Jan. 31.....	8.....		
Garfield.....	Jan. 1-31.....	4.....		
Gilpin.....	Jan. 1-31.....	1.....		
Grand.....	Dec. 1-31.....	2.....		
Huerfano.....	Dec. 1-31.....	13.....		
Jefferson.....	Dec. 1-31.....	5.....		
Kit Carson.....	Jan. 1-31.....	1.....		
La Plata.....	Dec. 1-Jan. 31.....	14.....		
Larimer.....	Jan. 1-31.....	17.....		
Las Animas.....	Dec. 1-Jan. 31.....	37.....		
Mineral.....	Jan. 1-31.....	2.....		
Montezuma.....	Dec. 1-31.....	1.....		
Montrose.....	Jan. 1-31.....	2.....		
Morgan.....	Dec. 1-Jan. 31.....	33.....		
Pueblo.....	Dec. 1-31.....	3.....	1.....	
Rio Grande.....	Jan. 1-31.....	9.....		
Saguache.....	Dec. 1-31.....	3.....		
Teller.....	Jan. 1-31.....	1.....		
Total for State.....		379.....	1.....	
Connecticut.....	Dec. 1-Feb. 28.....			No cases.

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from December 31, 1910, to March 24, 1911.

Places.	Date.	Cases.	Deaths.	Remarks.
District of Columbia.....	Jan. 15-Mar. 11.....	3		
Florida:				
Counties—				
Alachua.....	Dec. 18-Mar. 11.....	43	1	
Baker.....	Jan. 8-14.....	1		
Bradford.....	Jan. 16-Feb. 4.....	4		
Brevard.....	Feb. 19-25.....	5		
Calhoun.....	Jan. 29-Feb. 4.....	20		
Citrus.....	Jan. 8-Mar. 11.....	2		
Dade.....	Dec. 25-Feb. 18.....	3		
Duval.....	Jan. 1-Mar. 11.....	115	1	
Escambia.....	Jan. 1-Mar. 11.....	39		
Franklin.....	Jan. 8-21.....	4		
Gadsden.....	Dec. 18-Feb. 18.....	61		
Hillsboro.....	Dec. 25-Mar. 11.....	69		
Jackson.....	Dec. 25-Mar. 11.....	71		
Jefferson.....	Feb. 5-11.....	2		
Lafayette.....	Jan. 16-Feb. 4.....	6		
Lake.....	Jan. 22-Mar. 11.....	9		
Lee.....	Jan. 8-Mar. 4.....	21		
Leon.....	Dec. 18-Mar. 11.....	83	1	
Levy.....	Jan. 29-Feb. 4.....	2		
Liberty.....	Feb. 26-Mar. 4.....	6		
Madison.....	Dec. 18-Jan. 21.....	19		
Nassau.....	Jan. 16-21.....	2		
Orange.....	Jan. 18-21.....	1		
Osceola.....	Dec. 18-24.....	1		
Polk.....	Dec. 18-Mar. 11.....	55		
Putnam.....	Feb. 12-Mar. 4.....	4		
St. John.....	Jan. 22-Feb. 11.....	2		
Santa Rosa.....	Jan. 8-Feb. 25.....	34		
Suwanee.....	Jan. 16-21.....	1		
Taylor.....	Jan. 8-Feb. 4.....	140		
Volusia.....	Jan. 22-Mar. 4.....	14		
Walton.....	Dec. 25-Feb. 25.....	8		
Washington.....	Jan. 8-14.....	4		
Total for State.....		851	3	
Illinois:				
Counties—				
Adams.....	Feb. 1-28.....	1		
Bond.....	Jan. 1-Feb. 28.....	2		
Carroll.....	Feb. 1-28.....	1		
Clay.....	Feb. 1-28.....	1		
Coles.....	Jan. 1-Feb. 28.....	6		
Cook, exclusive of Chicago.	Jan. 1-31.....	2		
Chicago.....	Jan. 1-31.....	14		
Effingham.....	Feb. 1-28.....	1		
Kane.....	Jan. 1-Feb. 28.....	9		
McLean.....	Jan. 1-Feb. 28.....	18		
Macoupin.....	Feb. 1-28.....	1		
Madison.....	Jan. 1-Feb. 28.....	8		
Peoria.....	Jan. 1-Feb. 28.....	5		
Saline.....	Jan. 1-Feb. 28.....	8		
Stevenson.....	Jan. 1-31.....	3		
Union.....	Jan. 1-Feb. 28.....	12		
Vermilion.....	Jan. 1-Feb. 28.....	2		
Washington.....	Feb. 1-28.....	1		
Williamson.....	Jan. 1-31.....	1		
Total for State.....		96		
Indiana:				
Counties—				
Adams.....	Feb. 1-28.....	6		
Allen.....	Feb. 1-28.....	1		
Blackford.....	Feb. 1-28.....	3		
Cass.....	Jan. 1-Feb. 28.....	6		
Clay.....	Feb. 1-28.....	8		
Daviess.....	Feb. 1-28.....	1		
Delaware.....	Feb. 1-28.....	6		
Decatur.....	Jan. 1-Feb. 28.....	3		
DeKalb.....	Dec. 1-Feb. 28.....	9		
Elkhart.....	Dec. 1-31.....	5		
Greene.....	Feb. 1-28.....	1		
Howard.....	Dec. 1-31.....	1		
Huntington.....	Feb. 1-28.....	1		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from December 31, 1910, to March 24, 1911.

Places.	Date.	Cases.	Deaths.	Remarks.
Indiana—Continued.				
Counties—Continued.				
Jennings.....	Jan. 1-31.....	6.....		
Knox.....	Dec. 1-Feb. 28.....	8.....		
Madison.....	Dec. 1-Feb. 28.....	168.....		
Marion.....	Jan. 1-31.....	1.....		
Montgomery.....	Dec. 1-Feb. 28.....	12.....		
Noble.....	Jan. 1-31.....	1.....		
Posey.....	Jan. 1-31.....	1.....		
St. Joseph.....	Feb. 1-28.....	1.....		
Steuben.....	Jan. 1-Feb. 28.....	7.....		
Vigo.....	Jan. 1-Feb. 28.....	22.....		
Wabash.....	Feb. 1-28.....	1.....		
Warren.....	Feb. 1-28.....	1.....		
Wayne.....	Jan. 1-Feb. 28.....	19.....		
Total for State.....		299.....		
Iowa:				
Counties—				
Benton.....	Jan. 1-Feb. 28.....	2.....		
Black Hawk.....	Feb. 1-28.....	1.....		
Boone.....	Feb. 1-28.....	1.....		
Buena Vista.....	Dec. 1-31.....	1.....		
Dallas.....	Feb. 1-28.....	1.....		
Dubuque.....	Feb. 1-28.....	1.....		
Fremont.....	Feb. 1-28.....	7.....		
Guthrie.....	Jan. 1-Feb. 28.....	4.....		
Hancock.....	Jan. 1-31.....	3.....		
Jefferson.....			1	Year 1910, in delinquent report received after Jan. 1, 1911.
Johnson.....	Jan. 1-31.....	1.....		
Lee.....	Dec. 1-31.....	1.....		
Linn.....	Dec. 1-Feb. 28.....	58.....		
Lucas.....	Jan. 1-31.....	1.....		
Lyon.....	Dec. 1-31.....	3.....		
Mahaska.....	Feb. 1-28.....	1.....		
Marshall.....	Dec. 1-Jan. 31.....	8.....		
Page.....	Dec. 1-Feb. 28.....	34.....	1	
Polk.....	Dec. 1-Feb. 28.....	10.....		
Pottawattamie.....	Jan. 1-Feb. 28.....	9.....		
Scott.....	Dec. 1-Feb. 28.....	7.....		
Sioux.....	Feb. 1-28.....	1.....		
Taylor.....	Dec. 1-31.....	64.....		
Union.....	Jan. 1-Feb. 28.....	3.....		
Warren.....	Dec. 1-31.....	1.....		
Webster.....	Dec. 1-31.....	10.....		
Winnebago.....	Jan. 1-31.....	1.....		
Woodbury.....	Dec. 1-Feb. 28.....	13.....		
Total for State.....		247.....	2	
Kansas:				
Counties—				
Pawnee.....	Nov. 1-30.....	1.....		Not previously reported.
Reno.....	Nov. 1-30.....	1.....		Do.
Allen.....	Dec. 1-31.....	5.....		
Atchison.....	Dec. 1-31.....	4.....		
Brown.....	Dec. 1-31.....	36.....		
Butler.....	Dec. 1-31.....	1.....		
Cherokee.....	Dec. 1-31.....	1.....		
Clay.....	Dec. 1-31.....	1.....		
Decatur.....	Dec. 1-31.....	1.....		
Dickinson.....	Dec. 1-31.....	5.....		
Doniphan.....	Dec. 1-31.....	1.....		
Jefferson.....	Dec. 1-31.....	1.....		
Johnson.....	Dec. 1-31.....	4.....		
Kingman.....	Dec. 1-31.....	1.....		
Leavenworth—				
Leavenworth.....	Dec. 1-31.....	2.....		
Marshall.....	Dec. 1-31.....	78.....		
Montgomery.....	Dec. 1-31.....	4.....		
Nemaha.....	Dec. 1-31.....	1.....		
Osage.....	Dec. 1-31.....	1.....		
Reno.....	Dec. 1-31.....	1.....		
Rooks.....	Dec. 1-31.....	1.....	1	
Shawnee.....	Dec. 1-31.....	2.....		
Sumner.....	Dec. 1-31.....	6.....		
Wyandotte, exclusive of Kansas City.	Dec. 1-31.....	9.....		
Kansas City.....	Dec. 1-31.....	11.....		
Total for State.....		179.....	1	

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from December 31, 1910, to March 24, 1911.

Places.	Date.	Cases.	Deaths.	Remarks.
*Kentucky:				
Henderson.....	Feb. 22-28.....	4.....	.....
Lexington.....	Feb. 26-Mar. 4.....	1.....	.....
Paducah.....	Jan. 23-Mar. 11.....	20.....	.....
Total for State.....		25.....	.....
Louisiana:				
Parishes—				
Ascension.....	Dec. 1-31.....	1.....	.....
East Baton Rouge.....	Dec. 1-31.....	25.....	.....
East Feliciana.....	Dec. 1-31.....	30.....	.....
Iberville.....	Dec. 1-31.....	6.....	.....
Orileans—				
New Orleans.....	Dec. 18-Mar. 11.....	140.....	1.....	
Rapides.....	Dec. 1-31.....	1.....	.....
St. Charles.....	Dec. 1-31.....	4.....	.....
St. John.....	Dec. 1-31.....	1.....	.....
Tangipahoa.....	Nov. 1-Dec. 31.....	22.....	.....
Tensas.....	Dec. 1-31.....	9.....	.....
Washington.....	Dec. 1-31.....	1.....	.....
Total for State.....		240.....	1.....	
Maine.....	Dec. 1-Feb. 28.....	.....	.....	No cases.
Maryland:				
Counties—				
Baltimore.....	Feb. 1-28.....	2.....	.....
Garrett.....	Jan. 1-Feb. 28.....	10.....	.....	Dec. 1-31, no cases.
Total for State.....		12.....	.....
Massachusetts:				No cases.
Michigan:				
Counties—				
Alcona.....	Dec. 1-31.....	1.....	.....
Alger.....	Dec. 1-Feb. 28.....	2.....	.....
Alpena.....	Jan. 1-31.....	1.....	.....
Antrim.....	Jan. 1-31.....	1.....	.....
Arenac.....	Dec. 1-Jan. 31.....	7.....	.....
Bay.....	Dec. 1-Jan. 31.....	2.....	.....
Barry.....	Feb. 1-28.....	1.....	.....
Calhoun.....	Dec. 1-Feb. 28.....	17.....	1.....	
Cass.....	Feb. 1-28.....	2.....	.....
Charlevoix.....	Dec. 1-Feb. 28.....	24.....	.....
Cheboygan.....	Dec. 1-Feb. 28.....	30.....	.....
Clare.....	Jan. 1-31.....	8.....	.....
Clinton.....	Dec. 1-31.....	3.....	.....
Crawford.....	Dec. 1-Jan. 31.....	6.....	.....
Eaton.....	Dec. 1-Jan. 31.....	6.....	.....
Emmet.....	Jan. 1-Feb. 28.....	63.....	.....
Genesee.....	Dec. 1-Feb. 28.....	14.....	1.....	
Gladwin.....	Dec. 1-Feb. 28.....	4.....	1.....	
Grand Traverse.....	Dec. 1-31.....	1.....	.....
Gratiot.....	Dec. 1-Feb. 28.....	10.....	.....
Houghton.....	Feb. 1-28.....	5.....	.....
Huron.....	Jan. 1-31.....	8.....	.....
Ingham.....	Dec. 1-Feb. 28.....	3.....	.....
Ionia.....	Jan. 1-Feb. 28.....	19.....	.....
Isabella.....	Dec. 1-Feb. 28.....	14.....	.....
Kalamazoo.....	Dec. 1-Jan. 31.....	6.....	.....
Keweenaw.....	Dec. 1-Feb. 28.....	16.....	.....
Lake.....	Dec. 1-31.....	3.....	.....
Lapeer.....	Dec. 1-31.....	1.....	.....
Leelanau.....	Jan. 1-31.....	2.....	.....
Livingston.....	Feb. 1-28.....	1.....	.....
Mackinac.....	Feb. 1-28.....	4.....	.....
Macomb.....	Feb. 1-28.....	7.....	.....
Marquette.....	Dec. 1-Jan. 31.....	10.....	.....
Midland.....	Dec. 1-31.....	3.....	.....
Missaukee.....	Dec. 1-31.....	3.....	.....
Monroe.....	Dec. 1-31.....	2.....	.....
Muskegon.....	Jan. 1-31.....	1.....	.....
Newaygo.....	Jan. 1-31.....	3.....	.....
Peeque Isle.....	Dec. 1-31.....	1.....	.....
Saginaw.....	Dec. 1-31.....	3.....	3.....	
Salina.....	Jan. 1-Feb. 28.....	8.....	.....
St. Clair.....	Dec. 1-Feb. 28.....	7.....	.....

