PREVENTION AND DESTRUCTION OF MOSQUITOES.

[Prepared by direction of the Surgeon-General.]

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Its habit of feeding on the blood of man and other animals, the irritating character of its bite, and the more or less vague suspicion that it is connected in some way with the propagation of disease have always given the mosquito a certain sanitary and economic significance. But the demonstration in recent years of the essential part played by this insect in the propagation of filariasis (elephantiasis), malaria, yellow fever, and dengue—diseases which annually cause much human suffering and many deaths and, incidentally, an economic loss appalling to contemplate—has given great economic and sanitary importance to the problem of its extermination.

It is not proposed to discuss here all aspects of this problem; it is intended merely to outline the measures which have been found in actual practice to be relatively inexpensive, easily applied, and effective in reducing the number of mosquitoes to such a degree as to notably diminish the annoyance and discomfort caused by them and to reduce to a minimum the danger of disease conveyance.

Before beginning a campaign of mosquito extermination it is important to familiarize oneself with the fundamental facts in the life-history of these insects, for the measures which make a successful campaign possible are based upon these facts.

The mosquito.—The adult individuals of the various species differ markedly in their habits. Some are so commonly or almost exclusively found in or close to human habitations as to almost entitle them to be classed as domestic animals. Notable in this class are *Stegomyia calopus*—the yellow fever mosquito—and *Culex pungens*, the intermediary for *Filaria bancrofti* (filariasis) and for the virus of dengue. Others are never or only accidentally met with in or near human habitations. These are the swamp, marsh, or field species, the so-called sylvan or "wild" mosquitoes, of which *Ochlerotatus sollicitans* (= *Culex sollicitans*), the salt-marsh mosquito, is a well-known example. A third or semidomestic class may be encountered either in or near houses or in fields and swamps. This class includes the malaria-disseminating mosquitoes of the old genus *Anopheles*.

The adult insect may be carried to considerable distances by winds, but on its own wings it does not ordinarily travel outside of a radius of half a mile from its breeding place. This means that the destruction of all breeding places within this radius of a habitation will practically rid it of all but those mosquitoes which filter in or are brought in by winds from more or less distant marshes.

Mosquitoes breed in water in which they pass their larval ("wiggle-tail") and pupal stages. They never breed in damp grass, weeds, or bushes as has been popularly supposed, but frequently hide in these during the day. As might be inferred from their habits, the several species differ considerably in the character of the breeding places which they favor. The domestic species may be found breeding *in any collection of water* in or about the houses in which they lodge; they have been found in discarded tins, bottles, and broken crockery on the garbage heap; in buckets, tubs, barrels, cisterns, and wells; in baptismal and other fonts; in flowerpots and sagging roof gutters; in street and road-side puddles, gutters, and ditches; and in cesspools and sewers. The semidomestic species may occasionally be found breeding in tins, barrels, hoof prints, post holes, and holes in trees or tree stumps, but they usually prefer grass-bordered pools, slowly flowing ditches, the margins of lakes and streams, even such as are stocked with fish, provided the margins are shallow or are more or less choked with reeds and water plants so that the fish can not reach them. The sylvan or "wild" mosquitoes select breeding places of much the same character as do the semidomestic species with which they are not infrequently found associated, except that such breeding places are usually more or less remote from human habitations, in woods, swamps, and fresh or salt (brackish) coastal marshes.

In general, the food of mosquitoes consists of vegetable juices; unfortunately, the female of many species has developed a taste for blood, and indeed a feed of blood has become indispensable to some of these for the full development of their eggs. Remembering how all-compelling the generative instinct is, we can now understand why the *Stegomyia calopus*, for example, will, when disturbed, return again and again in an endeavor to obtain her fill of this life-giving fluid.

Having obtained her feed of blood she soon—in from a day or two to a week or ten days—seeks a suitable breeding place; here she deposits a variable number of eggs which, depending on the species, either float separately on their sides or up-ended and adhering together in irregular raft-like masses. Under ordinary conditions these hatch out in a day or two into larvæ or "wiggle-tails." The larva, although an aquatic animal, is a true air breather. The larva of *Anopheles* ordinarily feeds at the surface where it lies in an almost horizontal position, its tail and dorsal bristles touching the surface film and breathing through a breathing-siphon which is very short and insignificant in appearance.

The larvæ of the other species move about more or less actively, searching for food, but at intervals of a minute or two they may be seen to come to the surface for air and there hang, head down, attached by their more or less prominent conical breathing tubes to the surface film. After an existence of about a week as a larva it changes into a comma-shaped creature—the pupa. This is unprovided with a mouth and does not feed; but, except when disturbed, remains quietly at the surface, breathing through a pair of trumpet-shaped tubes which project from the dorsum of the thorax. This stage usually lasts two or three days and is terminated by the emergence of the adult winged insect from its pupal case through a rent in the region of the breathing tubes. The time from the laying of the egg to the emergence of the winged insect may therefore be as short

as nine days. Mosquitoes breed most abundantly or only during the summer, late spring, and early fall months.

Hibernation.—The way in which mosquitoes manage to pass through the rigors of the winter season probably varies with the different species; some, like the malarial *Anopheles*, hide in sheltered cellars or other out-of-the-way places, while others survive through the power of the larva or the egg to resist cold, even freezing, weather.

From the foregoing outline of the stages of development it is seen that the life of the mosquito may be broadly divided into an aquatic and an aerial stage, the former including the egg, larva ("wiggle-tail") and pupa, the latter being the adult, winged insect. Accordingly, the measures aimed at the destruction of the mosquito naturally fall into two classes: (a) Those directed against the larva and pupa—the aquatic stages—and (b) those directed against the adult.

MEASURES DIRECTED AGAINST THE LARVA AND PUPA.

For the extermination of mosquitoes the most effective measures are those which aim to destroy their breeding places and thus prevent their multiplication. For the best results both individual and communal effort is necessary, but the importance of individual effort alone can not be too much emphasized. The individual by attacking the problem on his own premises, grounds, or estate can do much not only to rid his own immediate neighborhood of mosquitoes and thereby increase his own comfort and guard himself from malaria, yellow fever, etc., but by setting an example he will stimulate his less enterprising neighbor, and thus derive additional benefit himself and indirectly confer a benefit on the community at large.

Natural breeding places.—Natural collections of water which do or may serve as breeding places are best dealt with by filling in or draining. In this way they are disposed of once and for all. For filling, inorganic refuse, such as cinders and ashes from houses and industrial establishments, may be employed, or sufficient earth may be dug from a near-by knoll or hill, care being observed that in so doing a depression capable of holding water is not made. Potholes in bowlders and irregularities in the rocky bed of a stream may be filled with concrete. Topographic conditions may render filling impracticable, or conditions may be such as to make draining of ponds, pools, or marshes the simpler and cheaper method. In this connection it may be observed that by draining of marshes is meant the draining of the pools of stagnant water, or in the case of coastal marshes the draining of the stagnant fishless pools that are beyond the reach of the ordinary tides and not the draining of the water-soaked soil itself. In order to be effective, ditches must be dug of sufficient depth to completely drain the pool or pools under treatment and with sufficient fall to prevent any stagnation in the course of the ditch itself. Where a sufficient fall is not obtainable, fishless pools may be connected with those containing fish or with a neighboring stream, so that the fish may freely enter. Similarly, many of the pools in coastal marshes may be rendered unfit as breeding places by ditching, so as to permit of their being freely scoured by the daily tides. Ditches must be inspected at frequent intervals and care taken to see that they do not become choked. Fish are among the most effective of the natural enemies of the mosquito. Advantage may be taken of this, either in the manner just described or

by directly stocking ponds or pools (ornamental lakes and fountains) with fish, such as minnows or goldfish. The margins of such pools must, however, be kept free of reeds and water plants, so as to permit the fish to reach their edges.

Where it is not possible to deal with pools and ponds in this way, and in the case of puddles, ditches, and the like, which it is not feasible to fill in or drain, resort may be had to coal (kerosene) oil. The oil may be poured on with an ordinary sprinkling pot or the surface sprayed with a hose. Sufficient oil should be used to cover the entire surface with a thin film. The oil thus spread on the surface acts as a stopper, shutting off the supply of air when the larvæ and pupæ come to the surface to breathe, and so causing their death by suffocation. As the oil is volatile and thus may become dissipated from the water surface within a few days and, furthermore, as the film which should be intact to be effective may be broken by winds, it is important to repeat the oiling regularly at intervals of not more than a week. It should always be borne in mind that oiling, though fairly efficient when properly carried out, is, in the nature of the problem, only a temporary, and in the end not an inexpensive, expedient.

Artificial breeding places.—In considering the methods of dealing with artificial collections of water which serve as mosquito-breeding places, it will almost invariably be found even where, in the absence of a public water supply, domestic storage is made necessary, that a variety of more or less useless water containers litter the premises. These and discarded tins, bottles, and the like should be absolutely abolished.

Whenever possible a closed system of water supply should be provided, for it is the most satisfactory way of doing away with the need of cisterns, barrels, and tubs. Where this is not, for one reason or another, practicable and domestic storage is a necessity, care should be taken to prevent the mosquito from gaining access to the water. Barrels, where these are in use, should be provided with tightly fitting covers. Burlap, sheeting, or several thicknesses of cheese cloth held in place by a well-fitting hoop serve this purpose very well. Wooden covers are unsatisfactory; they are rarely made to fit accurately enough to keep out the mosquito, and this defect is enhanced by the reasonable certainty that the wood will warp, making the cover worse than useless. More satisfactory than the wooden cover is one made of light galvanized sheet iron, the central portion of which may be wire gauze. The rim of the barrel should be trimmed to remove any irregularities that might prevent the cover from fitting evenly all around. Whatever the form of cover employed it should not be removed except for cleaning or refilling the barrel. The water should be drawn from a spigot. Where the water is very turbid and must undergo sedimentation before being used, several barrels should be provided for its storage and the water used from each barrel in turn. In such a case also the spigot should be placed about a foot from the bottom, so that the sediment need not be disturbed as the water is drawn off for use. Wells should be provided with tight covers and the water drawn by pumps.

Where cisterns or tanks are used these also should be provided with an accurately fitting cover, which should be inspected frequently to see, if wood, that seams are not opened up and cracks formed, as the result of warping and shrinkage from drying. Where warping and

shrinkage are likely to take place, as they almost certainly are in a hot, dry season, the cover should be reenforced by carefully tacking down and inclosing the upper foot of the tank with wire gauze of a mesh having not less than twenty strands to the inch. The wire gauze used may be iron, as this is the cheapest; but it rusts readily and is likely to require frequent renewals, so that galvanized iron, though somewhat more expensive, is really cheaper in the end. The inlet to the tank or cistern should be provided with a cap of the same close-meshed wire gauze, which may, if necessary to prevent its choking with leaves, etc., be protected by another and coarser meshed cap of stout wire. As an additional precaution, the inlet pipe should be long and extend well below the water level. In cases of emergency, as in times of epidemics of either yellow fever or dengue, where the permanent measures for preventing mosquito-breeding have been neglected, covering the surface of the water in the barrels, tanks, and cisterns with coal oil in the manner already described has been resorted to and has given fair results, but as the oil gives the water a slightly disagreeable odor and taste and is on that account at times objected to, the use of oil for this purpose can not be regarded as other than an emergency measure.

Cesspools and privy vaults should be done away with by providing dry-earth closets, or a sewerage system. Where this has not yet been done or can not for one reason or another be done, the cesspools should be frequently and copiously oiled.

MEASURES AIMED AT THE DESTRUCTION OF THE ADULT MOSQUITO.

For practical purposes, we have at command three substances which, though not ideal, serve reasonably well for the destruction of mosquitoes in a confined space. These substances are sulphur dioxide, pyrethrum powder, and phenol-camphor ("Mim's Culicide").

Sulphur dioxide.—This is a gas which is generated by burning sulphur in the air. It is a very efficient and on the whole a most useful insecticide, but its usefulness is restricted somewhat by its corrosive action on metals, bleaching effect on colors, and rotting effect on fabrics, especially in the presence of moisture. Its use, therefore, is largely limited to the fumigation of ships' holds, lofts, attics, cellars, halls, kitchens, bedrooms, and other places in which there are no paintings, valuable fabrics, or bright metal surfaces to be injured by it. In a dry climate, or in dry weather, and when the sulphur used for its generation can be burned in the absence of water, as it always should be where its insecticidal effect alone is desired, its use may be extended to the fumigation of libraries and living rooms with practically no danger of causing serious injury to books, metals, or fabrics, especially in the relatively small proportions and for the short exposure which suffice for this purpose.

The space to be fumigated should be measured, the cubic capacity calculated, and the sulphur apportioned on the basis of 1 pound to each 1,000 cubic feet. The sulphur is best burned in shallow pots of iron or tin, and in order to avoid the danger of scorching the floor or of fire from the spluttering of the sulphur, these should be set on bricks, which may be placed in the center of a circular layer of sand directly on the floor, or better, in a tub. The pots should not be stood in water, as is done when a bactericidal effect is desired. It should be remem-

bered that the rapidity of combustion depends on the extent of surface exposed to the air; and as it is desirable to evolve the maximum volume of fumes in the shortest possible time it is important, if the space to be fumigated is large and much sulphur is to be burned, to distribute it among several pots. The amount apportioned to any one pot should not be more than will cover the bottom to a depth of 1 to 1½ inches if the flowers of sulphur is used, or with not more than one layer of rolls if the roll sulphur is employed. If the amount of sulphur apportioned to a pot is greater than this it will take too long to burn, thus requiring an unduly prolonged exposure. Using the sulphur in the proportion of 1 pound to 1,000 cubic feet, the exposure should be for two hours, counting from the time the last exit is closed. The sulphur is ignited by first pouring a little strong alcohol (1 ounce of 95 per cent is enough) over it and setting fire to this with a match.