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from December 31, 1910, to March 24, 1911.

Places.	Date.	Cases.	Deaths.	Remarks.
Michigan—Continued.				
Counties—Continued.				
Washtenaw.....	Dec. 1-Jan. 31.....	3		
Wayne.....	Dec. 1-31.....	1		
Wexford.....	Dec. 1-31.....	5		
Total for State.....		342	6	
Minnesota:				
Counties—				
Beitrami.....	Dec. 19-Jan. 16.....	2		
Bigstone.....	Dec. 26-Jan. 1.....	1		
Blue Earth.....	Dec. 19-25.....	1		
Douglas.....	Dec. 5-Jan. 1.....	3		
Fillmore.....	Nov. 27-Dec. 4.....	1		
Hennepin.....	Dec. 3-Jan. 30.....	32		
Kandiyohi.....	Jan. 24-30.....	1		
Koochiching.....	Dec. 5-Jan. 23.....	11		
Lac qui Parle.....	Jan. 10-16.....	1		
Le Sueur.....	Dec. 26-Jan. 1.....	3		
Murray.....	Jan. 17-23.....	3		
Nobles.....	Dec. 5-25.....	3		
Norman.....	Dec. 12-Jan. 30.....	16		
Olmsted.....	Jan. 10-16.....	1		
Pipestone.....	Jan. 10-16.....	3		
Pope.....	Jan. 3-9.....	3		
Ramsey.....	Dec. 5-Jan. 16.....	86		
St. Louis.....	Nov. 27-Dec. 4.....	8		
Sibley.....	Dec. 26-Jan. 16.....	2		
Todd.....	Dec. 5-Jan. 30.....	22		
Wabasha.....	Dec. 26-Jan. 1.....	1		
Wadena.....	Dec. 26-Jan. 2.....	2		
Winona.....	Jan. 17-23.....	1		
Total for State.....		207		
*Mississippi:				
Biloxi.....	Mar. 13.....			Present.
*Missouri:				
Kansas City.....	Nov. 1-Jan. 31.....	119		
St. Joseph.....	Feb. 5-18.....	16		
St. Louis.....	Dec. 18-Mar. 11.....	26	1	
Springfield.....	Feb. 5-11.....	10		
Total for State.....		171	1	
Montana:				
Counties—				
Beaverhead.....	Jan. 1-31.....	1		
Cascade.....	Dec. 1-Jan. 31.....	6		
Chouteau.....	Jan. 1-31.....	1		
Custer.....	Dec. 1-Jan. 31.....	2		
Dawson.....	Nov. 1-30.....	4		
Deer Lodge.....	Nov. 1-Jan. 31.....	13	1	
Missoula.....	Jan. 1-31.....	2		
Powell.....	Jan. 1-31.....	1		
Ravalli.....	Dec. 1-31.....	3		
Silver Bow, exclusive of Butte.....	Nov. 1-Jan. 31.....	29		
Butte.....	Nov. 1-Jan. 31.....	41		
Teton.....	Jan. 1-31.....	1		
Total for State.....		104	1	
New Jersey:				
County—				
Bergen.....	Dec. 1-31.....	2		
Middlesex.....	Jan. 1-31.....	1		
Salem.....	Jan. 1-Feb. 28.....	27		
Total for State.....		30		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from December 31, 1910, to March 24, 1911.

Places.	Date.	Cases.	Deaths.	Remarks.
New York: Counties—				
Allegany.....	Nov. 1-30.....	1		
Chautauqua.....	Jan. 1-31.....	4		
Columbia.....	Jan. 1-31.....	1		
Niagara.....	Dec. 1-Jan. 31.....	2		
Onondaga.....	Jan. 1-31.....	1		
Tioga.....	Dec. 1-31.....	1		
Tompkins.....	Nov. 1-30.....	1		
Total for State.....		11		
North Carolina: Counties—				
Alamance.....	Jan. 1-31.....	1		
Beaufort.....	Dec. 1-Jan. 31.....	35		
Bertie.....	Jan. 1-31.....	1		
Bladen.....	Nov. 1-Jan. 31.....	63		
Brunswick.....	Dec. 1-Jan. 31.....	49		
Burke.....	Jan. 1-31.....	1		
Carteret.....	Nov. 1-Dec. 31.....	4		
Caswell.....	Jan. 1-31.....	9		
Chatham.....	Dec. 1-Jan. 31.....	40		
Cleveland.....	Jan. 1-31.....			Present.
Columbus.....	Nov. 1-Jan. 31.....	63		
Craven.....	Jan. 1-31.....	2		
Cumberland.....	Nov. 1-Jan. 31.....	32		
Currituck.....	Jan. 1-31.....	2		
Duplin.....	Dec. 1-31.....	20		
Durham.....	Nov. 1-Jan. 31.....	440		
Edgecombe.....	Nov. 4-Jan. 31.....	7		
Franklin.....	Nov. 1-30.....	1		
Granville.....	Dec. 1-Jan. 31.....	15		
Henderson.....	Dec. 1-Jan. 31.....	10		
Hertford.....	Dec. 1-31.....	1		
Johnston.....	Dec. 1-31.....	3		
Jones.....	Jan. 1-31.....	6		
Lee.....	Dec. 1-Jan. 31.....	7		
Lenoir.....	Jan. 1-31.....	2		
Martin.....	Nov. 1-Dec. 31.....	17		
Mecklenburg.....	Jan. 1-31.....	5		
Nash.....	Nov. 1-30.....	6		
New Hanover.....	Nov. 1-Jan. 31.....	597		
Northhampton.....	Jan. 1-31.....	12		
Onslow.....	Dec. 1-Jan. 31.....	65		
Orange.....	Jan. 1-31.....	12		
Pasquotank.....	Nov. 1-30.....	1		
Pender.....	Nov. 1-Jan. 31.....	127		
Person.....	Jan. 1-31.....	1		
Pitt.....	Nov. 1-Jan. 31.....	26		
Robeson.....	Nov. 1-Jan. 31.....	160		
Rowan.....	Dec. 1-Jan. 31.....	4		
Sampson.....	Dec. 1-Jan. 31.....	21		
Union.....	Nov. 1-Jan. 31.....	5		
Vance.....	Jan. 1-31.....	18		
Wake.....	Nov. 1-Jan. 31.....	19		
Washington.....	Jan. 1-31.....	2		
Wayne.....	Dec. 1-Jan. 31.....	4		
Wilkes.....	Jan. 1-31.....	1		
Total for State.....		1,917		
North Dakota: Counties—				
Billings.....	Jan. 1-Feb. 28.....	22		
Cass.....	Dec. 1-31.....	1		
Grand Forks.....	Jan. 1-31.....	1		
Lamoure.....	Feb. 1-28.....	6		
McIntosh.....	Jan. 1-Feb. 28.....	2		
Morton.....	Dec. 1-31.....	1		
Ramsey.....	Jan. 1-31.....	1		
Steele.....	Dec. 1-Jan. 31.....	19		
Stutsman.....	Jan. 1-Feb. 28.....	17		
Total for State.....		70		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from December 31, 1910, to March 24, 1911.

Places.	Date.	Cases.	Deaths.	Remarks.
Ohio:				
Counties—				
Ashland.....	Jan. 1-Feb. 28.....	2	.....
Clark.....	Jan. 1-31.....	51	1	
Delaware.....	Feb. 1-28.....	1	.....
Franklin.....	Dec. 1-Feb. 28.....	12	.....
Fulton.....	Jan. 1-31.....	4	.....
Hamilton.....	Dec. 1-Feb. 28.....	6	.....
Lorain.....	Dec. 1-31.....	2	.....
Miami.....	Feb. 1-28.....	1	.....
Montgomery.....	Jan. 1-Feb. 28.....	2	.....
Portage.....	Dec. 1-31.....	1	.....
Ross.....	Jan. 1-31.....	1	.....
Williams.....	Jan. 1-31.....	3	.....
Total for State.....		86	1	
Oklahoma:				
Counties—				
Adair.....	Nov. 1-30.....	1	.....
Atoka.....	Dec. 1-31.....	1	.....
Beckham.....	Nov. 1-Jan. 31.....	45	.....
Blaine.....	Nov. 1-Jan. 31.....	11	.....
Bryan.....	Nov. 1-Dec. 31.....	16	.....
Caddo.....	Nov. 1-Jan. 31.....	23	.....
Canadian.....	Nov. 1-Jan. 31.....	34	.....
Cherokee.....	Jan. 1-31.....	2	.....
Choctaw.....	Jan. 1-31.....	14	.....
Comanche.....	Jan. 1-31.....	4	.....
Custer.....	Dec. 1-Jan. 31.....	9	.....
Garfield.....	Dec. 1-31.....	1	.....
Grady.....	Nov. 1-Jan. 31.....	5	1	
Green.....	Nov. 1-30.....	1	.....
Hughes.....	Nov. 1-Jan. 31.....	25	.....
Jackson.....	Jan. 1-31.....	7	.....
Johnston.....	Jan. 1-31.....	1	.....
Kay.....	Dec. 1-31.....	1	.....
Latimer.....	Dec. 1-31.....	1	.....
Lincoln.....	Jan. 1-31.....	49	.....
McCurtain.....	Jan. 1-31.....	20	.....
McIntosh.....	Nov. 1-Dec. 31.....	12	.....
Major.....	Dec. 1-31.....	4	.....
Marshall.....	Nov. 1-30.....	8	.....
Nowata.....	Jan. 1-31.....	9	.....
Okfuskee.....	Jan. 1-31.....	5	.....
Oklahoma.....	Dec. 1-Jan. 31.....	12	.....
Oklmulgee.....	Jan. 1-31.....	13	.....
Osage.....	Dec. 1-Jan. 31.....	3	.....
Pittsburg.....	Dec. 1-31.....	1	.....
Pontotoc.....	Jan. 1-31.....	2	.....
Pottawatomie.....	Jan. 1-31.....	6	.....
Seminole.....	Dec. 1-Jan. 31.....	9	.....
Stephens.....	Dec. 1-31.....	1	.....
Tulsa.....	Nov. 1-Jan. 31.....	3	.....
Washington.....	Dec. 1-31.....	1	.....
Washita.....	Nov. 1-Jan. 31.....	2	.....
Woods.....	Dec. 1-Jan. 31.....	11	.....
Total for State.....		373	1	
Pennsylvania, entire State.....	Oct. 1-31.....	.....	.....	No cases.
	Nov. 1-Dec. 31.....	3	.....
* South Carolina:				
Camden.....	Jan. 15-21.....	1	.....
Charleston.....	Feb. 1-28.....	1	.....
Seven Mile.....	Mar. 1.....	9	1	
Total for State.....		11	1	
* Tennessee:				
Counties—				
Davidson—				
Nashville.....	Jan. 8-Mar. 11.....	5	.....
Hamilton—				
Chattanooga.....	Jan. 1-Feb. 18.....	7	1	
Knox—				
Knoxville.....	Jan. 22-Mar. 11.....	18	.....
Shelby.....	Nov. 1-Dec. 31.....	254	2	
Total for State.....		284	3	

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from December 31, 1910, to March 24, 1911.