Pyrethrum powder.—When pure pyrethrum powder is ignited it smolders, giving off fumes which stun but do not absolutely kill all mosquitoes. It is not therefore an absolutely dependable insecticide, while its cost is at the same time considerable. Its uncertainty and its cost restrict its field of usefulness. Another objection to it is the deposit of a slight brown film on all exposed surfaces which occasionally follows its use.

Pyrethrum powder has heretofore been employed in those cases where sulphur could not be used because of the danger of serious damage to paintings, fabrics, tapestries, musical and other instruments, upholstered furniture and the like. It is used in the proportion of 2 pounds to 1,000 cubic feet, the exposure being for two hours. As its insecticidal effect is uncertain, it is necessary to carefully sweep up and burn all the mosquitoes that have been stunned and are apparently dead immediately after the fumigation. Most of these mosquitoes will be found on the window sash, window sill, or on the floor close to the window, where they go, attracted by the light, in their efforts to find an exit to escape the fumes. Advantage should be taken of this tendency of the mosquito to seek the light by darkening all but one window and by placing on the floor under this and on the sill sheets of paper on which some adhesive preparation has been spread. A satisfactory adhesive preparation may be made by dissolving with the aid of heat 65 parts of colophony resin in 35 parts of castor oil, as given in Hager's Handbuch. This simplifies the collection of the fallen insects subsequent to the fumigation. The required amount of powder is distributed in pots (tin dairy pans serve the purpose admirably) and ignited by setting fire to the alcohol, which should first be sprinkled over it. The quantity apportioned to any one pot or pan should not exceed 1½ inches in depth if the exposure is to be for two hours. As in the case of sulphur, the pots or pans should be set on bricks, to prevent scorching the floor.

Phenol-camphor ("Mim's Culicide").—This is a liquid produced by rubbing up equal weights of phenol crystals and camphor. It may perhaps be more readily prepared by first liquefying the phenol by gentle heat and then pouring it over the camphor, which it then dissolves. This preparation was first used on a considerable scale toward the close of the yellow fever epidemic of 1905 at the suggestion of City Chemist Mim, of New Orleans. When moderately heated it gives off dense fumes which rise rapidly, diffuse, and after thirty to sixty

minutes, depending on the amount employed and the temperature of the air, condense and are deposited as a slight moisture on all exposed surfaces. The effect of these fumes on mosquitoes has been studied by Berry and Francis. In the proportions found practically useful these fumes act like those of pyrethrum; they stun, but do not invariably kill. The fumes are irritating to the mucous membranes, especially of the eyes, and may cause mild symptoms of phenol poisoning in susceptible individuals if much exposed to their inhalation. They renew the brightness and temporarily soften the varnish of surfaces on which they condense. Because of these limitations, and furthermore because of its slight power of diffusion and relatively high cost, it, like pyrethrum, can not displace sulphur except in the field of house fumigation where sulphur, on account of its injurious properties, can not be employed. As compared with pyrethrum, phenol-camphor is less expensive, more certain, and not so objectionable to the housekeeper. It has the drawback, however, that bedchambers must be freely ventilated for several hours after its use before they are altogether safe to sleep in; that it requires special apparatus and a little more care and intelligence in its use, and is, on that account, a trifle more troublesome; and, finally, if overheated it may take fire spontaneously. For use on a large scale, as in times of epidemic, in the hands of trained fumigators, phenol-camphor is on the whole to be preferred to pyrethrum, because it is more easily transportable on account of the small bulk required and because the fumes condensing quickly a room may if desired be entered in an hour and the apparatus removed, thus making it possible to fumigate a larger number of rooms in a given time with less labor than in the case of either sulphur or pyrethrum.

It should be employed in the proportion of 4 ounces to every 1,000 cubic feet. In this proportion the film of condensation is slight and is rapidly dissipated after the doors and windows are opened, which should be freely done after an exposure of two hours. As in the case of pyrethrum, sheets of paper preferably adhesive should be placed under windows and on window sills and the fallen mosquitoes carefully swept up, collected, and burnt. The phenol-camphor apportioned to the room to be fumigated should be distributed in agate-ware basins, not more than 8 to 10 ounces to any one basin. The basin with the proper proportion of the liquid is then set over an alcohol or other lamp at such an elevation and in such a manner as will permit of a rapid evolution of the fumes, yet not heat the basin so quickly as to cause the liquid to become overheated and take fire spontaneously. These points must first be determined experimentally for each type of lamp used. One of the small brass alcohol vapor lamps to be found on the market serves excellently. When one of these is used it should, as a safeguard against accidents, be stood in a tin dairy pan containing about one-half inch of water. A tripod to hold the basin and also act as a chimney for conducting the heat may be satisfactorily improvised by using a section of galvanized-iron stovepipe, at one end of which portions are cut out so as to form legs of a length equal to the height of the lamp. The stovepipe should be of such a length as to support the basin containing the phenol-camphor about 10 inches above the flame of this type of lamp. Just below the upper margin of the pipe a series of holes is punched to provide for draft.

Preparation of room for fumigation.—In the use of any of these substances the space to be fumigated must be made tight, not only by closing all doors, windows, and other openings, but also, if need be, by pasting strips or sheets of paper over cracks, so that neither the mosquitoes to be killed nor the fumes employed to kill them can escape.

This should invariably be attended to before the fumigation is begun. Closets, in which mosquitoes frequently hide, should be opened so that the fumes can freely penetrate, and large pieces of furniture should be moved away from the walls for the same reason. There is, of course, no objection to removing fabrics, paintings, instruments, or other objects from the room, but, except when sulphur is used, there is no use in doing so.

Advantage may in some instances be taken of the fact that at summer temperature a mosquito rarely or never survives deprivation of food and water for from five to seven days, to destroy mosquitoes by closing and keeping a room sealed for a period of not less than ten days, being careful before sealing to remove from such room anything that may serve as food and all water and objects that may be damp. Care should, of course, be taken to see that the seal remains unbroken throughout this period.

Screening.—In order to minimize or to do away with the need for repeated fumigations, it is necessary to carefully screen all outside windows and doors. The main entrance should in addition be guarded by a screened vestibule of such a depth as to make it impossible for a person to hold both doors open at the same time. The screens should be of not less than 20 strands to the inch. Iron wire is cheapest considering first cost alone, but it will hardly last a season unless painted, in which case the size of the mesh is considerably reduced and to that extent interferes with ventilation, a serious objection in hot weather or a tropical climate. The galvanized-iron wire, though somewhat more expensive, is much to be preferred on account of its greater durability. Where the consideration of first cost may be ignored, brass or bronze wire may be selected, either of which will be found to last almost indefinitely.

Legislation.—The importance of the problem not only justifies, but in many instances, urgently demands, that States and local communities supplement and strengthen their sanitary codes by enacting laws and ordinances aimed at the eradication of the mosquito. This is of peculiar importance in our Southern States, where the morbidity and mortality from malaria alone cause annually an enormous economic loss. Furthermore, appropriate legislation of this nature intelligently enforced gives the best possible assurance against the recurrence of epidemics of yellow fever and dengue. The law should declare all mosquito-breeding places nuisances prejudicial to the public health and should authorize the proper sanitary authority to draw up and enforce under appropriate penalty suitable regulations for their prevention and abatement. A few States and several municipalities have seen the wisdom of this and have placed this much-needed law on their statute books.

Organization.—The work should be under the direction of one with executive ability and a thorough understanding of the problem. He should have assistants who, under his direction, should have charge of the following divisions of the work:

1. Division of engineering, corresponding to the department of engineering of municipal organizations. This division should be charged with the duty of mapping out the location of natural breeding places, and their destruction by filling in or draining.

2. Artificial breeding places.—This division should be charged with the inspection of premises for the purpose of locating artificial breeding places, and for reporting failures to comply with the local ordinances, either with respect to the covering or screening of cisterns, wells, barrels, etc., used for the domestic storage of water, or the continued maintenance of these where public-water supply and sewerage exist. This division should also be charged with the duty of collecting and burying or otherwise disposing of garbage, paying particular attention to the collection of discarded tins, bottles, crockery, and the like.

3. Oiling division.—The duty of this division should be the oiling of all possible breeding places that can not be treated in one of the other more satisfactory ways, or those for which other treatment is proposed, but not yet executed.

The foregoing outline is presented merely as a skeleton and not with any idea that it is complete or final. Its purpose is that of a hint to those who are without experience in this line of work. It is likely that there are but few places to which it is entirely adapted in the exact form here proposed; the scheme which it suggests, however, will be found essential to any plan however different it may appear.

A campaign of education, which may constitute the duty of still another division, is an important element in the successful prosecution of the work. The interest of the public should be aroused through the public press and the circulation of leaflets, and by means of illustrated lectures. Every effort should be made to arouse the interest and obtain the cooperation of all classes and groups of citizens.

When to begin work.—Work may, of course, be begun at any time. It is best, however, to begin early in the spring. At this time it is well to burn the marsh weeds or grass in order to kill as many as possible of the hibernating eggs or larvæ in the thawing mud or pool bottoms, and it is well also to fumigate cellars, attics, and outhouses in order to kill the hibernating *Anopheles* or *Stegomyia*. The work of eradication should then be vigorously pressed and carried on through the summer well into the fall. In subtropical and tropical regions the work has, of course, to be carried on throughout the year, as the breeding of mosquitoes is but little, or not at all, affected by the change of season. Finally it may be said that valuable pioneer work has been done and encouraging results have been obtained at several points on Long Island, Staten Island, and in New Jersey.

UNITED STATES.

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

Reports from San Francisco, Cal.—Plague-prevention work at Berkeley, Cal.

Passed Assistant Surgeon Blue reports:

BERKELEY, CAL.

Week ended June 28.

Dead inspected	11
Premises inspected	1,244
Nuisances abated	34
Rats found dead	143
Rats trapped	106
Poisons placed	30,300
Notices served	26

Outgoing quarantine transactions.

Passed Assistant Surgeon Hobdy reports, June 30:

Week ended June 27.

Vessels disinfected and certified	32
Vessels certified	70

Reports from Seattle, Wash.—Inspection and fumigation of vessels, month of June, 1908.

Passed Assistant Surgeon Glover reports, July 1:

During the month of June, 1908, 20 vessels were fumigated and 28 were inspected.

Plague in rats.

Dr. Glover further reports, July 11:

Chapin reports three positive plague rats, making five positive rats from same locality.

Summary of plague-laboratory work, month of June, 1908.

Assistant Surgeon Chapin reports July 1, through Passed Assistant Surgeon Glover:

MONTH OF JUNE, 1908.

Five thousand two hundred and ninety-three rats were delivered at the laboratory, of which 4,856 were necropsied. None have been found plague infected.

The summary of the laboratory findings to date, June 30, comprises 3 human cases, the last case having died October 30, 1907, and 11 plague-infected rats, the last of which to date was delivered April 30, 1908.

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

CALIFORNIA—*Sacramento.*—Month of May, 1908. Estimated population, 50,000. Total number of deaths, 56, including diphtheria 1, enteric fever 2, scarlet fever 1, and 7 from tuberculosis. Cases: Diphtheria 8, enteric fever 2, smallpox 3, and scarlet fever 10.

CONNECTICUT—*Stamford.*—Month of June, 1908. Estimated population, 22,000. Number of deaths not reported. Cases: Diphtheria 1, scarlet fever 3, enteric fever 1, measles 13, and whooping cough 1.

FLORIDA.—Reports from the State board of health for the week ended July 4, 1908, show as follows: Enteric fever—*Jacksonville*, 3 cases; *South Jacksonville*, *Daytona*, and *Tallahassee*, each 1 case. Diphtheria—*Tampa*, 1 case. Tuberculosis—*Jacksonville*, 4 cases; *White Springs*, *Plant City*, and *Bakeland*, each 1 case.

Pensacola.—Month of June, 1908. Estimated population, 22,256. Total number of deaths, 35, including enteric fever 1 and 2 from tuberculosis. Cases of contagious diseases not reported.

ILLINOIS—*Alton.*—Month of June, 1908. Estimated population, 22,000. Total number of deaths, 14, including 1 from tuberculosis. Case: Diphtheria 1.

Jacksonville.—Month of June, 1908. Total number of deaths, 26. Cases: Smallpox, 10.

Quincy.—Month of June, 1908. Estimated population, 43,000. Total number of deaths, 39, including 4 from tuberculosis. Cases: Diphtheria 2 and enteric fever 2.

INDIANA—*Muncie.*—Month ended July 4, 1908. Estimated population, 34,036. Total number of deaths, 21, including scarlet fever 1 and 2 from tuberculosis. Cases: Diphtheria 4, enteric fever 4, scarlet fever 12, tuberculosis 1, measles 2, and whooping cough 6.

IOWA—*Cedar Rapids.*—Month of June, 1908. Estimated population, 30,000. Total number of deaths, 30, including scarlet fever 1, whooping cough 1, and 5 from tuberculosis. Cases: Scarlet fever 2, enteric fever 1, and smallpox 4.