Places.	Date.	Cases.	Deaths.	Remarks.
Texas:				
Counties—				
Bell.	Feb. 1-28.	1		
Cameron.	Nov. 1-Feb. 28.	68		
Cherokee.	Jan. 1-Feb. 28.	4		
Collin.	Jan. 1-31.	20		
Dallas.	Dec. 1-31.	24		
Dewitt.	Feb. 1-28.	4		
El Paso.	Jan. 1-Feb. 28.	48	3	
Grimes.	Nov. 1-30.	4		
Guadalupe.	Jan. 1-31.	5	2	
Henderson.	Nov. 1-Feb. 28.	15		
Hidalgo.	Dec. 1-31.	1		
Jones.	Jan. 1-31.	3		
McLennan.	Nov. 1-Feb. 28.	11		
Waco.	Jan. 1-31.	7		
Marion.	Dec. 1-Feb. 28.	18		
Matagorda.	Jan. 1-31.	5		
Nueces.	Jan. 1-Feb. 28.	4		
Orange.	Jan. 1-Feb. 28.	9		
Runnels.	Jan. 1-31.	1		
Swisher.	Dec. 1-31.	2		
Tarrant.	Dec. 1-Feb. 28.	9		
Taylor.	Jan. 1-31.	1		
Uvalde.	Jan. 1-31.	1		
Van Zant.	Feb. 1-28.	1		
Willis Point.	Nov. 1-Jan. 31.	8	1	
Total for State.		274	6	
Utah:				
Counties—				
Beaver.	Nov. 1-Jan. 31.	106		
Boxelder.	Jan. 1-31.	20		
Cache.	Nov. 1-30.	8		
Davis.	Dec. 1-Jan. 31.	4		
Iron.	Nov. 1-Jan. 31.	79		
Juab.	Nov. 1-Jan. 31.	8		
Millard.	Nov. 1-Jan. 31.	36		
Piute.	Jan. 1-31.	14		
Salt Lake.	Nov. 1-Jan. 31.	67		
Sanpete.	Dec. 1-31.	1		
Sevier.	Dec. 1-31.	30		
Utah.	Jan. 1-31.	22		
Washington.	Nov. 1-Jan. 31.	49		
Weber.	Nov. 1-Jan. 31.	19		
Total for State.		463		
Virginia:				
Counties—				
Appomattox.	Jan. 1-31.	3		
Alexandria.	Jan. 1-31.	5		
Culpeper.	Jan. 1-31.	3		
Dinwiddie.	Jan. 1-31.	1		
Fairfax.	Jan. 1-31.	2		
Fauquier.	Jan. 1-31.	12		
Frederick.	Jan. 1-31.	4		
Lee.	Jan. 1-31.	229		
Loudoun.	Jan. 1-31.	1		
Lunenburg.	Jan. 1-31.	8		
Nansemond.	Jan. 1-31.	4		
Roanoke.	Jan. 1-31.	1		
Southampton.	Jan. 1-31.	1		
Stafford.	Jan. 1-31.	10		
Wise.	Jan. 1-31.	7		
Total for State.		291		
Washington:				
Counties—				
King.	Dec. 1-31.	20		
Pierce.	Dec. 1-31.	1		
Skagit.	Nov. 1-Dec. 31.	93		
Snohomish.	Dec. 1-31.	6		
Spokane.	Nov. 1-30.	1		
Stevens.	Dec. 1-31.	1		
Total for State.		122		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from December 31, 1910, to March 24, 1911.

Places.	Date.	Cases.	Deaths.	Remarks.
Wisconsin: Counties—				
Ashland.....	Jan. 1-Feb. 28.....	6		
Barron.....	Jan. 1-31.....	3		
Buffalo.....	Feb. 1-28.....	1		
Chippewa.....	Dec. 1-Feb. 28.....	6		
Dane.....	Jan. 1-31.....	2		
Douglas.....	Feb. 1-28.....	1		
Dunn.....	Dec. 1-Feb. 28.....	13		
Eau Claire.....	Feb. 1-28.....	4		
Green.....	Jan. 1-31.....	2		
Iowa.....	Dec. 1-Feb. 28.....	46		
Jefferson.....	Dec. 1-Jan. 31.....	10		
Lafayette.....	Dec. 1-Feb. 28.....	11		
La Crosse.....	Dec. 1-Feb. 28.....	4		
Lincoln.....	Feb. 1-28.....	1		
Milwaukee.....	Dec. 1-Feb. 28.....	10		
Oneida.....	Dec. 1-Feb. 28.....	5		
Pierce.....	Feb. 1-28.....	1		
St. Croix.....	Dec. 1-Feb. 28.....	7		
Vernon.....	Jan. 1-Feb. 28.....	10		
Vilas.....	Dec. 1-31.....	1		
Walworth.....	Jan. 1-31.....	1		
Washington.....	Dec. 1-31.....	1		
Total for State.....		146		
Grand total for the United States.....		7,300	29	

MORBIDITY AND MORTALITY.

MORBIDITY AND MORTALITY TABLE, CITIES OF THE UNITED STATES, FOR WEEK ENDED MARCH 11, 1911.

Cities.	Population, United States, census 1910.	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Small- pox.		Tuber- culosis.		Ty- phoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
<i>Cities having over 500,000 inhabitants.</i>														
Baltimore, Md.....	558,485	236	32	2	289	...	34	4	...	...	32	32	9	3
Boston, Mass.....	670,585	249	30	6	108	...	46	6	...	...	76	19	4	...
Chicago, Ill.....	2,185,283	751	162	21	225	6	225	14	3	...	206	86	10	3
Cleveland, Ohio.....	560,663	169	32	4	39	1	92	9	...	...	28	15	3	1
New York, N. Y.....	4,766,883	1,605	332	41	531	14	537	28	...	...	508	185	28	5
Philadelphia, Pa.....	1,549,008	601	113	18	463	9	40	3	...	...	101	73	22	5
Pittsburg, Pa.....	533,905	168	19	2	41	1	11	1	...	...	45	16	14	2
St. Louis, Mo.....	687,029	245	45	4	520	12	102	2	3	...	41	25	7	2
<i>Cities having from 300,000 to 500,000 inhabitants.</i>														
Buffalo, N. Y.....	423,715	133	15	2	12	1	20	5	4	...	18	12	10	3
Cincinnati, Ohio.....	364,463									...				
Detroit, Mich.....	465,766	154	11	1			32			...	4	11	4	...
Los Angeles, Cal.....	319,198	94	6	1	12		15			...	16	19	3	1
Milwaukee, Wis.....	373,857	101	14		19	3	53			...	21	13	8	1
Minneapolis, Minn.....	301,408									...				
Newark, N. J.....	347,469	108	24				44			...	19	11	2	...
New Orleans, La.....	339,075	154	11	2	120	1	10		7	...	29	18	9	4
San Francisco, Cal.....	416,912	135	6	1	14	1	13	2	1	...	29	15	1	...
Washington, D. C.....	331,069	126	18	1	31		13		1	...	30	12	3	2

Weekly morbidity and mortality table, cities of the United States, for week ended March 11—Continued.

Cities.	Population, United States, census 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Small-pox.		Tuber-culosis.		Ty- phoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
<i>Cities having from 200,000 to 300,000 inhabitants.</i>														
Denver, Colo.	213,381													
Indianapolis, Ind.	233,650													
Jersey City, N. J.	267,779													
Kansas City, Mo.	248,381													
Louisville, Ky.	223,928													
Portland, Oreg.	207,214													
Providence, R. I.	224,326													
Rochester, N. Y.	218,149													
St. Paul, Minn.	214,744													
Seattle, Wash.	237,194													
<i>Cities having from 100,000 to 200,000 inhabitants.</i>														
Albany, N. Y.	100,253													
Atlanta, Ga.	154,839													
Birmingham, Ala.	132,685													
Bridgeport, Conn.	102,054													
Cambridge, Mass.	104,839													
Columbus, Ohio.	181,548													
Dayton, Ohio.	116,577													
Fall River, Mass.	119,295													
Grand Rapids, Mich.	112,571													
Lowell, Mass.	106,294													
Memphis, Tenn.	131,105													
Nashville, Tenn.	110,364	58	1		23	4	4		2		3	5	1	
New Haven, Conn.	133,605													
Oakland, Cal.	150,174	41	3		10		1				3	9	1	
Omaha, Nebr.	124,096													
Paterson, N. J.	125,600													
Richmond, Va.	127,628													
Scranton, Pa.	129,867													
Spokane, Wash.	104,402	27			47		12					2		
Syracuse, N. Y.	137,249													
Toledo, Ohio.	168,497	43	5		2		10		1		21	9	3	
Worcester, Mass.	145,986	47	4		15	1	9			16	7			
<i>Cities having from 50,000 to 100,000 inhabitants.</i>														
Akron, Ohio.	69,067													
Allentown, Pa.	51,913													
Altoona, Pa.	52,127	13									1	2	1	
Bayonne, N. J.	55,545		5		17		4				1			
Brockton, Mass.	56,878	24						2			2	2		
Camden, N. J.	94,538		4	4	6									
Canton, Ohio.	50,217	21	2									1		
Charleston, S. C.	58,833													
Covington, Ky.	53,270		17					1				3	1	1
Dallas, Tex.	92,104													
Des Moines, Iowa.	86,368		3						2					
Duluth, Minn.	78,466	14			2		3				4	4		
East St. Louis, Ill.	58,547											2		
Elizabeth, N. J.	73,409	23	3		4		9							
Erie, Pa.	66,525													
Evansville, Ind.	69,647	29	1		74		1					4	2	1
Fort Wayne, Ind.	63,933													
Fort Worth, Tex.	73,312													
Harrisburg, Pa.	64,186													
Hartford, Conn.	98,915		3	1	2		20				4	2		
Hoboken, N. J.	70,324		2	1	20		1				1			
Holyoke, Mass.	57,730													
Houston, Tex.	78,800	30	1			1						5		
Jacksonville, Fla.	57,669	25			13	1			10		3	4		1
Johnstown, Pa.	55,482													
Kansas City, Kans.	82,331	40	1			1			6	10		9	1	
Lawrence, Mass.	85,892	33	6	2	17		3				3	4		
Lynn, Mass.	89,336	23	1		10		5				1	2		

Weekly morbidity and mortality table, cities of the United States, for week ended March 11—Continued.

Cities.	Population, United States, census 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Small-pox.		Tuber-culosis.		Ty-phoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
<i>Cities having from 50,000 to 100,000 inhabitants—Continued.</i>														
Manchester, N. H.	70,063	25	1		3							1	1	
Mobile, Ala.	51,521											5	5	
New Bedford, Mass.	96,652		1	1			4							
Norfolk, Va.	67,452													
Oklahoma City, Okla.	64,205	20	1		6		6	1	1				3	
Passaic, N. J.	54,773	6	7	1	20		2					2	1	
Pawtucket, R. I.	51,622													
Peoria, Ill.	66,950													
Portland, Me.	58,571													
Reading, Pa.	96,071		9	1	49	3	12	1				5	3	3
Saginaw, Mich.	50,510													
St. Joseph, Mo.	77,403													
Salt Lake City, Utah	92,777													
San Antonio, Tex.	96,614	54	1		4	1	2						6	3
Savannah, Ga.	65,064													
Schenectady, N. Y.	72,826	18	1	1	2		1					2	1	1
Somerville, Mass.	77,236	15	2		34		1					5	1	
South Bend, Ind.	53,684			1	3		12		1				1	
Springfield, Ill.	51,678	16	3				6					3		
Springfield, Mass.	88,926	29	1		8		6					2	4	1
Tacoma, Wash.	83,743	31	3		3		2		1					
Terre Haute, Ind.	58,157	14	2		24		5					3	1	
Trenton, N. J.	96,815	60					1					8	3	4
Troy, N. Y.	76,813													
Utica, N. Y.	74,419	27	4	1	13		6					1	1	
Waterbury, Conn.	73,141													
Wichita, Kans.	52,450													
Wilkes-Barre, Pa.	67,105	16	2				2					6	2	
Wilmington, Del.	87,411	22			1								3	
Yonkers, N. Y.	79,803	26	5	1	13		26	1				9	1	1
Youngstown, Ohio.	79,066	28	3	1	1		4					2	4	
<i>Cities having from 25,000 to 50,000 inhabitants.</i>														
Amsterdam, N. Y.	31,267													
Atlantic City, N. J.	46,150	10	1		1		3						1	
Auburn, N. Y.	34,668													
Augusta, Ga.	41,040													
Aurora, Ill.	29,807	8	2	1										
Austin, Tex.	29,860													
Battle Creek, Mich.	25,267													
Bay City, Mich.	45,166													
Berkeley, Cal.	40,434	12	1			7	2							
Binghamton, N. Y.	48,443	12	2		48	1						8	1	
Bloomington, Ill.	25,768													
Brookline, Mass.	27,792	12	1		13								1	
Butte, Mont.	39,165													
Cedar Rapids, Iowa.	32,811													
Charlotte, N. C.	34,014													
Chattanooga, Tenn.	44,604											2	3	
Chelsea, Mass.	32,452	13	2		6		4					2		
Chester, Pa.	38,537													
Chicopee, Mass.	25,401	6	1		1							4	1	
Clinton, Iowa.	25,577													
Colorado Springs, Colo.	29,078													
Columbia, S. C.	26,319													
Council Bluffs, Iowa.	29,292													
Danville, Ill.	27,871	8	1							1		1		
Davenport, Iowa.	43,028													
Decatur, Ill.	31,140													
Dubuque, Iowa.	38,494													
Easton, Pa.	28,523													
East Orange, N. J.	34,371	9											1	
Elgin, Ill.	25,976													
Elmira, N. Y.	37,176	9	1		1		1							
El Paso, Tex.	38,279		2		1		4		4			6	1	
Everett, Mass.	33,484	12		1								4	1	

Weekly morbidity and mortality table, cities of the United States, for week ended March 11—Continued.

Weekly morbidity and mortality table, cities of the United States, for week ended March 11—Continued.