KANSAS.—Month of May, 1908. Reports to the State board of health show as follows: Diphtheria, 43 cases, 5 deaths; enteric fever, 51 cases, 9 deaths; measles, 844 cases, no deaths; scarlet fever, 154 cases, 4 deaths; smallpox, 446 cases, 2 deaths; tuberculosis, 80 cases, 52 deaths.

MASSACHUSETTS.—Reports from the State board of health for the month of May, 1908, show as follows: Week ended May 2, 1908. Forty-seven cities and towns having an aggregate estimated population of 2,318,465, report 809 deaths, including diphtheria 8, enteric fever 26, measles 5, and 77 from phthisis pulmonalis. Cases: Diphtheria 135, enteric fever 82, measles 859, scarlet fever 183, whooping cough 5, and tuberculosis 165.

Week ended May 9, 1908. Number of localities reporting, 46. Estimated population, 2,306,835. Total number of deaths, 722; diphtheria 9, enteric fever 15, measles 12, and phthisis pulmonalis 50. Cases: Diphtheria 201, enteric fever 63, measles 984, scarlet fever 187, whooping cough 17, and tuberculosis 142.

Week ended May 16, 1908. Number of localities reporting, 46. Estimated population, 2,291,297. Total number of deaths, 747; diphtheria 9, enteric fever 12, measles 10, and phthisis pulmonalis 70. Cases: Diphtheria 163, enteric fever 69, measles 928, scarlet fever 184, whooping cough 13, and tuberculosis 118.

Week ended May 23, 1908. Number of localities reporting, 46. Estimated population, 2,306,835. Total number of deaths, 713; diphtheria 8, enteric fever 12, measles 14, phthisis pulmonalis 64. Cases: Diphtheria 162, enteric fever 71, measles 1,025, scarlet fever 174, whooping cough 19, and tuberculosis 125.

Week ended May 30, 1908. Number of localities reporting, 43. Estimated population, 2,239,192. Total number of deaths, 690; diphtheria 6, enteric fever 14, measles 21, phthisis pulmonalis 60. Cases: Diphtheria 125, enteric fever 61, measles 724, scarlet fever 152, whooping cough 20, smallpox 2, and tuberculosis 105.

MINNESOTA—*Stillwater.*—Month of June, 1908. Census population, 12,318. Total number of deaths, 10, including 1 from tuberculosis. Cases: Tuberculosis 1.

MONTANA.—Month of May, 1908. Estimated population, 280,000. Reports to the State board of health show as follows: Total number of deaths, 302, including diphtheria 14, enteric fever 2, scarlet fever 7, whooping cough 3, and 22 from tuberculosis. Cases: Diphtheria 84, enteric fever 5, measles 72, scarlet fever 119, and smallpox 69.

Anaconda.—Month of May, 1908. Estimated population, 12,267. Total number of deaths, 15, including 1 from tuberculosis. Cases: Scarlet fever 2.

Billings.—Month of May, 1908. Estimated population, 12,000. Total number of deaths, 12. Cases: Diphtheria 6, scarlet fever 5, enteric fever 5, and measles 20.

Bozeman.—Month of May, 1908. Estimated population, 4,000. Total number of deaths, 4. Cases: Scarlet fever 1 and smallpox 1.

Great Falls.—Month of May, 1908. Estimated population, 16,000. Total number of deaths, 21, including 2 from tuberculosis. Cases: Diphtheria 2 and smallpox 3.

Helena.—Month of May, 1908. Estimated population, 16,770. Total number of deaths, 9, including diphtheria 1 and 1 from tuberculosis. Cases: Measles 1, scarlet fever 2, diphtheria 4, and smallpox, 2.

Livingston.—Month of May, 1908. Estimated population, 3,500. Total number of deaths, 6, including 1 from scarlet fever.

Missoula.—Month of May, 1908. Estimated population, 5,000; Total number of deaths, 15, including diphtheria 1 and 1 from tuberculosis. Cases: Scarlet fever 4, measles 11, and smallpox 1.

NEW JERSEY.—*Morristown.*—Month of June, 1908. Estimated population, 13,000. Total number of deaths, 26, including diphtheria 1, enteric fever 1, scarlet fever 1, and 1 from tuberculosis. Cases: Tuberculosis 2, measles 3, diphtheria 2, enteric fever 4, and scarlet fever 3.

NEW YORK—*Buffalo.*—Month of June, 1908. Estimated population, 410,000. Total number of deaths, 442, including diphtheria 6, measles 6, scarlet fever 4, enteric fever 3, whooping cough 6, and 51 from tuberculosis. Cases: Diphtheria 30, enteric fever 30, measles 134, scarlet fever 154, whooping cough 67, and tuberculosis 71.

Rome.—Month of June, 1908. Estimated population, 18,500. Total number of deaths not reported. One death from enteric fever. Cases: Tuberculosis 8, scarlet fever 4, diphtheria 1, and measles 4.

NORTH CAROLINA.—Month of May, 1908. Estimated population, 1,893,810. Reports of State board of health from 80 counties show as follows: Measles in 31 counties, whooping cough in 30 counties, scarlet fever in 13 counties, diphtheria in 10 counties, enteric fever in 46 counties, malarial fever in 6 counties, and smallpox in 8 counties, viz: Anson, 30; Cabarrus, 10; Chowan, 2; Johnston, several; New Hanover, 2; Orange 1; Richmond, 1; and Rowan, 1.

Reports for the month from 23 towns having an aggregate population of 246,100—white, 151,550; colored, 94,550—show a total of 369 deaths—white, 169; colored 200—including diphtheria 1, enteric fever 6, whooping cough 5, measles 2, and 52 from phthisis pulmonalis.

OHIO—*Zanesville.*—Month of June, 1908. Estimated population, 30,000. Total number of deaths, 30, including enteric fever 1, diphtheria 1, and 3 from tuberculosis. Cases: Enteric fever 17, scarlet fever 3, measles 3, and diphtheria 2.

PENNSYLVANIA—*Dunmore.*—Month of June, 1908. Estimated population, 17,500. Total number of deaths, 20, including 1 from tuberculosis. Cases: Tuberculosis 1, diphtheria 2, and measles 8.

South Bethlehem.—Month of June, 1908. Estimated population, 18,000. Total number of deaths, 19, including 1 from tuberculosis. Cases: Measles 6, enteric fever 1, and diphtheria 1.

VIRGINIA—*Newport News.*—Month of June, 1908. Estimated population, 28,749. Total number of deaths reported, 33 including 5 from tuberculosis.

WASHINGTON.—Reports to the State board of health for the month of May, 1908, show as follows: Total number of deaths, 858, including diphtheria 15, enteric fever 9, measles 4, scarlet fever 4, whooping cough 3, smallpox 1, and 99 from tuberculosis.

Smallpox in the United States as reported to the Surgeon-General, Public Health and Marine-Hospital Service, June 27 to July 17, 1908.

[For reports received from December 27, 1907, to June 26, 1908, see PUBLIC HEALTH REPORTS for June 26, 1908.]

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

Place.	Date.	Cases.	Deaths.	Remarks.
Alabama:				
Huntsville	Jan. 5-June 18	85		And vicinity.
Mobile	June 7-July 4	9		
Total for State		94		
Arkansas:				
Texarkana	Dec. 1-June 15			Present.
California:				
Angel Island Quarantine Station.	Jan. 1-May 18			5 additional cases. Report received out of date.
Los Angeles	June 7-27	5		
Oakland	May 1-31	12		Report for April not received.
Sacramento	May 1-31	3		
San Diego County	June 1-13			100 cases estimated. Mainly on Pala Indian Reservation.
San Francisco	June 6-27	17		
Total for State		37		
District of Columbia:				
Washington	June 14-27	8		
Total for District		8		
Illinois:				
Alexander County	May 1-31	3		
Carroll County	May 1-31	5		
Cass County	May 1-31	34		
Champaign County	May 1-31	4		
Christian County	May 1-31	3		
Clark County	May 1-31	11		
Cook County—				
Chicago	June 14-27	6		
Harvey	May 1-31	1		
Dupage County	May 1-31	1		
Effingham County	May 1-31	1		
Iroquois County	May 1-31	3		
Jo Daviess County	May 1-31	1		
Kane County	May 1-31	37		
Macon County	May 1-31	5		
Macoupin County	May 1-31	5		
Marshall County	May 1-31	9		
McLean County	May 1-31	5		
Mercer County	May 1-31	1		
Montgomery County	May 1-31	7		
Morgan County	May 1-31	20		
Jacksonville	June 1-30	10		
Peoria County	May 1-31	12		
Saline County	May 1-31	5		
Sangamon County—				
Springfield	June 19-July 2	3		
Stevenson County	May 1-31	25		
Tazewell County	May 1-31	64		
Warren County	May 1-31	6		
Will County	May 1-31	1		
Joliet	May 1-31	19		
Total for State		307		
Indiana:				
Allen County	Apr. 1-30	1		
Fort Wayne	June 21-27	2		
Bartholomew County	Apr. 1-30	1		
Boone County	Apr. 1-30	1		
Clark County	Apr. 1-30	10		
Jeffersonville	June 1-30	6	1	
Dearborn County	Apr. 1-30	3		
Dekalb County	Apr. 1-30	2		
Delaware County	Apr. 1-30	13		
Fulton County	Apr. 1-30	19		
Grant County	Apr. 1-30	13		
Hendricks County	Apr. 1-30	1		
Howard County	Apr. 1-30	15		
Huntington County	Apr. 1-30	38		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Indiana—Continued.				
Jackson County	Apr. 1-30	3		
Johnson County	Apr. 1-30	9		
Knox County	Apr. 1-30	21		
Laporte County	Apr. 1-30	2		
Lawrence County	Apr. 1-30	12		
Madison County	Apr. 1-30	4		
Marion County	Apr. 1-30	15		
Indianapolis	June 8-July 5	16	1	
Marshall County	Apr. 1-30	1		
Miami County	Apr. 1-30	16		
Morgan County	Apr. 1-30	2		
Noble County	Apr. 1-30	9		
Orange County	Apr. 1-30	1		
Owen County	Apr. 1-30	4		
St. Joseph County—				
South Bend	June 29-July 4	1		
Shelby County	Apr. 1-30	35	1	
Sullivan County	Apr. 1-30	9		
Tippecanoe County	Apr. 1-30	1		
Lafayette	June 21-July 6	2		
Tipton County	Apr. 1-30	1		
Wabash County	Apr. 1-30	14		
Warrick County	Apr. 1-30	1		
Wayne County	Apr. 1-30	15		
Wells County	Apr. 1-30	1		
Total for State		320	3	
Iowa:				
Cedar Rapids	June 1-July 1	4		
Davenport	June 2-30	3		
Sioux City	June 1-30	2		
Total for State		9		
Kansas:				
Allen County	Apr. 1-30	9		
Anderson County	Apr. 1-30	6		
Atchison County	Apr. 1-30	48		
Atchison	Apr. 1-30	16		
Barton County	Apr. 1-30	6		
Bourbon County	Apr. 1-30	10		
Chase County	Apr. 1-30	1		
Cherokee County	Apr. 1-30	7		
Cheyenne County	Apr. 1-30	2		
Crawford County	Apr. 1-30	1		
Pittsburg	Apr. 1-30	8		
Doniphan County	Apr. 1-30	3		
Douglas County	Apr. 1-30	8		
Edwards County	Apr. 1-30	2		
Franklin County	Apr. 1-30	2		
Greenwood County	Apr. 1-30	8		
Hamilton County	Apr. 1-30	1		
Harper County	Apr. 1-30	7		
Harvey County	Apr. 1-30	14		
Hodgeman County	Apr. 1-30	2		
Jackson County	Apr. 1-30	32		
Jefferson County	Apr. 1-30	1		
Kingman County	Apr. 1-30	12		
Labette County	Apr. 1-30	14		
Parsons	Apr. 1-30	14		
Leavenworth County	Apr. 1-30	18		
Lincoln County	Apr. 1-30	1		
Linn County	Apr. 1-30	15		
Lyon County	Apr. 1-30	18		
Miami County	Apr. 1-30	5		
Montgomery County	Apr. 1-30	5		
Nemaha County	Apr. 1-30	26		
Neosho County	Apr. 1-30	2		
Osage County	Apr. 1-30	1		
Pottawatomie County	Apr. 1-30	1		
Reno County	Apr. 1-30	12		
Republic County	Apr. 1-30	10		
Saline County	Apr. 1-30	11		
Sedgwick County	Apr. 1-30	7		
Shawnee County	Apr. 1-30	30		
Topeka	June 7-July 4	10		
Smith County	Apr. 1-30	7		
Stevens County	Apr. 1-30	1		
Sumner County	Apr. 1-30	3		
Trego County	Apr. 1-30	22		
Washington County	Apr. 1-30	2		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Kansas—Continued.				
Wyandotte County—				
Kansas City	June 8–15	3		
Total for State		444		
Kentucky:				
Covington	June 21–July 11	4		
Total for State		4		
Louisiana:				
New Orleans	June 14–July 4	16	1	
Total for State		16	1	
Maryland:				
Baltimore	July 5–11	1		
Total for State		1		
Michigan:				
Saginaw	June 21–27	1		
Total for State		1		
Minnesota:				
Aitkin County	Apr. 1–June 15	7		
Anoka County	Apr. 28–May 10	5		
Becker County	Apr. 28–June 15	123		
Benton County	Apr. 28–June 15	10		
Bigstone County	Apr. 7–May 17	1		
Blue Earth County	Apr. 21–June 15	21		
Brown County	Mar. 31–May 17	12		
Carver County	Apr. 28–June 8	19		
Cass County	June 1–8	1		
Chippewa County	Apr. 21–June 1	8		
Chisago County	Apr. 14–June 8	2		
Clay County	Apr. 28–June 8	18		
Crow Wing County	Apr. 28–June 15	9		
Dakota County	Apr. 28–June 8	8		
Douglas County	June 9–15	2		
Faribault County	May 4–June 8	18		
Fillmore County	May 4–17	9		
Freeborn County	May 4–10	1		
Goodhue County	May 4–June 4	15		
Hennepin County	Apr. 28–June 15	29		
Minneapolis	June 1–15	10		
Houston County	Apr. 28–June 15	3		
Hubbard County	Apr. 28–June 15	26		
Isanti County	Apr. 28–May 17	5		
Itasca County	Apr. 7–June 15	20		
Jackson County	Apr. 13–June 15	14		
Kanabec County	May 4–10	5		
Kandiyohi County	May 4–15	16		
Kittson County	Apr. 14–June 1	3		
Koochiking County	May 25–June 15	6		
Lac qui Parle County	May 4–June 15	6		
Lake County	May 27–June 15	12		
Lesueur County	Apr. 28–June 15	13		
Lincoln County	June 4–10	1		
Lyon County	May 4–10	2		
McLeod County	May 24–June 8	3		
Martin County	Apr. 28–June 15	5		
Meeker County	Apr. 28–June 8	24		
Millelacs County	Apr. 28–June 15	4		
Morrison County	Apr. 28–June 15	16		
Mower County	May 17–24	3		
Nicollet County	Apr. 28–June 1	14		
Nobles County	Apr. 28–May 3	1		
Norman County	May 10–June 15	2		
Olmsted County	Apr. 28–June 15	11		
Ottertail County	Apr. 28–June 15	15		
Pine County	May 17–June 1	8		
Pipestone County	June 1–8	1		
Polk County	Apr. 28–June 8	12		
Pope County	Apr. 28–May 3	1		
Ramsey County	Apr. 28–June 15	11		
St. Paul	May 1–31	49		
Red Lake County	May 4–17	4		
Redwood County	Apr. 28–June 15	13		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Minnesota—Continued.				
Renville County	May 10–15	4		
Rice County	Apr. 28–June 8	3		
Rock County	Apr. 28–June 8	3		
Roseau County	May 4–June 10	2		
St. Louis County	Apr. 28–June 15	9		
Duluth	Apr. 28–June 15	126		
Scott County	Apr. 28–June 15	147		
Sibley County	Apr. 27–June 5	6		
Stearns County	Apr. 28–June 8	43		
Steele County	Apr. 28–June 8	13		
Stevens County	Apr. 28–May 24	7		
Swift County	Apr. 28–June 8	16		
Todd County	Apr. 28–June 15	45		
Wabasha County	Apr. 28–May 10	5		
Washington County	May 24–June 15	6		
Wilkin County	Apr. 28–June 8	5		
Winona County	May 4–June 15	4		
Winona	June 21–27	1		
Wright County	Apr. 29–June 15	33		
Yellow Medicine County	May 4–June 15	8		
Total for State		1,143		
Missouri:				
Conway	Apr. 20–June 19	29		
Kansas City	June 14–July 4	4		
St. Joseph	June 7–27	11		
St. Louis	June 14–20	1		
Total for State		45		
Montana:				
Cascade County	May 1–31	3		
Chouteau County	May 1–31	22		
Deerlodge County	May 1–31	1		
Fergus County	May 1–31	8		
Flathead County	May 1–31	8		
Gallatin County	May 1–31	1		
Lewis and Clark County	May 1–31	3		
Helena	May 1–31	2		
Meagher County	May 1–31	1		
Missoula County	May 1–31	6		
Missoula	May 1–31	1		
Ravalli County	May 1–31	2		
Valley County	May 1–31	4		
Total for State		62		
Nebraska:				
Friend	Apr. 13–June 18	13		
Lincoln	Mar. 1–May 31	22		
South Omaha	June 7–13	1		
Total for State		36		
New York:				
New York	June 14–20	1		
Niagara Falls	June 14–20	1		
Total for State		2		
North Carolina:				
Anson County	May 1–31	30		
Cabarrus County	Apr. 1–May 31	38		
Camden County	Apr. 1–30	5		
Chatham County	Apr. 1–30	2		
Chowan County	Apr. 1–May 31	13		
Cleveland County	Apr. 1–30	8		
Davie County	Apr. 1–30	4		
Forsyth County	Apr. 1–30	1		
Gates County	Apr. 1–30	3		
Guilford County	Apr. 1–30	6		
Johnston County	Apr. 1–30	43		May 31, still present.
Mecklenburg County—				
Charlotte	June 14–27	2		
New Hanover County	Apr. 1–May 31	6		
Orange County	Apr. 1–May 31	3		
Richmond County	May 1–31	1		
Rowan County	Apr. 1–May 31	26		
Rutherford County	Apr. 1–30	12		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
North Carolina—Continued.				
Wayne County	Apr. 1–30	5		
Yadkin County	Apr. 1–30	2		
Total for State		210		
Ohio:				
Cincinnati	June 20–July 10	6		
Dayton	June 14–July 4	8		
Toledo	June 14–20	4		
Troy	Apr. 15–July 3	28		
Total for State		46		
Oregon:				
Portland	Apr. 1–30	13		
Total for State		13		
Rhode Island:				
Pawtucket	June 12–29	1		
Total for State		1		
Tennessee:				
Knoxville	June 21–27	1		
Nashville	June 14–20	1		
Total for State		2		
Texas:				
Fort Worth	May 1–31	9		
San Antonio	June 14–July 4	5		
Total for State		14		
Utah:				
Cache County	May 1–31	2		
Davis County	May 1–31	1		
Salt Lake County	May 1–31	5		
Utah County	May 1–31	6		
Weber County	May 1–31	19		
Total for State		33		
Vermont:				
Whiting	May 5	1		
Total for State		1		
Virginia:				
Alexandria	June 25–27	13		
Total for State		13		
Washington:				Report for April not received.
Seattle	May 1–31	19		
Spokane	June 7–27	31		
Tacoma	June 8–14	1		
Total for State		51		
West Virginia:				
Moundsville	June 17–July 2	1		
Total for State		1		
Wisconsin:				
La Crosse	June 16–July 4	14		
Milwaukee	June 14–July 4	8		
Total for State		22		
Grand total, United States		2,936	4	

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

[For smallpox see special table.]

Cities.	Week ended—	Population, United States census, 1900.	Total deaths from all causes.	Tuberculosis.		Enteric fever.		Scarlet fever.		Diphtheria.		Measles.		Whooping cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Altoona, Pa	July 4	38,973	9	....	....	1	....	2	....	....	....	....	....	....	....
Auburn, N. Y	June 13	30,345	10	....	....	1	....	2	....	....	....	1	....	....	....
Do	June 20	30,345	12	1	2	1	2	....	....	....	....	2	....	....	....
Do	June 27	30,345	11	4	2	1	1	1	....	....	....	4	....	2	....
Augusta, Ga	July 7	39,441	11	1	1	2	....	....	....	....	....	6	....	....	1
Baltimore, Md	July 4	508,957	244	17	32	15	1	13	2	9	....	8	....	5	....
Bayonne, N. J	....do	32,722	....	....	....	....	....	1	....	....	....	16	....	....	....
Beaver Falls, Pa	....do	10,054	0	....	....	1	....	....	....	....	....	1	....	....	....
Berkeley, Cal	June 27	18,214	8	2	1	1	....	....	....	....	....	....	....	....	....
Biddeford, Me	July 4	16,146	2	....	....	....	....	....	....	....	....	....	....	....	....
Binghamton, N.Y	....do	38,647	18	....	1	....	....	....	....	....	....	....	....	....	....
Boston, Mass	....do	560,892	196	35	25	13	3	21	3	45	4	154	5	13	3
Bradford, Pa	....do	15,564	3	1	....	....	....	1	....	....	....	....	....	....	....
Brockton, Mass	....do	40,063	6	1	1	....	....	....	....	....	....	10	....	....	....
Cambridge, Mass	....do	91,886	23	2	3	1	....	4	....	5	....	7	....	1	1
Camden, N. J	....do	75,935	30	2	....	....	....	2	1	1	....	2	....	....	....
Carbondale, Pa	....do	13,536	2	....	....	....	....	1	....	....	....	....	....	....	....
Charlotte, N. C	June 27	18,091	14	....	2	3	....	....	....	....	....	....	....	1	....
Do	July 4	18,091	11	....	1	6	....	2	....	....	....	....	....	....	....
Chicago, Ill	June 27	1,698,575	508	26	47	12	7	44	3	71	12	177	7	36	6
Do	July 4	1,698,575	440	54	65	5	7	69	2	61	10	149	4	29	4
Chicopee, Mass	....do	19,167	16	1	....	....	....	3	....	....	....	3	....	....	1
Cincinnati, Ohio	July 3	325,902	120	11	16	2	1	8	1	2	....	10	....	3	1
Cleveland, Ohio	....do	381,768	126	35	9	5	1	4	....	5	....	56	2	28	....
Columbus, Ga	July 4	17,614	4	....	....	....	....	....	....	....	....	....	....	....	....
Covington, Ky	....do	42,938	10	1	1	....	....	....	....	....	....	....	....	....	....
Danville, Ill	....do	16,354	6	....	....	....	....	....	....	....	....	....	....	....	....
Dayton, Ohio	....do	85,332	21	1	4	....	....	....	....	....	....	1	....	....	....
Detroit, Mich	....do	285,704	121	....	....	....	....	5	....	7	1	....	....	....	....
Dunkirk, N. Y	....do	11,616	1	....	....	....	....	1	....	2	....	2	....	1	....
Elkhart, Ind	....do	15,184	7	....	....	....	....	....	....	....	....	1	....	....	....
Elmira, N. Y	....do	35,672	9	....	....	15	1	....	....	1	....	1	....	....	....
Erie, Pa	July 2	52,738	22	2	4	2	....	3	....	....	....	1	....	10	....
Everett, Mass	July 4	24,336	6	....	....	1	....	1	....	....	....	1	....	....	....
Findlay, Ohio	....do	17,613	1	....	....	....	....	....	....	....	....	....	....	....	....
Fort Wayne, Ind	June 27	50,947	12	....	....	1	1	8	....	1	1	....	....	....	....
Galveston, Tex	July 3	37,789	12	1	1	1	1	....	....	1	....	....	....	....	....
Grand Rapids, Mich	July 4	87,565	38	2	....	1	....	10	....	5	....	31	....	7	1
Greensboro, N. C	....do	10,035	2	....	....	10	....	....	....	....	....	....	....	....	....
Greenville, S. C	June 27	11,860	2	....	....	....	....	....	....	....	....	....	....	3	1
Harrison, N. J	July 4	10,696	5	....	....	....	....	....	....	1	....	....	....	....	....
Hartford, Conn	July 5	79,850	18	4	2	1	....	7	....	6	....	....	....	....	....
Haverhill, Mass	July 4	37,175	16	....	....	1	1	....	....	....	....	....	....	....	....
Hoboken, N. J	....do	59,364	....	....	....	....	....	3	....	....	....	....	....	....	....
Hyde Park, Mass	....do	13,244	5	....	1	....	....	....	....	1	....	....	....	....	....
Indianapolis, Ind	June 28	169,164	64	....	10	2	1	....	....	3	1	9	....	....	2
Do	July 5	169,164	40	1	9	2	....	1	....	2	....	....	....	....	....
Jacksonville, Fla	July 4	28,429	23	....	6	4	1	....	....	....	....	....	....	....	....
Jersey City, N. J	July 5	206,433	88	1	8	2	....	16	3	7	....	26	....	1	....
Johnstown, Pa	July 4	35,996	13	....	....	1	....	....	....	1	1	....	....	16	....
Kalamazoo, Mich	June 27	24,404	17	1	1	....	....	....	....	1	....	....	....	5	....
Do	July 4	24,404	6	3	1	1	....	1	....	2	....	....	....	4	....
Kansas City, Kans	....do	51,418	26	1	1	....	....	3	....	....	....	....	....	3	....
Kansas City, Mo	....do	163,752	60	....	1	2	1	....	....	....	....	4	....	3	....
Kearny, N. J	....do	10,896	4	....	....	....	....	3	....	1	....	....	....	....	....
Kingston, N. Y	....do	24,535	8	....	....	....	....	....	....	....	....	....	....	....	....
Knoxville, Tenn	June 27	32,637	....	....	1	2	....	....	....	....	....	....	....	....	....
Do	July 4	32,637	....	....	....	6	....	1	....	....	....	....	....	....	....
La Crosse, Wis	....do	28,895	....	14	1	....	....	....	....	....	....	....	....	....	....
La Fayette, Ind	June 29	18,116	1	....	....	....	....	....	....	....	....	....	....	....	....
Do	July 6	18,116	7	....	....	....	....	....	....	....	....	....	....	....	....
Lancaster, Pa	July 4	41,459	11	....	2	....	....	1	....	....	....	6	....	....	....
Lawrence, Mass	....do	62,559	18	....	3	....	....	1	....	....	....	1	....	....	1
Lexington, Ky	June 20	26,369	5	....	1	....	....	....	....	....	....	1	1	1	....
Do	June 27	26,369	7	....	1	....	....	....	....	....	....	5	....	....	....
Do	July 4	26,369	16	....	1	....	....	1	....	....	....	2	....	....	....
Los Angeles, Cal	June 27	102,479	60	17	14	5	....	5	....	12	2	37	....	....	....
Lowell, Mass	July 4	94,969	44	2	1	1	....	1	....	5	....	18	....	....	1
Lynn, Mass	....do	68,513	17	....	3	....	....	5	....	4	....	3	....	....	....
Malden, Mass	....do	33,664	12	11	1	....	....	5	....	....	....	2	....	....	....
Manchester, N. H	....do	56,987	17	....	....	14	1	....	....	10	1	....	....	....	....
Manitowoc, Wis	....do	11,786	3	1	1	....	....	....	....	1	....	....	....	3	....
Marinette, Wis	....do	16,195	1	1	1	....	....	....	....	....	....	....	....	....	....