Cities.	Popula- tion, United States, census 1910.	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Small- pox.		Tuber- culosis.		Ty- phoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
<i>Cities having from 25,000 to 50,000 inhabitants—Continued.</i>														
Springfield, Mo.	35,201	—	—	—	—	—	—	—	—	—	—	—	—	—
Springfield, Ohio	46,921	11	—	—	—	—	—	—	—	—	—	—	—	—
Stamford, Conn.	25,138	—	—	—	—	—	—	—	—	—	—	—	—	—
Superior, Wis.	40,384	14	1	—	—	—	—	—	—	—	1	—	—	—
Tampa, Fla.	37,782	—	—	—	—	—	—	—	—	—	—	—	—	—
Taunton, Mass.	34,259	16	1	—	—	—	—	—	—	—	—	—	1	1
Topeka, Kans.	43,684	—	—	—	—	—	—	—	—	—	—	—	—	—
Waco, Tex.	26,425	—	—	—	—	—	—	—	—	—	—	—	—	—
Waitham, Mass.	27,834	9	2	—	—	—	—	—	—	—	—	—	—	—
Warwick, R. I.	26,629	—	—	—	—	—	—	—	—	—	—	—	—	—
Waterloo, Iowa	26,693	—	—	—	—	—	—	—	—	—	—	—	—	—
Watertown, N. Y.	26,730	—	—	—	—	—	—	—	—	—	—	—	—	—
West Hoboken, N. J.	35,403	—	—	—	—	—	—	—	—	—	—	—	—	—
Wheeling, W. Va.	41,641	11	—	—	—	—	1	—	—	—	—	2	1	2
Williamsport, Pa.	31,860	8	—	—	—	—	2	—	—	—	—	—	2	1
Wilmington, N. C.	25,748	—	—	—	—	—	—	—	—	—	—	—	—	—
Woonsocket, R. I.	38,125	—	—	—	—	—	—	—	—	—	—	—	—	—
York, Pa.	44,750	17	3	1	—	—	—	2	—	—	—	—	3	1
Zanesville, Ohio	28,026	16	—	—	—	—	2	—	—	—	—	—	2	44
<i>Cities having less than 25,000 inhabitants.</i>														
Ann Arbor, Mich.	14,817	—	—	—	—	—	—	—	—	—	—	—	—	—
Ashtabula, Ohio	18,266	—	—	—	—	—	—	—	—	—	—	—	—	—
Beaver Falls, Pa.	12,191	1	1	—	—	5	—	—	—	—	—	—	—	—
Bennington, Vt.	8,698	5	—	—	—	—	—	—	—	—	1	—	—	—
Biddeford, Me.	17,079	4	—	—	—	—	—	—	—	—	—	—	—	—
Braddock, Pa.	19,357	10	2	—	—	2	1	—	—	—	—	—	—	—
Butler, Pa.	20,728	—	—	—	—	—	—	—	—	—	—	—	—	—
Cambridge, Ohio	11,327	0	—	—	—	—	—	—	—	—	—	—	—	—
Camden, S. C.	0	—	—	—	—	—	—	—	—	—	—	—	—	—
Carbondale, Pa.	17,040	6	1	—	—	2	—	1	—	—	—	—	—	—
Clinton, Mass.	13,075	2	—	—	—	—	—	—	—	—	—	1	—	—
Coffeyville, Kans.	12,687	4	—	—	—	—	—	—	—	—	—	—	—	—
Columbus, Ga.	20,554	1	—	—	—	—	—	—	—	—	—	—	—	—
Columbus, Ind.	4	—	—	—	—	—	—	—	—	—	—	—	—	—
Concord, N. H.	21,497	9	1	—	—	—	—	—	—	—	—	—	1	1
Cumberland, Md.	21,839	8	—	—	—	—	1	—	—	—	—	—	2	1
Dunkirk, N. Y.	4	1	—	—	—	—	1	—	—	—	—	—	—	—
Freeport, Ill.	17,567	3	1	—	—	2	—	—	—	—	—	—	2	1
Galesburg, Ill.	22,089	4	—	—	—	—	—	1	—	—	—	—	—	—
Gloucester, Mass.	24,398	9	—	—	—	—	—	—	—	—	—	—	2	—
Greensboro, N. C.	15,895	2	—	—	—	—	—	—	—	—	—	—	—	—
Harrison, N. J.	14,498	2	1	—	—	—	—	1	—	—	—	—	1	1
Homestead, Pa.	18,713	2	1	—	—	2	—	—	—	—	—	—	1	1
Hyde Park, Mass.	15,507	8	—	—	—	—	—	—	—	—	—	—	1	1
Kearny, N. J.	18,659	5	2	—	—	1	—	3	—	—	—	3	2	—
Kokomo, Ind.	17,010	—	—	—	—	—	—	—	—	—	—	—	—	—
La Fayette, Ind.	20,081	4	—	—	—	—	1	—	—	—	—	—	1	—
Lebanon, Pa.	19,240	8	—	—	—	—	—	—	—	—	—	—	1	1
Manistee, Mich.	12,381	0	—	—	—	—	2	—	—	—	—	—	—	—
Manitowoc, Wis.	13,027	6	—	—	—	—	—	—	—	—	—	—	—	—
Marinette, Wis.	14,610	5	2	—	—	4	—	—	—	—	—	—	1	—
Marlboro, Mass.	14,579	4	—	—	—	—	—	—	—	—	—	—	—	—
Massillon, Ohio	13,879	3	2	—	—	8	—	3	—	—	—	—	1	—
Medford, Mass.	23,150	4	2	—	—	—	—	1	—	—	—	—	—	—
Melrose, Mass.	15,715	4	—	—	—	—	—	—	—	—	—	—	1	—
Moline, Ill.	24,199	11	1	1	—	17	—	6	—	—	—	1	2	1
Montclair, N. J.	21,550	6	—	—	—	—	—	—	—	—	—	—	2	—
Nanticoke, Pa.	18,877	3	—	1	—	—	—	1	—	—	—	—	—	—
Newburyport, Mass.	14,949	4	—	—	—	—	—	—	—	—	—	—	—	—
North Adams, Mass.	22,019	5	2	—	—	3	—	—	—	—	—	2	1	—
Northampton, Mass.	19,431	12	—	—	—	—	—	—	—	—	—	2	2	1
Ottumwa, Iowa	22,012	10	—	—	—	—	—	—	—	—	—	2	—	—
Paducah, Ky.	22,760	—	—	—	—	15	—	1	—	—	—	2	—	—
Palmer, Mass.	—	1	3	—	—	—	—	2	—	—	—	1	—	—
Peekskill, N. Y.	—	5	—	—	—	—	—	—	—	—	—	1	—	—

Weekly morbidity and mortality table, cities of the United States, for week ended March 11—Continued.

Cities.	Popula- tion. United States, census 1910.	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Small- pox.		Tuber- culosis.		Ty- phoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
<i>Cities having less than 25,000 inhabitants—Con.</i>														
Plainfield, N. J.	20,550	6			4		2				1	1	1	
Fortsomouth, N. H.	11,209				36									
Rock Island, Ill.		17	2		6		6						1	57
Rutland, Vt.		13,546												1
Saratoga Springs, N. Y.		14									1	1		
South Bethlehem, Pa.	19,973	4	1	1			1				2			
Steelton, Pa.	14,246	3	2								3			
Warren, Ohio	11,081	1					1	1						
Wilkinsburg, Pa.	18,924	4	2				1				2			
Woburn, Mass.	15,308	5	3				3				1			

STATISTICAL REPORTS OF MORBIDITY AND MORTALITY, STATES AND CITIES OF THE UNITED STATES (untabulated).

FLORIDA.—Week ended March 11, 1911. Reports from the State board of health show diphtheria present in 3 localities with 3 cases, malaria in 3 localities with 38 cases, smallpox in 9 counties with 46 cases, tuberculosis in 9 localities with 11 cases, typhoid fever in 7 localities with 12 cases.

ILLINOIS—Alton.—Month of February, 1911. Population, 17,528. Total number of deaths from all causes 18, including tuberculosis 2. Cases reported: Diphtheria 1.

MARYLAND.—Month of November, 1910. Population, 1,295,346. Total number of deaths from all causes 853, including diphtheria 15, measles 4, scarlet fever 3, tuberculosis 91, typhoid fever 36. Cases reported: Diphtheria 76, measles 70, scarlet fever 54, typhoid fever 246. The typhoid fever cases were distributed as follows: Potomac River watershed 118, Patapsco River watershed 11, Patuxent River watershed 3, Choptank River watershed 1, Herring Run watershed 4, Baltimore city water system 15. An epidemic center of typhoid fever occurred at Cumberland, Allegany County, with 87 cases.

MINNESOTA.—Month of December, 1910. Population, 2,075,708. Total number of deaths from all causes 2,008, including diphtheria 52, measles 9, scarlet fever 19, tuberculosis 164, typhoid fever 49.

NEBRASKA—South Omaha.—Month of January, 1911. Population, 26,259. Total number of deaths from all causes 27, including diphtheria 1, tuberculosis 1. Cases reported: Diphtheria 5, scarlet fever 1, smallpox 1, tuberculosis 1.

NEW YORK—Watertown.—Month of February, 1911. Population, 26,730. Total number of deaths from all causes 46. No deaths from contagious diseases. Cases reported: Diphtheria 2, measles 1, scarlet fever 36, tuberculosis 2, typhoid fever 10.

PENNSYLVANIA.—Reports from the State department of health show as follows:

Mortality.—Month of December, 1910. The total number of deaths reported was 10,255, including typhoid fever 157, scarlet fever 85, diphtheria 261, measles 83, whooping cough 76, smallpox 1, influenza 124, malarial fever 2, tuberculosis of lungs 705, tuberculosis of other organs 99, cancer 446, diabetes 53, meningitis 59, acute anterior poliomyelitis 16, pneumonia 1,456, diarrhea and enteritis, under 2 years, 214, diarrhea and enteritis, over 2 years, 74, Bright's disease 559, early infancy 601, suicide 73, accidents in mines and quarries 101, railway injuries 150, other forms of violence 5,000, all other diseases 4,360.

Morbidity.—Month of January, 1911. Cases of communicable diseases reported 13,462, distributed as follows: Anterior poliomyelitis 11, anthrax 1, cerebrospinal meningitis 11, chickenpox 1,427, diphtheria 1,436, erysipelas 207, German measles 45, malarial fever 3, measles 4,242, mumps 688, pellagra 3, pneumonia 883, puerperal fever 11, rabies 1, scarlet fever 1,185, smallpox 15, tetanus 5, trachoma 5, trichiniasis 3, tuberculosis 1,329, typhoid fever 772, uncinariasis 4, whooping cough 1,175.

SOUTH CAROLINA—Charleston.—Month of February, 1911. Population 58,833. Total number of deaths from all causes 110, including tuberculosis 9, typhoid fever 2. Cases reported: Diphtheria 2, scarlet fever 6, smallpox 1, typhoid fever 2.

FOREIGN AND INSULAR.

CANADA.

OTTAWA—Typhoid Fever Outbreak.

Information was received March 22 from the Department of State that the American consul general at Ottawa had reported an outbreak of typhoid fever at that place with more than 900 cases, of which 51 ended fatally. The outbreak began early in January. During the week ended March 21 there were reported 56 cases.

CHINA.

TSINGTAU—Precautions Against Plague.

Consul McNally reports February 11:

Tsingtau remains free from plague, the nearest reported case having occurred at Lantsun, 40 miles distant. Every case of sickness not properly diagnosed is investigated by the local physicians, and in case of sudden death the house in which the death occurred is surrounded by soldiers until a proper examination is made as to the nature of the illness which caused the death. Railway traffic has been almost entirely suspended and all boats arriving from the north having touched at infected ports are subject to five days' quarantine, including the period of the voyage. The chief difficulty which confronts the German authorities is the handling of the 20,000 returning Chinese who left Tsingtau to spend the Chinese new year with their families. Many of them will have passed through plague centers and it will be necessary to quarantine and maintain this number for the regulation period.

CUBA.

Transmissible Diseases.

The following report of transmissible diseases in the island of Cuba, issued by the national department of sanitation, was forwarded March 21 by Acting Assistant Surgeon Villoldo at Habana:

February 18-28, 1911.

	New cases.	Deaths.	Remaining under treatment.
Tuberculosis.....	32	68	2,448
Leprosy.....	3	1	346
Malaria.....	28	4	173
Typhoid fever.....	16	3	66
Diphtheria.....	22	4	27
Scarlet fever.....	18	2	30
Measles.....	153	1	386
Varicella.....	17	—	31
Tetanus in the new born.....	4	4	1
Filariasis.....	—	—	1
Dengue.....	—	—	1
Typhus fever.....	1	—	1

No quarantinable diseases were reported in the island during the week ended March 18.

ECUADOR.**Campaign Against Yellow Fever and Malaria.**

Passed Assistant Surgeon Parker, at Guayaquil, reports February 27:

A circular entitled "Sanitary Campaign against Yellow Fever and Malaria" and a letter addressed to each practicing physician in Guayaquil were issued February 3 by the director of health of Ecuador. The circular is a popular article intended for the education of the people in regard to the transmission of the diseases named and the methods to be adopted for their suppression. These relate to the destruction of the breeding places of mosquitoes by oiling the large deposits of water, removing old bottles and cans, fruit shells, and leaves, the covering with wire netting of all large water containers, and the daily washing of the small containers, such as barrels, and the oiling of damp places in the vicinity of houses. Attention is drawn to the fact that small fish devour the larva of the mosquito and that it is desirable to place fish in water deposits to prevent the propagation of mosquitoes.

The letter addressed by the director of health to physicians relates to the prompt reporting of all cases of fever occurring in their practice in natives or foreigners, and the registering of temperatures in order that a case may be promptly isolated should it prove to be yellow fever.