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

Cities.	Week ended—	Population, United States census, 1900.	Total deaths from all causes.	Tuberculosis.		Enteric fever.		Scarlet fever.		Diphtheria.		Measles.		Whooping cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Marlboro, Mass	July 4	13,609	4	....	1	....	....	....	....	....	....	....	....	....	....
Massillon, Ohio	....do	11,944	2	....	....	....	....	....	....	....	....	....	....	....	....
Medford, Mass	....do	18,244	3	1	1	....	....	....	....	....	....	....	....	....	....
Melrose, Mass	June 27	12,962	1	....	1	1	....	....	....	1	....	11	....	....	....
Do	July 4	12,962	0	....	....	....	....	....	....	....	....	4	....	1	....
Milwaukee, Wis	June 20	285,315	85	19	12	9	2	8	....	5	....	47	2	18	1
Do	June 27	285,315	72	11	12	7	2	6	....	10	....	25	....	13	2
Do	July 4	285,315	88	14	6	3	2	10	....	9	1	47	....	12	2
Mobile, Ala	June 27	38,469	21	....	2	....	1	....	....	....	....	....	....	....	....
Moline, Ill	July 5	17,248	4	2	....	....	....	1	....	....	....	....	....	....	....
Montclair, N. J	July 4	13,962	6	....	....	1	....	....	....	....	....	....	....	....	....
Montgomery, Ala	July 3	30,346	20	....	5	....	1	....	....	....	....	....	....	....	....
Mount Vernon, N. Y	July 4	21,228	8	1	....	2	....	....	....	....	....	3	....	....	....
Nanticoke, Pa	July 6	12,616	6	....	....	1	1	....	5	1	....	....	....	....	....
Nashville, Tenn	July 4	80,865	42	1	5	21	1	3	....	....	....	....	....	....	6
Newark, N. J	....do	246,070	80	....	12	....	....	19	....	10	....	....	1	....	....
New Bedford, Mass	....do	63,442	27	4	....	....	....	....	1	....	....	2	....	....	....
Newburyport, Mass	....do	14,478	8	1	....	2	....	....	....	....	....	4	....	....	....
New Orleans, La	....do	278,104	125	24	23	14	4	22	....	6	....	....	1	....	1
Newton, Mass	....do	33,587	9	2	1	1	....	....	....	....	....	....	....	3	1
New York, N. Y	....do	3,437,202	1,322	374	150	37	8	244	23	243	28	472	15	17	5
Niagara Falls, N. Y	....do	19,457	5	1	....	1	....	2	....	1	....	1	....	....	....
Norristown, Pa	....do	22,265	9	....	1	4	....	....	....	1	....	....	....	....	....
North Adams, Mass	....do	24,200	6	1	....	....	....	....	....	....	....	....	....	....	....
Northampton, Mass	....do	18,643	2	....	....	....	....	1	....	4	....	8	....	....	....
Oneonta, N. Y	....do	7,147	1	....	....	....	....	....	....	....	....	....	....	....	....
Orange, N. J	....do	24,141	7	....	1	....	....	....	....	1	....	....	....	....	....
Ottumwa, Iowa	....do	18,197	9	....	....	....	....	....	....	....	....	....	....	....	....
Palmer, Mass	....do	7,801	3	....	....	....	....	....	....	....	....	....	....	....	....
Philadelphia, Pa	June 27	1,293,697	500	100	61	34	6	30	1	51	2	148	8	48	6
Pittsburg, Pa	....do	321,616	156	19	11	32	4	14	2	4	1	96	6	5	....
Do	July 4	321,616	148	26	6	29	4	13	1	6	....	95	5	11	1
Pittsfield, Mass	June 6	21,766	10	....	1	1	....	....	....	....	....	....	....	....	....
Do	June 13	21,766	4	1	....	....	....	....	....	....	....	....	....	....	....
Do	June 20	21,766	11	2	3	....	....	....	....	1	....	....	....	....	....
Do	June 27	21,766	9	1	....	....	....	....	....	....	....	....	....	....	....
Do	July 4	21,766	6	1	....	....	....	....	....	....	....	....	....	....	....
Plainfield, N. J	....do	15,369	3	2	1	....	....	....	....	....	....	....	....	....	....
Portsmouth, N. H	....do	10,637	1	....	....	1	....	....	....	1	....	....	....	....	....
Portsmouth, Va	July 7	17,427	7	3	1	4	....	....	....	....	....	1	....	....	....
Providence, R. I	July 4	175,597	46	4	7	2	....	2	....	14	1	2	1	....	....
Quincy, Mass	June 20	23,899	1	....	....	1	....	2	....	....	....	2	....	....	....
Do	June 27	23,899	7	3	....	....	....	....	....	....	....	3	....	....	....
Do	July 4	23,899	5	2	....	....	....	2	....	....	....	....	....	....	....
Racine, Wis	....do	29,102	11	6	....	....	....	2	....	....	....	....	....	....	....
Richmond, Va	....do	85,050	64	2	6	3	2	....	....	3	....	4	....	4	1
Saginaw, Mich	June 27	42,345	11	1	1	....	....	....	....	....	....	....	....	....	....
St. Joseph, Mo	....do	102,979	13	24	2	....	....	....	....	....	....	2	....	8	....
St. Louis, Mo	July 4	575,238	209	44	11	6	1	12	....	15	....	14	....	13	....
San Antonio, Tex	....do	53,321	....	....	....	4	....	....	....	....	....	1	1	....	....
Sandusky, Ohio	June 20	19,664	10	....	....	6	....	....	....	....	....	....	....	....	....
Do	June 27	19,664	5	....	....	11	....	....	....	....	....	....	....	....	....
San Francisco, Cal	....do	342,782	114	11	10	9	1	4	....	16	1	32	....	7	....
Somerville, Mass	July 4	61,643	19	4	2	....	....	2	....	5	1	15	....	....	....
South Bend, Ind	....do	35,999	6	....	....	....	....	1	....	....	....	....	....	....	....
Spokane, Wash	June 27	38,848	21	....	....	1	....	....	....	3	1	2	....	....	....
Springfield, Ill	June 25	34,159	24	....	....	....	....	....	....	....	....	....	....	....	....
Do	July 2	34,159	11	....	....	....	....	4	....	1	....	....	....	....	....
Springfield, Mass	July 4	62,059	18	2	2	5	....	2	1	4	....	....	....	....	....
Springfield, Ohio	....do	38,253	8	3	....	1	....	....	....	2	....	2	....	....	....
Steelton, Pa	....do	12,068	3	....	....	....	....	....	....	....	....	2	....	....	....
Tacoma, Wash	June 27	37,714	12	....	2	....	....	3	....	1	1	1	....	....	1
Taunton, Mass	July 4	31,036	8	2	2	....	....	....	....	....	....	....	....	....	....
Terre Haute, Ind	June 27	36,673	9	....	1	....	....	....	....	....	....	1	....	8	....
Do	July 4	36,673	23	....	2	2	....	2	....	2	....	....	....	....	....
Titusville, Pa	....do	8,244	2	....	....	....	....	....	....	....	....	....	....	....	....
Toledo, Ohio	June 20	131,822	33	....	5	4	....	....	....	4	....	4	....	....	....

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

Cities.	Week ended—	Population, United States, census, 1900.	Total deaths from all causes.	Tuberculosis.		Enteric fever.		Scarlet fever.		Diphtheria.		Measles.		Whooping cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Topeka, Kans.	June 30	33,608	14	....	....	....	....	....	....	....	....	....	....	....	....
Do	June 27	33,608	6	....	1	....	....	....	....	3	1	1	....	....	....
Waltham, Mass	July 4	23,481	4	1	1	2	....	....	....	4	....	....	....	2	....
Washington, D. C.	June 27	278,718	147	....	11	16	....	3	....	2	1	36	....	16	....
Wheeling, W. Va.	....do	38,878	17	....	1	....	3	....	....	....	....	....	....	....	....
Do	July 4	38,878	5	....	1	2	....	1	....	....	....	....	....	....	....
Wilkes-Barre, Pa.	July 3	51,721	22	....	....	....	....	1	1	2	....	6	....	3	....
Wilkinsburg, Pa.	July 5	11,886	5	....	....	2	....	3	....	....	....	2	....	....	....
Williamsport, Pa.	July 4	28,757	3	....	....	1	....	....	....	1	....	2	....	....	....
Wilmington, Del.	....do	76,508	28	....	2	....	....	....	....	....	....	....	1	....	....
Winona, Minn	June 27	19,714	3	....	....	....	....	....	....	1	....	....	....	....	....
Do	July 4	19,714	6	....	....	....	....	....	....	....	1	....	....	....	....
Woburn, Mass	....do	14,254	1	....	....	....	....	1	....	....	....	....	....	....	....
Worcester, Mass.	....do	118,421	41	9	2	....	....	2	....	9	....	10	1	....	....

FOREIGN AND INSULAR.

BARBADOS.

Report from Bridgetown—Inspection of vessels—Sanitary conditions.

Acting Assistant Surgeon Urquhart reports, June 27:

Week ended June 27. Bills of health issued to 6 vessels having a total of 156 passengers and 263 members of crews. The sanitary condition of vessels, cargoes, crews, and passengers was good. The sanitary condition of this port continues good. No quarantinable disease was reported for the port or island during the week.

BRAZIL.

Reports from Rio de Janeiro—Inspection of vessels—Mortality—Plague, smallpox, and yellow fever.

Acting Assistant Surgeon Stewart reports, June 13 and 17:

Week ended June 7. Vessels inspected and received bills of health: June 1 the British steamship *Bellaura*, for New Orleans, with a cargo of coffee, no passengers, and with no change in the personnel of the crew; June 3 the British steamship *Byron*, for New York, with a cargo of coffee, 27 cabin and 20 steerage passengers, and no change in the crew personnel; June 6 the Portuguese bark *Venturosa*, for New Orleans, with stone and sand ballast, and with no change in the crew personnel, and on the same date the German steamship *Seigmund*, for New York, with 1 cabin passenger, and no change in the personnel of the crew.

No other vessels left this port during the time under report for United States ports.

Mortality—Smallpox and yellow fever: Week ended June 7. Total estimated population, 636,018, and for the city and suburbs, according to the new calculation, 811,443. Population estimated in February, 1907, 628,675. Total deaths during the week, 345. Yellow fever caused 2 deaths with the same number of cases reported, both cases being fatal; smallpox, 93 deaths, with 201 cases. At the close of the week there were in the Hospital São Sebastião 271 cases of smallpox under treatment. The 2 cases and deaths of yellow fever are the first occurring this calendar year, with the exception of 1 fatal case reported during the week ended March 22.

Week ended June 14. Vessels inspected and received bills of health: June 8 the British steamship *Castillian Prince*, for New York, with a cargo of coffee, no passengers, and no change in the crew personnel; and on the same date the British steamship *Strathayre*, for New York, with coffee, no passengers, and no change in the crew personnel.

No other vessels left this port for United States ports during the week.

Mortality—Plague and smallpox: Week ended June 14, 1908. Total deaths, 349. Total estimated population, 811,443. One new case of plague was reported during the week. Smallpox caused 100 deaths, with 249 new reported cases, making the total for the past 2 weeks 430 cases with 192 deaths.

All steerage passengers and new crews taken on vessels leaving here for the United States are vaccinated.

BRITISH HONDURAS.

Report from Belize, fruit port.

Acting Assistant Surgeon Mengis reports:

Week ended July 2. Present officially estimated population, 10,000. General sanitary condition of this port and the surrounding country during the week, very good.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
June 26	Belize	Mobile	18	0	0
26	Corinto	New Orleans	28	3	13

CHINA.

Report from Hongkong—Quarantine restrictions—Plague and smallpox—Inspection of vessels—Examination of emigrants.

Acting Assistant Surgeon Hough reports:

Week ended May 23. Restrictions enforced by Hongkong remain as reported on March 28. Restrictions enforced against Hongkong remain as reported on March 28. Quarantinable diseases: Plague, 114 cases, 95 deaths; smallpox, 8 cases, 5 deaths. Vessels inspected and granted bills of health, 6.

Examination of aliens bound from Hongkong to the Philippine Islands.

Week ended May 23. Examined 51; rejected 21.

Week ended May 30. Examined 69; rejected 28; advised to wait 2.

Rejections and detentions were for trachoma.

COSTA RICA.

Report from Limon, fruit port.

Acting Assistant Surgeon Goodman reports:

Week ended June 27. Estimated population, 6,000. General sanitary condition of this port and the surrounding country during the week, good.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
June 21	Limon	Boston	44	9	0
21	Prinz Joachim	New York	129	137	2
22	Barranca	do	57	2	0
24	Ellis	New Orleans	39	1	31
25	Oracabessa	do	46	5	0
26	Matina	New York	50	4	0
27	Origen	New Orleans	25	0	0

Two bills of health for Panaman ports were viséed and certificates issued to 18 passengers bound for Colon.