Immediately upon the issuance of the circular and letter active work was commenced by the sanitary department. Contracts have been let for public improvements, water supply, and street paving.

The sanitary measures directed against plague continue to be enforced.

GREECE.**ATHENS—Cerebrospinal Meningitis—Detention of Emigrants.**

The American consul general at Athens reported March 27 that during the past three months there had been 219 cases of cerebrospinal meningitis with 55 deaths in Athens and Paraetus and 289 cases with 49 deaths in the provinces. The epidemic reached its climax in February and is now subsiding. The consul general has been directed to detain emigrants for the United States for a period of 10 days from the date of their last exposure to the disease.

HAWAII.**Record of Plague Infection.**

Last case of human plague at Honolulu occurred July 12, 1910.

The last plague-infected rat was found at Aiea, 9 miles from Honolulu, April 12, 1910.

At Hilo the last case of human plague occurred March 23, 1910. A fatal case occurred at Honokaa, 60 miles from Hilo, December 17, 1910, and 2 fatal cases were reported January 31, 1911.

The last plague-infected rat was found at Honokaa February 2, 1911.

Passed Assistant Surgeon Ramus reports in regard to plague-prevention work, March 6:

HONOLULU.*Week ended March 4, 1911.*

Total rats and mongoose taken.....	787
Rats trapped.....	777
Mongoose trapped.....	10
Examined bacteriologically.....	716
Classification of rats trapped:	
<i>Mus alexandrinus</i>	105
<i>Mus musculus</i>	244
<i>Mus norvegicus</i>	61
<i>Mus ratus</i>	367
Average number of traps set daily.....	1,720

Smallpox at Kona, Hawaii.

Dr. Ramus reports the occurrence March 22 of a case of smallpox at Kona, Hawaii, and at Waiakea, Hilo, 1 case March 25 and 2 cases March 26.

INDIA.**CALCUTTA—Cholera, Plague, and Smallpox.**

Acting Assistant Surgeon Allan reports February 23:

During the week ended February 4 there were reported in Calcutta 60 deaths from cholera, 13 from plague, and 1 from smallpox; in all Bengal 2,438 cases of plague, with 2,192 deaths; in all India 26,211 cases of plague with 22,239 deaths.

KARACHI—Cholera, Plague, and Smallpox—Comparative Statistics.

Consul Lupton reports February 8:

During the year ended December 31, 1910, a total of 5,078 deaths from all causes was reported in Karachi (population in 1901 was 108,644), giving a death rate of 46.74 per 1,000. Contagious diseases were reported as follows:

	Cases.	Deaths.
Plague.....	1,727	1,661
Smallpox.....	56	14
Cholera.....	39	21
Cholera nostras.....	25	15

Almost two-thirds of the plague cases occurred in the first four months of the year.

The following tables show the variations in the death rate, as well as the relation between the number of cases and deaths in each of the contagious diseases named.

The periods covered are in all cases the years ending March 31.

Total deaths from all causes.

Causes.	1907-8	Rate per 1,000.	1908-9	Rate per 1,000.	1909-10	Rate per 1,000.
Fever (malaria).....	790	7.27	834	7.67	696	6.40
Plague.....	2,380	21.90	2,547	23.44	2,069	19.04
Cholera.....			47	.43		
Smallpox.....	94	.86	50	.45	12	.11
Stomach and bowel complaints.....	122	1.12	110	1.01	88	.80
Accidents.....	48	.44	40	.37	20	.18
Other causes.....	1,991	18.32	2,318	21.33	2,283	21.01
	5,425	49.93	5,946	54.72	5,168	47.56

Municipal sweepers are paid a small sum for being inoculated with Haffkine's plague serum, but it is almost impossible to persuade others to undergo this treatment. A careful record has been kept of this work, with the results here shown.

Plague inoculation.

1906

Class.	Number.	Attacks.	Per cent.	Deaths.	Per cent.	Case mortality per cent.
Uninoculated.....	60	8	13.33	5	8.33	62.50
Inoculated.....	1,245	22	1.76	4	.32	18.18

1907

Uninoculated.....	46	3	6.52	2	4.35	66
Inoculated.....	1,063	5	.47	2	.19	40

1908

Uninoculated.....	92	13	14.13	11	12.00	85
Inoculated.....	1,114	6	.54	3	.27	50

The total number of deaths from plague, with their relation to the total mortality from all causes since the first outbreak in 1896-97, is as follows:

PLAUE.

Years.	Cases.	Deaths from plague.	Deaths from all causes.
1896-97.....		2,667	6,471
1897-98.....		661	3,889
1898-99.....		3,123	6,970
1899-1900.....		2,221	9,339
1900-1901.....		2,452	7,472
1901-2.....		3,099	6,855
1902-3.....		2,041	7,761
1903-4.....		2,555	6,154
1904-5.....		2,834	6,100
1905-6.....		2,190	6,394
1906-7.....		2,885	6,283
1907-8.....	2,520	2,380	5,425
1908-9.....	2,699	2,547	5,946
1909-10.....	2,133	2,069	5,168

ITALY.

NAPLES—Examination of Emigrants—Smallpox.

Passed Assistant Surgeon King reports March 7:

Vessels inspected at Naples and Palermo week ended March 4.

NAPLES.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of baggage inspected and passed.	Pieces of baggage disinfected.
Mar. 1	Romanic.....	Boston.....	872	155	1,080
1	Roma.....	New York.....	323	65	580
1	San Giorgio.....	do.....			
2	Duca di Genova.....	do.....	844	105	1,250
2	Virginia.....	do.....	554	25	680
3	Königin Luise.....	do.....	411	30	620
3	Regina d'Italia.....	do.....	692	40	870
4	Ancona.....	Philadelphia.....	1,079	110	1,450
	Total.....		4,775	530	6,530

PALERMO.

Mar. 2	Romanic.....	Boston.....	61	75	30
3	Duca di Genova.....	New York.....	378	405	300
3	Virginia.....	do.....	170	224	134
4	Königin Luise.....	do.....	250	246	200
4	Regina d'Italia.....	do.....	316	530	300
	Total.....		1,175	1,480	964

Rejections recommended.

NAPLES.

Date.	Name of ship.	Trachoma.	Favus.	Suspected trachoma.	Other causes.	Total.
Mar. 1	Romanic.....	16	3	9	4	32
1	Roma.....	9		8		17
1	San Giorgio.....					
2	Duca di Genova.....	35	1	12	4	52
2	Virginia.....	11	1	7	7	26
3	Königin Luise.....	4	2	4	3	13
3	Regina d'Italia.....	19		11	3	33
4	Ancona.....	21	9	12	11	53
	Total.....	115	16	63	32	226

PALERMO.

Mar. 2	Romanic.....	7		7	1	15
3	Duca di Genova.....	28		27	6	61
3	Virginia.....	9		4		13
4	Königin Luise.....	14		16	2	32
4	Regina d'Italia.....	15		12	2	29
	Total.....	73		66	11	150

Smallpox in Naples.—During the week ended March 4 there were reported at the health office of the city of Naples 29 cases of smallpox with 4 deaths.

MEXICO.

TAMPICO—Smallpox.

Consul Miller reports March 9:

During the month of February, 1911, there were reported 34 new cases of smallpox with 10 deaths. On March 1 there were 17 cases remaining.

PERU.

Status of Plague.

Acting Assistant Surgeon Castro-Gutierrez at Callao reports, March 7:

The last case of plague at Callao occurred February 7. Some recent cases have occurred at Lima. At Salaverry plague is present in epidemic form. Moche, Viru, Trujillo, and the whole of Chicama Valley are infected. Plague has also appeared in the vicinity of the port of Casma in the Department of Ancachs.

Bills of health from ports south of Callao show as follows:

Mollendo, Peru (Feb. 21), 2 cases of plague with 1 death in preceding two weeks; Arica, Chile (Feb. 20), plague present; Iquique, Chile (Feb. 19), 1 death from plague in preceding two weeks.

SALAVERRY—Epidemic Plague.

Consular Agent Caldicott reports February 23 and 25 through Consul General Robertson at Callao:

During the past three weeks 14 deaths have been registered in Salaverry, of which number 4 were officially declared to have been due to plague. On February 23 there were reported 2 additional cases of plague and on February 24 there were reported 5 cases, making a total since February 1 of 16 cases with 6 deaths. The municipality is disinfecting infected dwellings. The baggage of passengers by steamships is not examined or disinfected. Population of Salaverry, 1,800.

Restrictions Enforced at Salaverry.

In view of the plague conditions existing at Salaverry, Acting Assistant Surgeon Castro-Gutierrez at Callao addressed a circular letter dated March 4 to steamship agents informing them that no baggage of any class would be allowed shipment from Salaverry on any vessels bound for Ancon, Canal Zone, or any port in the United States.

RUSSIA.

LIBAU—Examination of Emigrants.

Acting Asst. Surg. Mooney reports March 3 and 10:

During the week ended March 2 there were inspected 768 intending emigrants and 93 members of crew, and during the week ended March 9 there were inspected 658 emigrants and 92 members of crew, all of whom had been in Libau under observation for five days. The number of pieces of baggage examined for foodstuffs was 406.

SIAM.

BANGKOK—Quarantine Against Singapore Removed.

Consul General Tarler reported January 23 to the Department of State:

Smallpox being no longer prevalent at Singapore the minister of local government at Bangkok directed January 19 the withdrawal of quarantine restrictions against that port.

TURKEY.

TREBIZOND—Summary of Cholera.

Consul Jewett reports January 22:

Cholera was officially reported present at Trebizond September 16, 1910. The maximum number of cases and deaths was reached on the tenth day of the epidemic, September 25. From that date the number gradually fell to zero on October 20. The total number of cases to that date was 462 with 261 deaths, giving a case mortality rate of about 54 per cent.

After October 21 there was a moderate recrudescence of the epidemic and cases and deaths continued to be officially reported to December 16. The total number of cases officially reported is 673 with 352 deaths, giving a case mortality rate of 52.5 per cent. There were no deaths from the disease among foreigners.

Cholera has been present in many localities in the consular district of Trebizond during the past few months.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.

Reports Received During Week Ended March 31, 1911.

These tables include cases and deaths recorded in reports received by the Surgeon General, Public Health and Marine-Hospital Service, from American consuls, through the Department of State, and from other sources.]

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
India:				
Calcutta.....	Jan. 29-Feb. 4.....		60	
Madras.....	Feb. 12-18.....	7	2	
Rangoon.....	Feb. 5-11.....	2	2	
Java:				
Batavia.....	Feb. 5-11.....	1	.....
Tunis:				
Amrousse.....	Sept. 20-Dec. 8.....	6	5	
Hanl.....	Sept. 20-Dec. 8.....	3	2	
Tunis.....	Sept. 20-Dec. 8.....	33	.....	Not previously reported.

YELLOW FEVER.

Brazil:				
Manaos.....	Feb. 12-25.....		37	
Para.....	Feb. 19-Mar. 4.....	6	3	
Ecuador:				
Guayaquil.....	Feb. 1-15.....	27	6	
Venezuela:				
Caracas.....	Feb. 16-28.....	2	2	

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received During Week Ended March 31, 1911.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Rio de Janeiro.....	Jan. 16-Feb. 18.....	8	4	
China:				
Amoy.....	Feb. 5-11.....		1	
Tientsin.....	Jan. 29-Feb. 18.....		13	Present in the island.
Chile:				
Arica.....	Feb. 20.....			Present.
Iquique.....	Feb. 19.....			Do.
Ecuador:				
Guayaquil.....	Feb. 1-15.....	18	7	
Milagro.....	Feb. 1-15.....	2		
Egypt:				
Cairo.....	Feb. 11.....	1	1	
Provinces—				
Assiout.....	Feb. 1-Mar. 2.....	31	8	
Assouan.....	Feb. 1-Mar. 2.....	68	39	
Benisouef.....	Feb. 7-11.....	2		
Galloubeh.....	Feb. 28.....	1	1	
Kena.....	Feb. 3-Mar. 2.....	42	31	
Minieh.....	Jan. 22-Mar. 1.....	31	9	
India:				
Bombay.....	Feb. 12-18.....		86	
Calcutta.....	Jan. 29-Feb. 4.....		13	
Kurrachee.....	Feb. 12-18.....	50	50	
Rangoon.....	Jan. 29-Feb. 11.....	15	13	
Japan:				
Formosa.....	Feb. 5-11.....	2	1	
Peru:				
Departments—				
Ancachs—				
Casma.....	Mar. 4.....			Present.
Arequipa—				
Mollendo.....	Feb. 21.....	2	1	
Callao—				
Callao.....	Feb. 7.....	1		
Libertad—				
Salaverry.....	Feb. 15-Mar. 1.....	25	15	Feb. 28, 23 cases in the lazaretto at Truxillo. Present in Moche, Viru, and Chicama Valley.
Lima—				
Lima.....	Mar. 4.....			Present.

SMALLPOX.

Brazil:				
Para.....	Feb. 19-Mar. 4.....	10	1	
Pernambuco.....	Jan. 16-31.....		77	
Rio de Janeiro.....	Jan. 16-Feb. 18.....	7	1	
Canada:				
Fernie.....	Mar. 12-18.....	2		
Ottawa.....	Mar. 12-18.....	3		
Quebec.....	Mar. 12-18.....	1		
Ceylon:				
Colombo.....	Feb. 5-11.....	7	3	
Egypt:				
Cairo.....	Feb. 19-25.....	1		
Port Said.....	Feb. 12-25.....	1	1	
Great Britain:				
Liverpool.....	Mar. 5-11.....	1		
London.....	Feb. 27-Mar. 4.....	45	1	
Hawaii:				
Kona.....	Mar. 22.....	1		
Waiakea, Hilo.....	Mar. 25-26.....	3		
India:				
Bombay.....	Feb. 12-18.....		10	
Calcutta.....	Jan. 29-Feb. 4.....		1	
Madras.....	Feb. 12-18.....	47	20	
Rangoon.....	Jan. 29-Feb. 11.....	55	15	
Italy:				
Naples.....	Feb. 26-Mar. 4.....	29	4	
Palermo.....	Feb. 19-Mar. 4.....	13	3	
Mexico:				
Aguascalientes.....	Mar. 5-11.....		5	
Ensenada.....	Mar. 12-18.....	2		
Mexico.....	Feb. 12-18.....		3	
San Luis Potosi.....	Feb. 19-25.....	10	9	
Tampico.....	Mar. 1-10.....	6	3	

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received During Week Ended March 31, 1911.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Peru:				
Salaverry.....	Feb. 27-Mar. 4.....	4.....		
Portugal:				
Lisbon.....	Mar. 4.....	33.....		
Russia:				
Moscow.....	Feb. 12-18.....	14.....	5.....	
Odessa.....	Feb. 19-Mar. 4.....	26.....		
St. Petersburg.....	Feb. 5-25.....	109.....	27.....	
Spain:				
Madrid.....	Feb. 1-28.....		8.....	
Seville.....	Feb. 1-28.....		2.....	
Valencia.....	Feb. 29-Mar. 4.....	1.....		
Straits Settlements:				
Singapore.....	Jan. 29-Feb. 4.....	5.....	1.....	
Turkey in Asia:				
Beirut.....	Feb. 27-Mar. 4.....	5.....		

Reports Received from December 31, 1910, to March 24, 1911.

[For reports received from June 25, 1910, to Dec. 30, 1910, see PUBLIC HEALTH REPORTS for Dec. 30, 1910. In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.]

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
Arabia:				
Bajil.....	Jan. 18-Feb. 12.....	49.....	41.....	
Hodeida.....	Jan. 23-Feb. 12.....	188.....	133.....	
Perim.....	Jan. 23.....			Present.
Maskat.....	Nov. 20-30.....	7.....	7.....	
Menaka.....	Jan. 19-Feb. 12.....	97.....	24.....	
Obal.....	Jan. 27-Feb. 12.....	3.....	3.....	
Zalda.....	Jan. 27-Feb. 12.....	27.....	15.....	
Austria-Hungary:				
Croatia and Slavonia.....	Aug. 3-Nov. 7.....			Not previously reported.
Maren.....	Dec. 4-17.....	5.....	2.....	
Hungary.....	Oct. 1-9.....	3.....		Total for Hungary, Nov. 27-Dec. 17: Cases, 9; deaths, 3.
Bulgaria:				
Tartar-Pazardjik.....	Jan. 10.....	2.....	2.....	
Varna.....	Nov. 29.....	2.....		From steamship Bulgarie, 3 fatal cases having been reported on p. 1936, Vol. XXV.
Ceylon:				
Colombo.....	Dec. 11-24.....	4.....	3.....	
China:				
Niuchwang.....	Aug. 1-Nov. 22.....			Occasional cases.
Shanghai.....	Aug. 1-31.....			Reported out of date.
Formosa.....	Nov. 20-Dec. 17.....	11.....	6.....	Mainly in Kelung and Taihoku.
Hawaii:				
Honolulu.....				Total from Feb. 25-Mar. 14: Cases, 31; deaths, 22.
India:				
Bombay.....	Nov. 23-Feb. 11.....		105.....	
Calcutta.....	Nov. 13-Jan. 28.....		340.....	
Madras.....	Nov. 27-Feb. 4.....		12.....	
Rangoon.....	Jan. 1-28.....	3.....	3.....	
Indo-China:				
Saigon.....	Dec. 12-Jan. 22.....	7.....	4.....	
Italy.....				Total for Italy, Dec. 27-Jan. 30: Cases 111; deaths, 17.
Provinces—				
Aquila.....	Dec. 4-17.....	4.....	1.....	
Bari.....	Dec. 27-Jan. 30.....	5.....	2.....	
Caltanissetta.....	Dec. 4-10.....	1.....		
Caserta.....	Dec. 4-Jan. 14.....	15.....	3.....	
Catanzaro.....	Dec. 27-Jan. 6.....	2.....	2.....	
Lecce.....	Dec. 11-Jan. 30.....	111.....	13.....	
Palermo—				
Palermo.....	Dec. 4-10.....	16.....	6.....	
Insane asylum.....	Dec. 4-Jan. 6.....	24.....	6.....	
Rome.....	Dec. 4-Jan. 6.....	10.....	7.....	
Salerno.....	Dec. 11-Jan. 6.....	10.....		

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from December 31, 1910, to March 24, 1911.

CHOLERA—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Japan.....				Total for Japan, Sept. 14—Nov. 30: Cases, 2,770; deaths, 1,923; including cases and deaths appearing on p. 1937, Vol. XXV.
Aichi ken.....	Oct. 16—Nov. 20.....	3	3	
Ehime ken.....	Sept. 23—Nov. 30.....	27	19	
Fukuoka ken.....	Sept. 30—Nov. 30.....	234	165	
Hiogo ken, Kobe.....	Sept. 12—Nov. 30.....	607	396	
Hiroshima ken.....	Sept. 25—Nov. 30.....	58	30	
Kagawa ken.....	Oct. 2—Nov. 30.....	293	201	
Kagoshima ken.....	Oct. 28—Nov. 30.....	4	3	
Kochi ken.....	Oct. 18—Nov. 30.....	70	42	
Kyoto fu.....	Sept. 30—Nov. 30.....	143	119	
Kumamoto ken.....	Oct. 18—Nov. 30.....	19	11	
Miye ken.....	Oct. 11—Nov. 30.....	8	5	
Nagasaki ken.....	Oct. 16—Nov. 30.....	26	11	
Nara ken.....	Oct. 3—Nov. 30.....	31	23	
Oita ken.....	Oct. 10—Nov. 30.....	2	1	
Okayama ken.....	Sept. 29—Nov. 30.....	71	49	
Osaka fu.....	Sept. 17—Nov. 30.....	951	692	
Saga ken.....	Oct. 4—Nov. 30.....	51	31	
Shiga ken.....	Nov. 20—30.....	7	6	
Shimane ken.....	Oct. 24—Nov. 30.....	7	5	
Tokushima ken.....	Oct. 3—Nov. 30.....	59	37	
Tokyo fu.....	Oct. 18—Nov. 30.....	1	1	
Wakayama ken.....	Oct. 6—Nov. 30.....	57	44	
Yamaguchi ken.....	Oct. 12—Nov. 30.....	41	29	
Java:				
Batavia.....	Nov. 13—Feb. 4.....	12	5	Among natives.
Samarang.....	Sept. 11—Dec. 20.....	590	504	
Soerobaya.....	Oct. 23—Dec. 24.....	23	15	
Korea:				
Seoul.....	Oct. 26—Nov. 5.....	1	1	
Madeira.....				Total for Madeira, Nov. 16—Jan. 12: Cases, 1,646; deaths, 525; including report, page 1938, Vol. XXV. Funchal district, Nov. 16—Jan. 31: Cases, 822; deaths, 238. Rural districts, Nov. 16—Dec. 31: Cases, 828; deaths, 267.
Persia:				
Funchal.....	Nov. 16—Dec. 8.....	126	36	
Calheta.....	Dec. 9—31.....	1	.....
Camara dos Lobos.....	Nov. 16—Dec. 8.....	112	32	
Ponto do Sol.....	Nov. 16—Dec. 8.....	54	20	
Santa Cruz.....	Nov. 16—Dec. 8.....	15	8	
Machico.....	Nov. 16—Dec. 8.....	31	5	
Porto Santo Island.....	Nov. 10—Dec. 8.....	7	3	
Assadabad.....	Oct. 5—Nov. 8.....	61		
Birjend.....	Nov. 10.....	.....	
Enzeli.....	Nov. 8—25.....	9	11	
Hamadan.....	Oct. 6—Dec. 3.....	42	22	
Kasri-Churine.....	Oct. 13—20.....	.....	5	
Kerman.....	Nov. 22—Dec. 24.....	106	51	
Kermanchah.....	Nov. 5—10.....	.....	6	
Mohammerah.....	Nov. 13—Dec. 5.....	11	3	
Resht.....	Nov. 19—Dec. 3.....	48	42	
Mollag-Ali.....	Nov. 20.....	6	.....
Turbat-i-Hidari.....	Oct. 10—Nov. 15.....	66	25	
Philippine Islands:				
Manila.....	Nov. 6—Dec. 31.....	9	6	Third quarter, 1910: Cases, 195; deaths, 141.
Provinces.....				Third quarter, 1910: Cases, 5,657; deaths, 4,089.
Albay.....	Dec. 24—Feb. 4.....	24	19	
Bulacan.....	Nov. 6—Feb. 4.....	18	15	
Ilocos Sur.....	Nov. 6—Dec. 17.....	58	38	
Mindoro.....	Nov. 6—Feb. 4.....	24	17	
Rizal.....	Nov. 6—Dec. 3.....	40	32	
Union.....	Nov. 6—12.....	3	1	
Russia.....				Total for Russia, Nov. 20—Jan. 28: Cases, 1,229; deaths, 302. From May 8—Jan. 28: Cases, 216,795; deaths, 100,981.
Baku government—				
Baku.....	Nov. 6—Dec. 17.....	6	2	
Batum.....	Dec. 4—10.....	2	1	
Don territory.....	Nov. 6—19.....	6	2	

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from December 31, 1910, to March 24, 1911.

CHOLERA—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Russia—Continued.				
Erivan government.....	Nov. 6-Dec. 10.....	4	4	
Ferghana territory.....	Nov. 6-19.....	6	6	
Kharkov government.....	Nov. 6-12.....	2	.....
Kazan government.....	Nov. 6-Jan. 7.....	2	1	
Kherson government.....	Nov. 6-Dec. 3.....	4	4	
Kief government.....	Nov. 6-Jan. 28.....	44	17	
Kuban territory.....	Nov. 6-13.....	4	4	
Lublin government.....	Nov. 20-26.....	31	13	
Mohilev government.....	Nov. 6-19.....	2	1	
Orenburg government.....	Nov. 13-24.....	15	6	
Oufa government.....	Nov. 6-12.....	2	1	
Perm government.....	Nov. 20-26.....	1	.....
Podolia government.....	Nov. 13-Jan. 28.....	11	4	
Rjasan government.....	Nov. 6-12.....	2	.....
St. Petersburg government.....	Nov. 6-12.....	2	.....
St. Petersburg.....	Nov. 6-Dec. 31.....	32	16	
Samara government.....	Nov. 6-19.....	6	.....
Saratov government.....	Nov. 13-26.....	8	6	
Siberia, eastern.....	Nov. 6-19.....	12	3	Vladivostok, Oct. 29—N ov. 13 Cases, 4; deaths, 17.
Syr Darya territory.....	Nov. 6-19.....	7	4	
Taurida government—				
Sebastopol.....	Nov. 13-Dec. 3.....	7	4	
Tambov government.....	Nov. 13-Dec. 10.....	86	34	
Tiflis government.....	Nov. 6-26.....	2	.....
Vitebsk government.....	Nov. 6-19.....	3	2	
Veronesch government.....	Nov. 6-12.....	2	.....
Yekaterinoslav government.....	Nov. 6-Jan. 14.....	65	34	
Siam:				
Bangkok.....	Nov. 6-Jan. 21.....	296	291	
Straits Settlements:				
Singapore.....	Dec. 25-31.....	1	1	
Sumatra:				
Bambel.....	Dec. 29.....	.....	.....	Present.
Biagnoeti.....	Nov. 14.....	.....	.....	Do.
Keretan.....	Dec. 29.....	.....	.....	Do.
Pengoloedjabar.....	Nov. 14.....	.....	.....	Do.
Tripoli:				
Tripoli.....	Nov. 15-Dec. 8.....	37	37	
Turkey:				
Adrianople vilayet.....	Nov. 21-Dec. 15.....	60	70	94 cases and 34 deaths reported, p. 1940, Vol. XXV.
Constantinople.....	Nov. 22-Jan. 16.....	841	529	Total from Sept. 13-Jan. 16: Cases, 1,318; deaths, 793.
Saloniki vilayet.....	Dec. 11-31.....	50	25	
Turkey in Asia:				
Bagdad vilayet.....	Nov. 20-Dec. 11.....	119	115	Total, Oct. 16-Jan. 16: Cases, 819; deaths, 723.
Basra.....	Nov. 6-26.....	10	9	
Damascus.....	Feb. 3.....	13	3	Among pilgrims.
Mekka.....	Dec. 26-Jan. 28.....	153	142	
Samsoun.....	Nov. 20-Dec. 3.....	6	6	
Smyrna.....	Nov. 20-Feb. 12.....	331	200	
Trebizond.....	Nov. 20-Dec. 18.....	107	42	And vicinity.
Yembo.....	Jan. 7-12.....	24	21	
Zongouldak.....	Nov. 20-Dec. 16.....	9	6	

YELLOW FEVER.