CUBA.

Reports from Cienfuegos—Inspection and fumigation of vessels—Summary for month of June, 1908—Leprosy.

Acting Assistant Surgeon Marsillan reports, June 30 and July 6:

Week ended June 27.

Vessels inspected	4
Vessels inspected and fumigated	4
Bills of health issued	8
Members of crews inspected	267
Landed at this port	2
Taken on at this port	1
Passengers inspected—15 cabin, 10 taken on, 5 in transit; 29 steerage in transit for New Orleans	44
Immune certificates issued	2

The sanitary condition of the city is fair. No quarantinable disease except leprosy was reported in this port during the week.

Transactions for the month of June, 1908.

Vessels inspected	7
Vessels inspected and fumigated	10
Bills of health issued	17
Members of crews inspected	497
Landed here	2
Taken on here	1
Passengers inspected (15 cabin, 10 taken on here, 5 in transit; 29 steerage in transit)	44
Immune certificates issued during the month	4

The sanitary conditions of the city and port during the month were fair. No quarantinable disease except leprosy was reported during the month.

Week ended July 4.

Vessels inspected and bills of health issued	2
Members of crews inspected	52

The sanitary condition of the city and surrounding country is fair. Mosquitoes are becoming very abundant in the city. No quarantinable disease was reported during the week.

Report from Habana—Inspection and fumigation of vessels—House inspection—Deposits of water examined for mosquito larvæ—Case of yellow fever at Daiquiri—Measures proposed to prevent spread.

Passed Assistant Surgeon Amesse reports, July 6:

Week ended July 4.

Vessels inspected	13
Bills of health issued	17
Members of crews inspected	712
Members of crews not inspected (proceeding via foreign ports)	216
Passengers inspected	765
Passengers not inspected (proceeding via foreign ports)	194
Certificates of immunity to yellow fever issued	36
Vaccination certificates issued for Colon	22
Certificates issued to passengers bound for New York	163
Certificates issued to passengers bound for Southern ports	204
Vessels fumigated prior to sailing	2

The local board of health reports for this period 10,546 house inspections and the detection of 34 deposits of mosquito larvæ, 17 of which were those of *Stegomyia calopus*. This is an increase over the week previous.

One death from yellow fever at the mining settlement of Daiquiri, Province of Santiago, was confirmed by necropsy on July 2. To aid the local sanitary service the national board has dispatched an expert from Habana, who will act as diagnostician and direct the various prophylactic measures usually practiced. It is proposed to fumigate every dwelling in the camp and establish inspection and oiling brigades to serve throughout the rainy season.

New yellow fever cases at Daiquiri.

Doctor Amesse further reports:

July 11. Sanitary Department reports 3 new cases yellow fever, Daiquiri.

July 13. One case yellow fever, Daiquiri.

Report from Matanzas—Inspection of vessels—Summary for month of June, 1908.

Acting Assistant Surgeon Nuñez reports, July 6:

Week ended July 4:

Bills of health issued to 3 vessels leaving for United Stated ports in good sanitary condition; 2 health and acclimation certificates granted, and 5 passengers destined for New York via Habana vaccinated and certificates granted to that effect. No quarantinable diseases have been reported.

Summary for month of June, 1908.—Bills of health issued to 14 vessels leaving for the United States, having an aggregate number of 407 members of crews, and 20 passengers in transit for various ports in Cuba; 4 health and acclimation certificates granted, and 5 passengers destined for New York by way of Habana vaccinated and certified to. No quarantinable diseases reported.

Report from Santiago—Inspection of vessels.

Acting Assistant Surgeon Wilson reports, July 1:

Week ended June 27. Bills of health issued to 3 vessels bound for the United States. No quarantinable disease reported.

ECUADOR.

Reports from Guayaquil—Inspection and fumigation of vessels—Plague, small-pox, and yellow fever.

Assistant Surgeon Wightman reports, June 8 and 21, through Passed Assistant Surgeon Lloyd:

Week ended June 6. One steamship fumigated and dispatched, with a total personnel of 79 members of crew, and 33 cabin and 24 steerage passengers.

During the week 78 deaths were recorded in Guayaquil, including yellow fever, 3; small-pox, 5; plague, 6.

Week ended June 13. One steamship fumigated and dispatched, with a personnel of 97 members of crew, and 38 cabin and 13 steerage passengers.

In the same week 63 deaths were recorded in Guayaquil, including yellow fever, 2; small-pox, 1; plague, 5.

GUATEMALA.

Report from Puerto Barrios, fruit port.

Acting Assistant Surgeon Wailes reports:

Week ended July 2. Present officially estimated population, 250. General sanitary condition of this port and the surrounding country during the week, very good.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.	Pieces of baggage disinfected.
June 29	José	26	8	.....	.....
July 2	Mobila	48	10	.....	.....

HAWAII.

Reports from Honolulu—Examination of rats for plague infection.

Passed Assistant Surgeon Currie, in charge of plague laboratory, reports, June 15 and 20, through Chief Quarantine Officer Cofer:

Week ended June 13.

Rats trapped in Honolulu	620
Rats found dead in Honolulu	3
Total rats taken in Honolulu	623
Honolulu rats examined in this laboratory	530
Rats examined in Hilo under supervision of this laboratory	187
Total rats examined bacteriologically	717
Total rats destroyed	848

Classification of rats:	
Mus rattus	169
Mus Norvegicus	139
Mus alexandrinus	96
Mus musculus	213
Total classified	617
Average number of traps set daily	720
Honolulu rats showing plague infection	0
Hilo rats showing plague infection	0

Week ended June 20.

Rats trapped in Honolulu	575
Rats found dead in Honolulu	3
Total rats taken in Honolulu	578
Honolulu rats examined in this laboratory	520
Rats examined at Hilo under supervision of this laboratory	18
Total rats examined bacteriologically	538
Total rats destroyed	596
Classification of Honolulu rats:	
Mus rattus	116
Mus Norvegicus	114
Mus alexandrinus	166
Mus musculus	182
Total classified	578
Average number of traps set daily	720
Ounces of poison placed out (impure barium carbonate)	80
Honolulu rats showing plague infection	0
Hilo rats showing plague infection	0

HONDURAS.

Report from Ceiba, fruit port—Active sanitary measures carried out.

Acting Assistant Surgeon Jumel reports:

Week ended June 30. Present officially estimated population, 6,500. General sanitary condition of this port and the surrounding country during the week, good.

Sanitary measures for local improvement continue active. Considerable progress has been made in bettering condition of sidewalks in business section of the town. Many thousand cubic feet of concrete have been used and greater extension of this work is contemplated.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.	Pieces of baggage disinfected.
June 26	Klondyke	7	0	0	0
26	Joseph Vaccaro	34	5	0	0
29	Colombia	19	0	0	0

Report from Tela, fruit port.

Acting Assistant Surgeon Roe reports:

Week ended June 27. Present officially estimated population, about 1,250. General sanitary condition of this port and the surrounding country during the week, good.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
	Jos. Vaccaro	New Orleans	34	0	0
	Columbia	Mobile	18	0	0

INDIA.

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

Acting Assistant Surgeon Allan reports, June 11:

Week ended June 6. No transactions.

Week ended May 23. Seventy-one deaths from cholera, 79 from plague, and 12 from smallpox. In Bengal during the same period, 110 cases and 101 deaths from plague, and throughout India, 2,577 cases and 1,990 deaths from plague.

Week ended May 30. Eighty-one deaths from cholera, 60 from plague, and 20 from smallpox in Calcutta. In Bengal during the same week, there were 74 cases and 72 deaths from plague; in India during the same period, 2,733 cases and 2,370 deaths from plague.

ITALY.

Report from Naples—Inspection of vessels—Emigrants recommended for rejection—Smallpox in Italy—Smallpox in Naples.

Assistant Surgeon Wollenberg reports, June 22:

Vessels inspected at Naples, Messina, and Palermo, week ended June 20.

NAPLES.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of baggage inspected and passed.	Pieces of baggage disinfected.
June 16	Indiana	New York	176	30	280
17	Admiral Exelmans	San Francisco			
17	Calabria	New York	43	15	150
17	Romanic	do	202		
19	Principe di Piemonte	do	235	50	320
19	Königin Luise	do	119	25	180
20	Germania	do	125	80	160
	Total		900	150	1,090

MESSINA.

June 16	San Giorgio	New York	51	30	72
18	Calabria	do	21	24	68
	Total		72	54	140

PALERMO.

June 17	San Giorgio	New York	134	146	70
19	Calabria	do	23	33	10
	Total		157	179	80

Rejections recommended.

NAPLES.

Date.	Name of ship.	Trachoma.	Favus.	Suspected trachoma.	Suspected favus.	Other causes.	Total.
June 16	Indiana	2		1			3
17	Admiral Exelmans						
17	Calabria	4					4
17	Romanic	4				3	7
19	Principe di Piemonte	4		1		1	6
19	Königin Luise	4		4			8
20	Germania	2				1	3
	Total	20		6		5	31

MESSINA.

June 16	San Giorgio	2					2
18	Calabria	3					3
	Total	5					5

PALERMO.

June 17	San Giorgio	13		11			24
19	Calabria	4		2			6
	Total	17		13			30

Smallpox in Naples.—During the week ended June 21, 6 cases of smallpox were reported at the office of public health of the city of Naples. It is believed that the first case was imported from Marseille early in June.

Smallpox in Italy.—Week ended June 21. Cases: Castel San Pietro (Bologna) 3; Andria 2; Capurso 1; Locorotondo 2; Givia 1; Triggiano (Bari) 2; Cinquefrondi 6; Polistena (Reggio Calabria) 2; Syracuse 1.

JAPAN.

Report from Yokohama—Inspection of vessels—Smallpox on steamship Muncaster Castle at Kobe—Plague-infected rat found in city—Epidemic plague in Formosa—Commission appointed to study beriberi.

Passed Assistant Surgeon Cumming reports. June 15:

Two weeks ended June 13. Bills of health issued to 5 vessels having an aggregate personnel of 740 members of crews, and 688 steerage and 237 saloon passengers. Among these vessels was the British steamship *Muncaster Castle* which arrived here from Kobe where she had been disinfected by the medical officer of this Service, remained here in the open bay one day and returned to Kobe en route to New York via Manila. She reached Kobe with a case of smallpox on board and was detained by the local authorities. The Japanese authorities did not vaccinate the crew, but this was done at Moji by a European physician.

June 1 a plague-infected rat was found in Nakamura machi of this city, a district remote from all godowns except one for kerosene oil, and from hotels or boarding houses. The authorities report this as being the eighth infected rat found since March, and the district is now being cleaned, 84 houses being disinfected.

Plague is reported epidemic in Taiwan (Formosa). From May 15 to 25, cases were reported daily. Many vessels en route to Pacific coast points call there for tea during this season.

An important commission for the study of beriberi has been formed by the Imperial Government, and is to be under the war department. This association is to collect data from the government offices (war and navy), from public and private schools, hospitals, factories, Red Cross Society, and all other available sources. The commission will consist of medical officers of the army and navy, professors of medical colleges, personnel of the Epidemic Institute (Doctor Kitasato's institute) and certain practitioners. It is to be under the presidency of the chief of the medical bureau. The appointment of this commission indicates the importance of the disease to be considered from a military and economic point of view.

Examination of emigrants.

Number of emigrants per steamship *Aki Maru*, recommended June 10 for rejection: For Seattle, 8; advised to wait, 7.

Per steamship *Tenyo Maru* June 16: For San Francisco, advised to wait, 1; for Honolulu, advised to wait, 7.

Per steamship *Shawmut* June 8: For Tacoma, 1; advised to wait, 5.

Rejections and detentions were for trachoma.

Report from Kobe—Inspection of vessels—Examination of emigrants—Plague and smallpox at Kobe and Osaka — Smallpox on steamship Mongolia from Hongkong.

Acting Assistant Surgeon Slade reports, June 3, 8, and 16:

Week ended May 30. Supplemental bills of health granted to 5 steamships.

There were inspected 251 crew and 561 steerage passengers, and 3 members of crew and 84 steerage passengers were bathed and had their effects disinfected by steam. The number of pieces of baggage steamed was 206. The number of pieces of bedding similarly treated was 179. Manifests were viséed for 44,245 pieces of freight, amounting to 3,114 tons.

Emigrants examined: Per steamship *Kumeric* for Manila, passed 15, rejected 10; per steamship *Mongolia* for Honolulu, passed 64, rejected 50; for San Francisco, rejected 2.

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

The report from Osaka for the week ended May 23, shows, plague 5 cases, 5 deaths; smallpox 27 cases, 15 deaths.

On the arrival, May 30, of the American steamship *Mongolia* at the quarantine station of this port from Hongkong and en route to San Francisco via Yokohama and Honolulu a case of smallpox was discovered on board by the Japanese quarantine officers. The passenger, a Chinese, was taken from the European steerage quarters and landed at Kobe. The authorities cleansed and disinfected the steerage quarters, and bathed and disinfected the steerage passengers and steamed their effects and bedding. On making my inspection I had the remaining 39 passengers and their 3 attendants vaccinated in my presence. These were all who had been exposed. After a careful general

inspection of Asiatic steerage passengers the vessel was allowed to proceed to Yokohama.

Thorough measures were taken by the local authorities in connection with the single case of plague reported above; no further development has taken place. There are no storehouses of firms shipping to America in the immediate vicinity.