Brazil:				
Manaos.....	Dec. 4-Feb. 11.....	.....	78	
Para.....	Nov. 27-Feb. 18.....	176	76	
Ecuador:				
Guayaquil.....	Nov. 1-Jan. 31.....	73	31	
Honduras:				
Puerto Cortez.....	Jan. 21-29.....	.....	.....	One fatal case on U.S.S. Marietta.
Mexico:				
Salina Cruz.....	Mar. 4.....	1	1	From s. s. Opland from Guatema- lian ports.
Venezuela:				
Caracas.....	Dec. 4-Feb. 15.....	55	14	Nov. 22-Dec. 3, 5 deaths.
La Guaira.....	Dec. 1-15.....	1	1	Jan. 22-27, 1 fatal case in Canton, suburb.
Macuto.....	Dec. 1-7.....	1	.....
Maiquetia.....	Nov. 29.....	1	.....

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from December 31, 1910, to March 24, 1911.
PLAGUE.

Places.	Date.	Cases.	Deaths.	Remarks.
Azores:				
Terceira.....	Dec. 24.....			Present.
Brazil:				
Bahia.....	Oct. 29-Dec. 23.....	32	28	
Pernambuco.....	July 1-Dec. 16.....		15	
Rio de Janeiro.....	Nov. 1-27.....	12	5	
São Paulo.....	Jan. 8-21.....	2	2	
Chile:				
Arica.....	Jan. 26-Feb. 5.....	5	1	Dec. 28-Jan. 12, present.
Iquique.....	Jan. 1-28.....	5	3	
China:				
Amoy.....	Jan. 21-Feb. 5.....	1	1	
Changchung.....	Jan. 1-Feb. 1.....		544	Kuiangau, Jan. 1-21, 3 fatal cases. Jan. 21-Feb. 11, present in Amoy Island.
Changtu.....	Jan. 14.....			Feb. 20-26, deaths not reported; cases, 20 daily.
Paoting-fu.....	Jan. 24.....			Present.
Peking.....	Jan. 24.....	2		Present.
Shantung Province.....	Jan. 15-Feb. 15.....		1,000	
Chefoo.....	Jan. 15-Feb. 15.....		300	
Tengchowfu.....	Feb. 4.....		30	
Sioke.....	Dec. 6-Jan. 4.....			Present; in the interior, 60 miles from Amoy.
Swatow.....	Jan. 28-Feb. 11.....			Present in vicinity.
Tientsin.....	Jan. 21-Feb. 18.....		17	Among Chinese.
Manchuria.....				Total for Manchuria, Oct. 25-Feb. 3: Cases, 1,176 Chinese, 40 Europeans; deaths, 1,164 Chi- nese, 37 Europeans.
Ashihe.....	Dec. 25-Jan. 13.....	2		
Buhedu.....	Oct. 30.....	3	3	
Dalny.....	Jan. 11-Feb. 8.....	66	60	
Dunzenshan.....	Dec. 25-Feb. 3.....	19	22	
Fuchiatien.....				Nov. 8-Feb. 4: Deaths, 4,284.
Hailar.....	Dec. 6.....	1	1	
Harbin.....				Nov. 8-Feb. 4: Deaths, 1,020 Chi- nese, 27 Europeans.
Hulan.....	Dec. 31.....			Present.
Iaomin.....	Dec. 25-Jan. 13.....	1	1	
Kirin.....	Jan. 7-28.....		33	
Kuantchentzi.....	Jan. 1-Feb. 3.....	8	3	
Liesanai veta Handa- chedzy.....	Dec. 25-Jan. 13.....	9	9	
Lochagri.....	Dec. 27.....	4	4	
Loshagooon.....	Dec. 27.....	4		
Manchuria, station.....	Dec. 7-26.....	85	95	
Moershan.....	Jan. 1-20.....	1	1	
Mukden.....	Jan. 1-Feb. 5.....		680	
Sanshahe.....	Jan. 1-20.....	3	3	
Tieling.....	Jan. 14.....		1	
Tchjalainarskiy.....	Nov. 11-Dec. 3.....	104	106	Cases previously reported, 14; deaths, 12.
Tchjalantum.....	Nov. 21-Jan. 14.....		42	
Turchiha.....	Oct. 30.....	4	4	
Tzaitzzaligoy.....	Jan. 1-20.....	2	2	
Ecuador:				
Babahoyo.....	Dec. 16-Jan. 15.....	16	4	
Duran.....	Dec. 16-Jan. 31.....	10	4	
Guayaquil.....	Nov. 1-Jan. 31.....	203	183	
Milagro.....	Jan. 1-31.....	7	5	
Egypt:				
Alexandria.....	Jan. 4.....	1	2	Nov. 29-Dec. 24, 5 cases, 2 deaths.
Cairo.....	Feb. 11.....	1	1	
Provinces—				
Assiout.....	Jan. 1-Mar. 2.....	71	24	Dec. 1-29, 50 cases, 24 deaths.
Assouan.....	Jan. 1-Mar. 2.....	68	39	
Behera.....	Jan. 1-17.....	3		
Beni Souef.....	Feb. 7-11.....	2		
Galloubeeh.....	Feb. 28.....	1	1	Nov. 22-Dec. 2, 1 case, 1 death.
Gizeh.....	Jan. 1-Feb. 2.....	9	5	
Kena.....	Jan. 14-Mar. 2.....	62	43	
Menouf.....	Jan. 1-27.....	6	2	Dec. 2-22, 26 cases, 14 deaths.
Minieh.....	Feb. 22-Mar. 1.....	31	9	
Hawaii:				
Honokaa.....	Jan. 31.....	2	2	

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from December 31, 1910, to March 24, 1911.

PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
India:				
Bombay.....	Nov. 23—Feb. 11.....	.....	250	
Calcutta.....	Nov. 13—Jan. 28.....	.....	118	
Kurrachee.....	Nov. 19—Feb. 11.....	193	191	
Madras.....	Dec. 11—17.....	.....	1	
Rangoon.....	Jan. 1—28.....	18	17	
Bombay Presidency and Sind.....	Oct. 29—Jan. 28.....	21,855	14,671	Dec. 11—31, 10 deaths.
Madras Presidency.....	Oct. 29—Jan. 28.....	5,666	4,654	
Bengal.....	Oct. 29—Jan. 28.....	15,243	12,042	
United Provinces.....	Oct. 29—Jan. 28.....	66,534	56,216	
Punjab.....	Oct. 29—Jan. 28.....	19,395	15,294	
Burma.....	Oct. 29—Jan. 28.....	1,787	1,720	
Central Provinces.....	Oct. 29—Jan. 28.....	14,834	11,137	
Coorg.....	Oct. 29—Jan. 28.....	19	9	
Mysore State.....	Oct. 29—Jan. 28.....	7,302	5,255	
Hyderabad State.....	Oct. 29—Jan. 28.....	4,552	3,847	
Central India.....	Oct. 29—Jan. 28.....	3,332	2,703	
Rajputana and Ajmer-Merwara.....	Oct. 29—Jan. 28.....	8,277	6,393	
Kashmir.....	Nov. 6—Jan. 28.....	104	74	
North West Province.....	Dec. 10—Jan. 28.....	61	52	
Grand total.....	.....	168,961	134,067	
Indo-China:				
Saigon.....	Nov. 14—Jan. 29.....	5	4	
Japan:				
Formosa.....	Jan. 22—Feb. 4.....	7	6	
Mauritius.....	Sept. 30—Dec. 29.....	511	290	
New Caledonia:				
Noumea.....	Sept. 17.....	.....	.....	Present.
Peru:				
Arequipa Department.....	Nov. 1—Dec. 31.....	10	2	
Mollendo.....	.....	.....	.....
Callao Department.....	Nov. 1—Jan. 14.....	2	.....
Lambayeque Department.....	Nov. 1—Dec. 31.....	8	2	
Libertad Department.....	Nov. 1—Dec. 31.....	58	29	
Lima Department.....	Nov. 1—Feb. 18.....	15	8	
Piura Department.....	Nov. 1—Dec. 31.....	29	18	
Russia:				
Odessa.....	Jan. 1.....	1	.....
Astrakhan Government—				
Abil-Isken.....	Nov. 22—29.....	4	4	
Kirghiz Steppe.....	Dec. 17—Feb. 2.....	99	81	
Kolden.....	Dec. 6—13.....	8	3	
Kolybai.....	Dec. 10—13.....	5	1	
Kulken Island.....	Oct. 13—Nov. 4.....	5	5	
Kauraali-Tehaygal.....	Nov. 23—29.....	5	5	
Neuren.....	Nov. 17—21.....	1	1	
Trans-Caucasia.....	.....	.....	.....	Total from Oct. 23—Nov. 24; Cases, 28; deaths, 5.
Petrovsk.....	Nov. 23.....	1	1	
Sanitsa-Oliviana.....	Nov. 22.....	1	1	
Baku.....	Dec. 17.....	1	1	
Batum.....	Dec. 17.....	1	1	
Odessa.....	Nov. 26—Dec. 9.....	.....	1	
Siam:				
Bangkok.....	Nov. 27—Dec. 3.....	1	1	
Straits Settlements:				
Singapore.....	Nov. 13—Dec. 3.....	1	1	
Trinidad.....	Feb. 8—Mar. 15.....	2	1	
Turkey in Asia:				
Jiddah.....	Jan. 15.....	1	.....
Venezuela:				
Caracas.....	Nov. 9.....	.....	.....	Present.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from December 31, 1910, to March 24, 1911.

SMALLPOX.