Week ended June 6. Supplemental bills of health granted to 4 steamships, and original bills of health granted to 2 steamships.

There were inspected 497 crew and 98 steerage passengers, and there were bathed and had their effects disinfected by steam 55 members of crews and 89 steerage passengers. The number of pieces of baggage steamed was 299, and bedding 180. Manifests were viséed for 16,504 pieces of freight, amounting to 1,963 tons.

Emigrants examined: Per steamship *Aki Maru* for Seattle, passed 79, rejected 51.

The emigrants passed, together with 10 intending passengers to Victoria by the same vessel, were bathed and disinfected and their effects were disinfected before embarkation.

The official reports of infectious diseases for the week show for Kobe, smallpox 4 cases.

The report from Osaka for the week ended May 30 shows plague 2 cases, 2 deaths; smallpox 19 cases, 13 deaths; for the week ended June 6, plague 6 cases, 5 deaths; smallpox 17 cases, 5 deaths.

Week ended June 13. Supplemental bill of health granted to 1 steamship.

There were inspected 124 steerage passengers, and 80 steerage passengers were bathed and had their effects disinfected by steam. The number of pieces of baggage steamed was 127 and bedding 160. Manifests were viséed for 24,599 pieces of freight, amounting to 2,406 tons.

Emigrants examined: Per steamship *Tenyo Maru* for Honolulu, passed 76, rejected 48; for San Francisco, passed 4, rejected 2.

The British steamship *Muncaster Castle* obtained original bill of health from this office June 3. As no new members of crew were taken on here, and as the port was clean, none were vaccinated here or at Yokohama, to which port she went from here. On returning, en route to Moji and Manila, the captain discovered amongst the Chinese crew a man ill with a suspicious rash. He stopped at the quarantine station outside Kobe and requested the Japanese quarantine officers to inspect and pronounce on above case. This they did, confirming the captain's suspicion of smallpox. The man was removed from the ship and the entire personnel were bathed and disinfected and their effects were disinfected. The crew's quarters were disinfected. I advised the captain, as the ship was not entering Kobe harbor, to have the entire personnel vaccinated on the following day at Moji. This he promised to do if the agents agreed. On returning to Kobe I reported the matter to them and learned that the ship was bound for Hongkong before going to Manila. Consequently I cabled the facts of the case, including the statement that the crew had not been vaccinated here, to the United States quarantine officer at Hongkong.

MEXICO.

Report from Coatzacoalcos—Inspection and fumigation of vessels—Fumigation of vessels and observation of passengers from Laguna de Terminos ordered.

Acting Assistant Surgeon Thompson reports, July 2:

Week ended July 1. Three vessels inspected. Of these vessels 1 was fumigated.

The local sanitary physician has been directed to fumigate all vessels from Laguna de Terminos and passengers landing are under observation for 6 days. There is a vessel from Laguna de Terminos about every 10 days, usually coming via Frontera. The first vessel arriving was fumigated this morning. The rainy season has begun and the mosquitoes are more numerous.

Yellow fever at Veracruz and Frontera.

Doctor Thompson further reports:

July 12. Reported to-day 2 cases yellow fever at Veracruz and 1 case at Frontera.

Report from Mexico City—Yellow fever at Veracruz.

The following is received from Dr. Eduardo Liceaga, president of the superior board of health of Mexico:

July 11. A case of yellow fever at Veracruz ended by death.

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

Acting Assistant Surgeon Harrison reports, June 27:

Period from June 19 to 27. No quarantinable disease has been reported. Sanitary conditions continue unchanged, but mosquitoes are much more numerous, owing to recent rains.

Four steamships have been dispatched with 220 persons in crews, and 46 as passengers from this port to the United States. Of these essels, two for Gulf ports were fumigated.

Report from Salina Cruz—Inspection and fumigation of vessels.

Acting Assistant Surgeon McPherson reports, July 1:

Period June 16 to 30, inclusive. One steamship cleared from this port for the United States, viz, the steamship *Texan*, which left for San Francisco, Cal., on June 20, and was fumigated throughout for 5 full hours while in the roadstead outside the harbor.

Report from Veracruz—Inspection and fumigation of vessels—Sanitary conditions—Anopheles and Stegomyia present.

Acting Assistant Surgeon Jacobs reports, June 29:

Week ended June 27. Total bills of health issued, 9. Vessels inspected and fumigated, 4. Vessels inspected only, 5. Total crews, 414; cabin passengers, 116; steerage passengers, 87.

The sanitary condition of Veracruz and surrounding country is good. No quarantinable diseases have been reported during the week. *Anopheles* are increasing in numbers. *Stegomyia calopus* are not numerous.

NICARAGUA.

Report from Bluefields, fruit port—Mosquitoes increasing—Stegomyia abundant—Screening ordinance not carried out.

Acting Assistant Surgeon Layton reports:

Week ended June 23. Present officially estimated population, 2,500. General sanitary condition of this port and the surrounding country during the week, good. Mosquitoes increasing. *Stegomyia calopus* present in large numbers. Screening ordinance not enforced. A few cisterns have been screened, but the screening is entirely unsatisfactory.

Bill of health issued to the following-named vessel:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
June 20	Dictator.....	New Orleans, La., via Cape Gracias, Nicaragua.	19	5	0

PANAMA.

Report from Bocas del Toro, fruit port.

Acting Assistant Surgeon Osterhout reports:

Week ended June 23. General sanitary condition of this port and the surrounding country during the week, good. Present officially estimated population, 4,954.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.	Pieces of baggage disinfected.
June 17	Mount Vernon.....	Mobile.....	20	1	0	0
18	Fort Morgan.....	.....do.....	24	1	0	0
18	Frutera.....	New York via Santa Marta.	25	0	0	0
20	Greenbrier.....	New Orleans.....	46	0	0	0

PERU.

Report from Callao—Inspection and fumigation of vessels—Plague at Callao.

Acting Assistant Surgeon Gutierrez reports, June 16:

Week ended June 13. Three steamships were dispatched with an aggregate personnel of 181 crew, 73 cabin and 84 steerage passengers. Only 2 were fumigated; the third did not dock, having called for orders.

Since my last report a new case of plague has occurred in Callao.

PHILIPPINE ISLANDS.

Reports from Manila—Decrease in smallpox—Increase of cholera in the provinces—Quarantine against arrivals from Capiz for protection of Iloilo—Inspection of vessels.

Chief Quarantine Officer Heiser reports, May 19 and 28:

Week ended May 16. Smallpox 23 cases, 12 deaths.

Bills of health issued: May 14 the British steamship *Chingtu*, with 66 crew and 76 passengers, en route from Kobe to Zamboanga, granted a supplemental bill of health.

May 15 the United States Army transport *Sherman*, with 186 crew and 968 passengers, granted bill of health for San Francisco via Nagasaki and Honolulu. Crew and steerage passengers bathed and their effects and baggage disinfected at the Mariveles Quarantine Station. All cargo and baggage either disinfected or passed after inspection. Vessel partially disinfected. All persons on board inspected at the hour of sailing.

Week ended May 23. There has been a still further decrease in the number of smallpox cases in the city of Manila, only 6 cases and 8 deaths having been reported for the week.

In the Provinces of Capiz and Pangasinan there has been a marked increase in the number of cholera cases, more than 100 cases having occurred in each of these provinces during the past two weeks. In the Province of Capiz, from January 1 to May 23, 1908, 236 cases and 191 deaths have been reported; in the Province of Pangasinan, 388 cases and 268 deaths.

In order to protect Iloilo, a port of entry, a quarantine of 48 hours has been imposed by the Service upon all vessels arriving from Capiz. Owing to the continuous demand which is made for greater local autonomy, the various municipalities involved have been permitted to manage these outbreaks with their own local officials, and it has been the policy of the Insular Bureau of Health to aid and advise, rather than to take charge, and absolute management of the situation is undertaken only at places where there is danger of the spread of the disease from one province to another. In view of the continued presence and increase in the number of cases, many of the municipalities are, however, already demanding that the Insular Bureau of Health take charge of the situation.

Bills of health issued: May 21, the British steamship *Saint George*, with 36 crew, en route from New York to Iloilo, granted a supplemental bill of health; May 21, the British steamship *Satsuma*, with 54 crew, en route from Yokohama to Boston and New York via Cebu, granted a supplemental bill of health, after the usual inspection. May 23, the American steamship *Shawmut*, with 144 crew and 33 passengers, granted a bill of health for Tacoma. Cargo and baggage treated according to the regulations. All persons on board inspected at the hour of sailing.

Week ended May 30. Smallpox, 5 cases, 2 deaths. No consular bills of health were issued to vessels proceeding to United States ports.

ST. LUCIA ISLAND.

Reports from Castries—Sanitary conditions—Convention to be held at Barbados to consider method of handling vessels from plague-infected ports.

Acting Assistant Surgeon Maylie reports, June 22 and 29:

Week ended June 27. The health officer of Castries left here today for Barbados as a delegate to a convention composed of representatives of all the British West Indian Islands, except Jamaica, about to meet in Barbados for the purpose of considering the best ways and means of handling vessels from plague-infected ports.

TRINIDAD.

Status of plague—Sanitary work—Quarantine against Venezuelan ports not strictly observed.

Consul Handley reports, June 22 and July 6:

There has been officially reported only one more death from plague here since my dispatch dated June 13. This was the case of an East Indian (cooly), who died at the isolation camp on June 15.

Since the outbreak of plague, May 30, there have been 9 cases of plague with 7 deaths.

The authorities have organized sanitary squads the duty of which is to inspect and clean the yards, etc., of private residences.

Steamships from Puerto Cabello, Carupaño, Cumaña, and Ciudad Bolivar, Venezuela, are permitted to enter here and discharge cargo and passengers from those ports.

June 22. Another death from plague occurred here this morning.

July 6. Plague is still confined to Port of Spain and to the streets near the harbor. The disease has not reached any other district of the Island, although there is daily unrestricted communication by road, rail, and coastal steamships.

A fresh case of plague was reported July 4.

VENEZUELA.

Reports from Caracas—Status of plague at Caracas and La Guaira.

The following is received from Chargé d'Affaires ad Interim Sleeper, under dates of June 19 and 22:

No new cases of plague have occurred at this capital since my dispatch of June 13.

The situation at La Guaira is as follows: June 16, 1 case; June 17, 1 case; June 18, 2 cases, 1 death; June 19, 1 case.

June 22. Since my dispatch of June 19 there have been 4 new cases of plague in Caracas, 2 on June 20 and 2 on June 21. Of these cases 2 are reported to have resulted fatally. No new cases reported at La Guaira.

The following is received from Mr. John Brewer, in charge of the archives, under date of June 27:

During the past few days the plague alarm has spread rapidly. Many persons are being inoculated with Haffkine's lymph. The present market building is to be closed on account of several cases having

appeared in its neighborhood. The merchants are endeavoring to raise a sum sufficient to build a proper quarantine hospital outside the city limits, while the Government has to-day begun the inoculation of all the troops.

Since June 21 6 new cases of plague are reported as having developed in this city, 1 of these resulting fatally. The consulate at La Guaira reports no new cases since June 19.

Report from Puerto Cabello—Plague at Caracas and La Guaira, June 25.

The following is received from the Department of State, under date of July 3:

A telegram, dated July 2, has been received from the consul at Puerto Cabello, Venezuela, which reads:

Official acknowledgment plague La Guaira and Caracas twenty-fifth.

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

AFRICA—*Lourenço Marquez.*—Month of May, 1908. Estimated population, 10,000. Total number of deaths, 47, including beriberi 2, and 4 from tuberculosis.

BRAZIL—*Bahia.*—Month of May, 1908. Estimated population 265,000. Total number of deaths, 601, including enteric fever 4, smallpox 5, and 58 from tuberculosis.

CANADA—*Quebec—Sherbrooke.*—Month of June, 1908. Estimated population, 14,709. Total number of deaths, 13, including 1 from tuberculosis.

GREAT BRITAIN—*England and Wales.*—The deaths registered in 76 great towns in England and Wales during the week ended June 20, 1908, correspond to an annual rate of 11.6 per 1,000 population, which is estimated at 16,234,952.

London.—Nine hundred and ninety deaths were registered during the week, including measles 30, scarlet fever 7, diphtheria 4, whooping cough 15, enteric fever 1, tuberculosis 154, and 20 from diarrhea. The deaths from all causes correspond to an annual rate of 10.8 per 1,000. In Greater London 1,444 deaths were registered. In the "outer ring" the deaths included 3 from measles, 6 from scarlet fever, 6 from diphtheria, and 6 from whooping cough.

Salford.—Two weeks ended June 20, 1908. Estimated population, 239,294. Total number of deaths, 149, including diphtheria 3, measles 6, scarlet fever 1, whooping cough 5, and 17 from phthisis pulmonalis.

Ireland.—The average annual death rate represented by the deaths registered during the week ended June 20, 1908, in the 21 principal town districts of Ireland was 16.3 per 1,000 of the population, which is estimated at 1,131,959. The lowest rate was recorded in Limerick, viz, 4.1, and the highest in Ballymena, viz, 47.9 per 1,000.

Scotland.—The deaths registered in 8 principal towns during the week ended June 20, 1908, correspond to an annual rate of 14.7 per 1,000 of the population, which is estimated at 1,839,038. The highest rate of mortality was recorded in Greenock, viz, 16.7, and the lowest in Aberdeen, viz, 10 per 1,000. The aggregate number of deaths registered from all causes was 517, including diphtheria 1, measles 13, scarlet fever 2, enteric fever 1, and 20 from whooping cough.