Places.	Date.	Cases.	Deaths.	Remarks.
Abyssinia:				
Adis Ababa.....	Nov. 20-Feb. 11.....	.....	.....	Present.
Arabia:				
Aden.....	Jan. 9-16.....	11	3	Epidemic.
Berbera.....	Dec. 9-Jan. 9.....	.....	.....	Present.
Bulhar.....	Jan. 25.....	.....	.....	1 case from a British naval vessel.
Maskat.....	Jan. 1-21.....	3	.....	Present.
Zella.....	Jan. 25.....	.....	.....	.....
Argentina:				
Buenos Aires.....	Oct. 1-Dec. 31.....	.....	16	.....
Rosario.....	Oct. 1-Dec. 31.....	.....	11	.....
Australia:				
Adelaide.....	.....	.....	.....	Sept., 1910, 1 case on s. s. Kaszembe from Singapore.
Barbados:				
Bridgetown.....	Jan. 14.....	1	.....	From steamship Cara from Rio de Janeiro.
Brazil:				
Bahia.....	Oct. 29-Dec. 23.....	59	30	.....
Para.....	Nov. 27-Feb. 11.....	34	8	.....
Pernambuco.....	July 1-Jan. 15.....	.....	886	.....
Rio de Janeiro.....	Nov. 14-27.....	3	.....	.....
Sao Paulo.....	Jan. 8-14.....	.....	1	.....
Canada:				
British Columbia—				
Fernie.....	Feb. 19-Mar. 11.....	4	.....	.....
Vancouver.....	Jan. 1-31.....	3	.....	.....
Victoria.....	Dec. 11-Feb. 28.....	59	.....	.....
New Brunswick—				
Moncton.....	Jan. 29-Feb. 11.....	15	.....	.....
Newcastle.....	Dec. 18-Jan. 25.....	9	.....	Jan. 14-Mar. 8, in vicinity.
Nova Scotia—				
Halifax.....	Jan. 1-14.....	3	.....	.....
Louisburg.....	Dec. 25-Feb. 4.....	9	.....	.....
Sydney.....	Jan. 22-Mar. 11.....	5	.....	.....
Ontario—				
Cornwall.....	Jan. 1-21.....	3	.....	.....
Ottawa.....	Dec. 18-Feb. 25.....	7	.....	.....
Quebec—				
Quebec.....	Feb. 12-18.....	1	.....	.....
Ceylon:				
Colombo.....	Nov. 13-Jan. 7.....	25	6	Feb. 12, present.
Chile:				
Coquimbo Province.....	Dec. 13-30.....	.....	.....	Present in two localities.
Iquique.....	Nov. 13-19.....	.....	1	.....
Punta Arenas.....	Nov. 1-30.....	1	.....	.....
Talcahuano.....	Nov. 13-Dec. 17.....	23	.....	.....
Valparaiso.....	Nov. 20-Jan. 28.....	448	.....	Deaths not generally reported; Jan. 8-14, two deaths.
China:				
Canton.....	Dec. 11-17.....	26	3	Present among natives.
Chefoo.....	Dec. 11-17.....	.....	.....	Present.
Chungking.....	Nov. 13-Jan. 28.....	.....	.....	.....
Hongkong.....	Dec. 4-Jan. 28.....	14	9	.....
Manchuria—				
Dalmay.....	Nov. 27-Feb. 11.....	2	1	Do.
Nanking.....	Nov. 20-Feb. 18.....	.....	.....	Deaths among natives.
Shanghai.....	Nov. 21-Feb. 5.....	30	130	Present 25 miles inland; Feb. 11, present in vicinity.
Swatow.....	Jan. 1-7.....	.....	.....	.....
Tsingtau.....	Jan. 8-Feb. 11.....	12	1	.....
Colombia:				
Cartagena.....	Jan. 15.....	.....	.....	Present.
Egypt:				
Alexandria.....	Nov. 1-Dec. 31.....	1	2	.....
Cairo.....	Dec. 3-Feb. 11.....	12	4	.....
Port Said.....	Dec. 17-Feb. 11.....	3	.....	.....
France:				
Paris.....	Dec. 3-Feb. 18.....	38	.....	.....
Germany.....	.....	.....	.....	Total for Germany, Dec. 4-Jan. 7, cases 11.
Gibraltar.....	Jan. 16-Feb. 5.....	3	.....	.....
Great Britain:				
Dublin.....	Jan. 15-21.....	1	.....	.....
Leith.....	Dec. 11-17.....	2	.....	From a steamship from Oporto.
Liverpool.....	Jan. 29-Mar. 4.....	3	.....	.....
London.....	Feb. 19-25.....	35	.....	.....
Hawaii:				
Honolulu.....	Jan. 3-Feb. 18.....	4	.....	Jan. 3, 3 cases on s. s. Kihō Maru from Manzanillo. Feb. 18, 1 case on s. s. Chiyo Maru from Yokohama.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from December 31, 1910, to March 24, 1911.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Hawaii—Continued.				
Maui—				
Puuene.....	Jan. 24.....	39.....		
Waikapu.....	Jan. 31.....	1.....		
India:				
Bombay.....	Dec. 6-Feb. 11.....		29.....	
Calcutta.....	Nov. 6-Jan. 28.....		15.....	
Madras.....	Nov. 20-Feb. 11.....	208.....	69.....	
Rangoon.....	Jan. 1-28.....	47.....	14.....	Nov. 20-Dec. 31, 6 deaths.
Indo-China:				
Saigon.....	Nov. 14-Feb. 5.....	73.....	21.....	
Italy:				
Genoa.....	Feb. 1-15.....	6.....		
Naples.....	Dec. 4-Feb. 25.....	247.....	144.....	
Palermo.....	Jan. 8-Feb. 18.....	32.....	12.....	
Turin.....	Jan. 8-14.....	1.....		
Japan:				
Kobe.....	Dec. 26-Feb. 12.....	3.....		Dec. 26-Jan. 1, 2 cases from s. s. Shimosa from New York via ports.
Java:				
Batavia.....	Dec. 26-Feb. 4.....	6.....		
Malta:				
Valletta.....	Dec. 4-Jan. 28.....	4.....		
Mexico:				
Aguascalientes.....	Dec. 25-Mar. 4.....		36.....	
Chihuahua.....	Jan. 30-Feb. 5.....	1.....	1.....	
Guadalajara.....	Jan. 29-Feb. 4.....	1.....	1.....	
Mexico.....	Dec. 11-Feb. 11.....		19.....	Reports from Jan. 8-28 not received.
Monterey.....	Dec. 19-25.....		1.....	
San Luis Potosi.....	Nov. 13-Feb. 11.....	93.....	55.....	Jan. 26, present in the interior of the State.
Tampico.....	Dec. 2-Feb. 28.....	91.....	21.....	Present in Dona Cecilia, La Barra, and Tancol.
Netherlands:				
Rotterdam.....	Dec. 11-Jan. 28.....	4.....		
New Zealand:				
Lyttelton.....	Dec. 30.....	1.....		On s. s. Knight of the Garter from Karotzu, Japan.
Peru:				
Salaverry.....	Jan. 25-31.....	1.....		Jan. 10-Feb. 7 present.
Truxillo.....	Dec. 19.....		2.....	Dec. 19-Jan. 7 present in vicinity.
Philippine Islands.....				Third quarter, 1910: Cases 11, deaths 0.
Portugal:				
Lisbon.....	Dec. 3-Feb. 25.....	198.....		Oct. 30-Dec. 31, deaths 48. Year 1910, 286. Jan. 1-28, deaths 11.
Russia:				
Libau.....	Dec. 5-Jan. 23.....	6.....	4.....	
Moscow.....	Nov. 13-Feb. 11.....	108.....	52.....	
Odessa.....	Nov. 20-Feb. 18.....	14.....	3.....	
Riga.....	Dec. 11-Feb. 18.....	78.....		
St. Petersburg.....	Nov. 13-Feb. 4.....	316.....	89.....	
Warsaw.....	Oct. 9-Dec. 17.....		19.....	
Siberia:				
Vladivostok.....	Nov. 22-Jan. 21.....	16.....	3.....	
Siam:				
Bangkok.....	Dec. 21-Feb. 22.....	1.....	1.....	
Spain:				
Barcelona.....	Dec. 5-Jan. 8.....		2.....	
Madrid.....	Nov. 1-Jan. 31.....		15.....	
Seville.....	Jan. 1-31.....		8.....	
Valencia.....	Nov. 27-Feb. 25.....	17.....		
Straits Settlements:				
Penang.....	Nov. 6-Jan. 7.....	275.....	120.....	
Singapore.....	Nov. 13-Jan. 28.....	69.....	13.....	
Switzerland:				
Cantons—				
Aargau.....	Jan. 29-Feb. 25.....	31.....		
Baselstadt.....	Feb. 19-25.....	1.....		
Bern.....	Dec. 12-Feb. 11.....	11.....		
Turkey:				
Constantinople.....	Dec. 19-25.....		1.....	
Turkey in Asia:				
Beirut.....	Dec. 4-Feb. 18.....	23.....		
Smyrna.....	Dec. 18-24.....	1.....		
Uruguay:				
Montevideo.....	Oct. 1-Dec. 31.....	31.....	10.....	
Zanzibar:				
Zanzibar.....	Oct. 31-Feb. 5.....	67.....	58.....	

MORTALITY.

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.	Typhoid fever.	Scarlet fever.	Diphtheria.	
Aguascalientes.	Mar. 11	40,000	45				5	1			1		1
Aix la Chapelle.	Feb. 11	156,064	80	8	1								1
Amoy.	do	200,000	5										
Amsterdam.	Feb. 25	574,973	156	22							1	11	1
Antwerp.	do	320,351	71	7							1		
Asuncion, Paraguay.	Jan. 28	75,000	24	1					1				
Athens.	Feb. 22	250,010	23						1				
Barcelona.	Mar. 5	591,272	315	27				5		1	11	1	2
Barmen.	Feb. 18	169,200	40	4									
Batavia.	Feb. 11	217,630						1					
Berirut.	Mar. 4	80,000	20	2				3					
Belfast.	do	398,421	133	23						1	7	10	8
Berlin.	Feb. 28	2,070,981	581	81					1	5	18	5	2
Do.	Feb. 25		605	88					1				
Birmingham.	Mar. 4	575,545	177	29					2		1		
Do.	Mar. 11		177						1	1	5	17	1
Bombay.	Feb. 18	977,822	801	57	86		10		2			35	
Bradford.	Mar. 4	297,780	86	9					2				6
Bremen.	do	246,827	52	8						1		3	6
Bristol.	do	387,511	99	7					2		1	7	3
Do.	Mar. 11		133	9					1		1	4	
Brussels.	Mar. 4	720,030	243	18					1		5	3	4
Budapest.	Feb. 25	950,610								1			
Cairo.	Feb. 18	682,953	458	21				9	2	1	6		
Do.	Feb. 25		468	30				6		4		6	
Calcutta.	Feb. 4	847,796	508	35	13	60	1			2	1	1	
Chemnitz.	Feb. 25	289,850	85	4									
Chihuahua.	Feb. 19	39,000	24	2					1				
Do.	Feb. 26		37	4				1					
Do.	Mar. 5		39	4				1					
Do.	Mar. 12		30	3				1			2	3	
Christiania.	Mar. 4	245,000	70	4									
Colombo.	Feb. 11	191,310	123	17					8				
Constantinople.	Mar. 5	1,000,000	326	31				6		2	1		
Copenhagen.	Feb. 18	459,000	129	18						1	1		3
Do.	Feb. 25	462,000	182	21						1			
Dresden.	Feb. 18	547,300	175	26						1	1	8	2
Do.	Feb. 25		168	23					2	2	2		
Dublin.	do	402,928	195	25					2	2	2		7
Do.	Mar. 4		180	27					4	2	7	11	5
Dundee.	do	171,006	63	9						1			
Durban.	Feb. 11	64,689	16	2					1				
Edinburgh.	Mar. 4	365,253	116	9					2		1	2	3
Erfurt.	Feb. 18	111,535	44	7					2				
Do.	Feb. 25		25	3						2			
Fiume.	Mar. 4	50,811	30	13							1		
Ghent.	Feb. 25	165,965	64	3							1		
Do.	Mar. 4		45	3							2		
Glasgow.	Mar. 10	897,178	315					1	3	4		16	
Gottenborg.	Mar. 4	165,400	54	10							1	1	2
Greenock.	Mar. 11	74,131	36										
Guadalajara.	do	118,799	64					1					
Hamburg.	do	932,000	284	43						1	1	7	2
Hongkong.	Feb. 11	336,488					3	1					
Kingston, Canada.	Mar. 18	20,000	11	1							1		2
Konigsberg.	Feb. 25	245,853	96	7									
Kurrachee.	Feb. 18	130,000	131	50									
Leeds.	Mar. 4	498,027	154	12						2	4	4	3
Do.	Mar. 11		121	14						5	2	1	
Leipzig.	Mar. 4	585,743	170	24						1	3	2	
Libau.	Feb. 27												
Liverpool.	Mar. 11	774,951	261	18						1	4	11	5
London.	Mar. 4	7,645,716	2,088					1	1	6	30	209	45
Madras.	Feb. 18	530,000	416	2		20	1				6		
Magdeburg.	Feb. 11	277,937	103	7							3	2	
Manaos.	Feb. 18	52,000	64	6			19						
Do.	Feb. 25		66	6			18						
Para.	do	185,000	62	8			1						
Do.	Mar. 4		98	12			2	1		2			
Port of Spain.	Feb. 11	60,000	44	6	1								
Tampico.	Mar. 10	23,453	42	6			3						
Vienna.	Feb. 25	2,030,834	743	106						4	3	5	5

**MORTALITY—FOREIGN AND INSULAR COUNTRIES AND CITIES
(untabulated).**

AUSTRALIA—*New Castle*.—Month of January, 1911. Population, 55,550. Total number of deaths from all causes 48. No deaths from contagious diseases.

DUTCH GUIANA—*Paramaribo*.—Month of February, 1911. Population, 37,475. Total number of deaths from all causes 83. No contagious diseases.

FRANCE—*Calais*.—Month of February, 1911. Population, 80,000. Total number of deaths from all causes 141, including diphtheria 1, scarlet fever 1, tuberculosis 30.

Nice.—Month of November, 1910. Population, 150,881. Total number of deaths from all causes 199, including measles 4, tuberculosis 35, typhoid fever 1.

Month of December, 1910. Population, 150,881. Total number of deaths from all causes 289, including diphtheria 3, measles 27, tuberculosis 32, typhoid fever 2.

St. Etienne.—Two weeks ended February 28, 1911. Population, 150,000. Total number of deaths from all causes 133, including diphtheria 2, measles 4, tuberculosis 18, typhoid fever 1.

GREAT BRITAIN.—Week ended March 4, 1911.

England and Wales.—The deaths registered in 77 great towns correspond to an annual rate of 15.3 per 1,000 of the population, which is estimated at 17,160,256.

Ireland.—The deaths registered in 21 principal town districts correspond to an annual rate of 20.4 per 1,000 of the population, which is estimated at 1,163,596. The lowest rate was recorded at Portadown, viz, 5.2, and the highest at Sligo, viz, 48, per 1,000.

Scotland.—The deaths registered in 8 principal towns correspond to an annual rate of 16.9 per 1,000 of the population, which is estimated at 1,917,875. The lowest rate was recorded at Paisley, viz, 8.8, and the highest at Dundee, viz, 20.1. The total number of deaths from all causes was 621, including diphtheria 5, measles 2, scarlet fever 4, typhoid fever 2.

ITALY—*Genoa*.—Month of February, 1911. Population, 221,774. Total number of deaths from all causes 254, including diphtheria 4, measles 1, tuberculosis 24.

NEW ZEALAND.—Month of December, 1910.

Auckland.—Population, 97,929. Total number of deaths 79, including tuberculosis 8.

Christchurch.—Population, 78,605. Total number of deaths 45, including tuberculosis 4.

Dunedin.—Population, 62,584. Total number of deaths 30, including tuberculosis 1.

Wellington.—Population, 76,390. Total number of deaths 46, including typhoid fever 1, tuberculosis 7.

ROUMANIA—Bucharest.—Month of December, 1910. Population, 282,071. Total number of deaths from all causes 96, including diphtheria 33, measles 10, scarlet fever 40, typhoid fever 12.

SIERRA LEONE—Freetown.—Month of January, 1911. Population, 40,000. Total number of deaths from all causes, 71. No contagious diseases reported.

SPAIN—Almeria.—Month of February, 1911. Population, 50,910. Total number of deaths from all causes 116, including tuberculosis 8, typhoid fever 2.

By authority of the Secretary of the Treasury:

WALTER WYMAN,

Surgeon General,

United States Public Health and Marine-Hospital Service.