JAPAN—*Formosa.*—Two weeks ended June 6, 1908. Estimated population, 3,050,004. Total number of deaths not reported. Five deaths from enteric fever and 180 from plague reported.

MALTA.—Two weeks ended June 20, 1908. Estimated population, 206,690. Total number of deaths, 217, including diphtheria 2, enteric fever 2, and 11 from tuberculosis.

SWITZERLAND.—Week ended June 13, 1908. Reports from 18 cities, having an aggregate population of 876,946, show as follows: Total number of deaths, 254, including diphtheria 2, measles 3, scarlet fever 2, whooping cough 3, and 54 from tuberculosis.

TASMANIA.—Month of March, 1908. Estimated population, 184,008. Total number of deaths, 206, including enteric fever 10, diphtheria 1, and 1 from whooping cough.

Month of April, 1908. Total number of deaths, 143, including enteric fever 3 and 4 from whooping cough.

URUGUAY—*Montevideo.*—Month of April, 1908. Estimated population, 309,511. Total number of deaths, 389, including enteric fever 9, diphtheria 1, plague 3, and 57 from tuberculosis.

WEST INDIES—*Curaçao.*—Two weeks ended June 26, 1908. Estimated population, 31,600. Total number of deaths, 19. No deaths from contagious diseases reported.

Cholera, yellow fever, plague, and smallpox, from June 26 to July 17, 1908.

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

[For reports received from December 27, 1907, to June 26, 1908, see PUBLIC HEALTH REPORTS for June 26, 1908.]

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

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Ceylon, general	May 17–23		1	
India:				
Bombay	May 20–June 2		2	
Calcutta	May 10–30		261	
Madras	May 16–June 5		17	
Rangoon	May 17–30		21	
Indo-China:				
Cholon	May 10–30	48	45	
Saigon	May 10–30	46	30	Report May 23 included Cholon.
Philippine Islands:				
Manila				First quarter calendar year 1908, 203 cases, 167 deaths.
Provinces				First quarter calendar year 1908, 806 cases, 628 deaths.
Bataan	Jan. 1–Mar. 31	20	18	
Bulacan	Jan. 1–Mar. 31	91	72	
Capiz	Jan. 1–May 23	236	191	
Cavite	Jan. 1–Mar. 31	22	20	
La Laguna	Jan. 1–Mar. 31	3	2	
Mindoro	Jan. 1–Mar. 31	32	20	
Pampanga	Jan. 1–Mar. 31	145	128	
Pangasinan	Jan. 1–May 23	388	268	
Rizal	Jan. 1–Mar. 31	143	116	
Tarlac	Jan. 1–Mar. 31	10	8	
Zambales	Feb. 2–Mar. 31	62	48	
Straits Settlements:				
Singapore	May 10–16		1	

YELLOW FEVER.

Brazil:				
Manaos	May 26–June 13	5	5	
Para	May 31–June 20	9	9	
Rio de Janeiro	June 1–7	2	2	
Cuba:				
Santiago Province—				
Daiquiri	July 6–13	6	1	
Santiago	July 4	1		From Daiquiri.
Ecuador:				
Guayaquil	May 31–June 13		5	
Mexico:				
Frontera	July 12	1		
Laguna de Terminos	June 9–26	3	1	From May 18—1 case additional from S. S. Lembit.
Veracruz	July 12	3	2	

PLAGUE.

Australia:				
Brisbane	June 6	1		
Brazil:				
Rio de Janeiro	May 11–June 14	5		
Sao Paulo	May 18–31		2	
Chile:				
Antofagasta	May 18–24	24	2	
Arica	May 21–27			Present.
Iquique	May 20–26	11	1	
China:				
Canton	May 1–June 9	10		Mainly imported.
Foochoo	April 6			Present.
Hongkong	May 10–23	202	160	
Hsing-Sua	June 2–8			Do.
Ecuador:				
Guayaquil	May 31–June 13		11	
Egypt:				
Alexandria	May 27–June 8	5	3	
Provinces—				
Assiout	May 27–June 8	1	1	

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

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Egypt—Continued.				
Provinces—Continued.				
Minieh	May 15–June 1	3	1	
Garbieh	May 16–June 10	15	1	
Fayoum	May 28–June 11	41	28	
Beni Souef	May 29–June 9	2	.....	
Kena	May 28–June 11	16	10	
Galyoobeeyeh	May 21–June 10	15	10	
India:				
Bombay Presidency and Sind.	Apr. 26–May 16	2,667	2,206	
Madras Presidency	Apr. 26–May 16	107	78	
Bengal	Apr. 26–May 16	476	443	
United Provinces	Apr. 26–May 16	1,200	1,095	
Punjab	Apr. 26–May 16	8,412	6,942	
Burma	Apr. 26–May 16	249	240	
Central provinces, including Berar.	Apr. 26–May 16	23	19	
Mysore State	Apr. 26–May 16	132	105	
Central India	Apr. 26–May 16	4	4	
Rajputana	Apr. 26–May 16	498	358	
Kashmir	Apr. 26–May 16	12	6	
Northwest frontier province.	Apr. 26–May 16	278	226	
Grand total		14,058	11,722	
Indo-China:				
Cholon	May 10–30	7	5	
Saigon	May 10–30	16	13	Report May 23 included Cholon.
Japan:				
Formosa	May 10–June 6	490	375	From May 15 epidemic at Taiwan; 25 cases reported daily.
Kobe	May 24–30	1	1	
Osaka	May 17–June 6	13	12	
Peru:				
Callao	May 20–June 21	7	2	
Chiclayo	May 20–June 21	2	2	
Lima	May 20–June 21	5	4	And vicinity.
Trujillo	May 20–June 21	24	13	Do.
Siam:				
Tongkah	May 4	.....	.....	Present.
Straits Settlements:				
Singapore	May 17–23	.....	1	
Trinidad:				
Port of Spain	June 4–July 4	8	5	
Turkey in Asia:				
Bagdad	June 7–20	19	13	
Venezuela:				
Caracas	June 10–27	15	4	June 25, still present.
La Guaira	June 16–19	5	1	Do.

SMALLPOX.

Argentina:				
Buenos Aires	Mar. 1–31	.....	2	
Arabia:				
Aden	May 28–June 11	.....	2	
Austria:				
Galicia	May 24–June 6	2	.....	
Brazil:				
Bahia	May 1–31	114	5	Report for April not received.
Pernambuco	May 1–15	.....	25	
Rio de Janeiro	May 11–June 14	971	419	
Santos	May 18–June 7	.....	4	
Canada:				
Nova Scotia—				
Halifax	June 14–July 4	12	.....	
Ontario Province—				
Hamilton	June 1–30	3	.....	
Ceylon, general	Apr. 1–30	.....	2	
China:				
Amoy (Kulangsu)	Apr. 5–May 16	.....	1	
Foochoo	Apr. 26–June 6	.....	.....	Present.
Hongkong	May 10–23	11	6	
Shanghai	May 18–June 14	.....	8	
Ecuador:				
Guayaquil	May 31–June 13	.....	6	

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

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Egypt, general	May 14–27	161	31	
Cairo	May 31–June 17	20	4	
France:				
Paris	May 31–June 20	3	.....	
Toulon	May 1–31	1	.....	
Germany, general	May 24–June 20	24	.....	
Bremen	May 24–June 6	3	.....	
Great Britain:				
Liverpool	Apr. 30–June 6	1	.....	
India:				
Bombay	May 20–June 9	.....	76	
Calcutta	May 10–30	.....	48	
Madras	May 23–29	.....	1	
Indo-China:				
Cholon	May 24–30	5	1	
Italy, general	June 8–21	47	.....	
Catania	May 22–June 11	.....	1	
Naples	June 7–20	12	.....	
Palermo	May 24–June 6	7	.....	
Japan:				
Kobe	May 31–June 13	7	.....	May 30, 1 case on S. S Mongolia; June 13, 1 case on S. S. Muncaster Castle.
Nagasaki	May 26–31	1	.....	
Osaka	May 10–June 6	83	50	
Yokohama	June 2–8	2	.....	
Java:				
Batavia	May 10–30	10	1	
Mexico:				
Aguas Calientes	June 8–27	.....	7	
Mexico City	May 10–16	.....	10	
Monterey	June 8–14	.....	1	
Philippine Islands:				
Manila	May 3–30	45	26	First quarter calendar year 1908, 42 cases, 12 deaths.
Porto Rico:				
Mayaguez	June 7–27	6	.....	
Portugal:				
Lisbon	May 31–June 13	10	.....	
Russia:				
Batoum	May 1–31	1	.....	
Moscow	May 24–June 20	118	43	
Odessa	May 24–June 20	23	2	
Riga	June 7–20	5	.....	
St. Petersburg	May 17–June 13	164	44	
Warsaw	May 10–16	.....	4	
Siberia:				
Vladivostok	May 6–14	1	.....	
Spain:				
Barcelona	June 1–20	.....	2	
Valencia	June 1–27	51	2	
Straits Settlements:				
Singapore	May 24–30	.....	2	
Turkey in Asia:				
Bagdad	May 10–June 6	49	6	Report from May 17–31 not received.
Turkey in Europe:				
Constantinople	June 1–29	.....	20	

Weekly mortality table, foreign and insular cities.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—										
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Aberdeen	June 20	174,579	34	....	....	....	....	....	....	....	....	....	....	....
Adelaide	Apr. 4	392,431	102	....	....	....	....	....	....	3	....	....	....	....
Do	Apr. 11	392,431	49	....	....	....	....	....	....	1	....	....	....	....
Do	Apr. 18	392,431	64	....	....	....	....	....	....	....	....	....	....	....
Do	Apr. 25	392,431	72	....	....	....	....	....	....	2	....	....	....	....
Do	May 2	392,431	97	....	....	....	....	....	....	1	....	....	....	....
Aguascalientes	June 21	40,000	69	1	....	....	....	3	....	....	4	....	....	....
Do	June 28	40,000	69	....	....	....	....	1	....	1	1	2	....	1
Aix la Chapelle	June 13	158,070	36	7	....	....	....	....	....	....	....	....	....	3
Amsterdam	June 20	565,122	126	13	....	....	....	....	....	1	....	2	6	1
Antwerp	June 13	312,571	62	1	....	....	....	....	....	....	1	1	....	1
Asuncion	May 30	75,000	23	4	....	....	....	....	....	....	....	....	....	....
Athens	June 20	241,058	54	18	....	....	....	....	3	2	....	....	1	1
Baracoa	June 27	27,000	5	....	....	....	....	....	....	....	....	....	....	....
Barranquilla	June 20	40,000	54	1	....	....	....	....	....	3	....	....	....	....
Basel	....do	131,000	46	9	....	....	....	....	....	....	....	....	....	....
Belfast	....do	380,344	129	23	....	....	....	....	....	3	....	....	....	1
Belize	July 2	9,113	4	....	....	....	....	....	....	....	....	....	....	....
Bergen	June 20	87,749	20	4	....	....	....	....	....	....	....	2	....	....
Birmingham	....do	558,336	123	....	....	....	....	....	....	....	....	....	....	3
Bluefields	....do	2,500	5	....	....	....	....	....	....	....	....	....	....	....
Do	June 27	2,500	1	....	....	....	....	....	....	....	....	....	....	....
Bombay	June 2	977,822	739	43	144	1	....	29	....	3	....	....	13	....
Do	June 9	977,822	642	40	74	....	....	16	....	2	....	....	8	....
Bordeaux	June 20	253,000	85	9	....	....	....	....	....	....	....	1	....	....
Bradford	....do	292,136	86	6	....	....	....	....	....	....	....	1	2	3
Bremen	May 30	228,166	68	9	....	....	....	....	....	....	....	3	....	1
Do	June 6	228,166	82	10	....	....	....	....	....	2	....	2	3	2
Bristol	June 20	372,785	83	....	....	....	....	....	....	....	....	5	2	2
Brussels	....do	630,078	147	17	....	....	....	....	....	....	2	3	3	2
Cairo	June 10	684,183	658	30	....	....	....	1	16	13	....	5	6	....
Do	June 17	684,183	789	33	....	....	....	1	10	4	....	6	15	....
Calcutta	May 23	847,796	570	30	79	71	....	12	....	....	....	....	1	....
Cardiff	June 20	191,446	42	5	....	....	....	....	....	....	....	....	....	1
Do	June 27	191,446	35	3	....	....	....	....	....	....	....	....	....	....
Cartagena, Colombia	June 22	30,000	23	....	....	....	....	....	....	....	....	....	....	....
Catania	June 25	160,000	68	2	....	....	....	....	....	5	....	1	....	....
Ceiba	June 27	6,500	2	....	....	....	....	....	....	....	....	....	....	....
Christiania	June 20	233,000	71	....	....	....	....	....	....	....	....	2	....	....
Cienfuegos	June 27	37,000	15	1	....	....	....	....	....	....	....	....	....	....
Coatzacoalcos	June 20	3,300	6	....	....	....	....	....	....	1	....	....	....	....
Do	June 27	3,300	2	....	....	....	....	....	....	....	....	....	....	....
Cognac	June 20	19,483	7	1	....	....	....	....	....	....	....	....	....	....
Colon	June 21	16,000	9	1	....	....	....	....	....	....	....	....	....	....
Constantinople	June 14	1,000,000	175	21	....	....	....	4	....	2	....	....	1	....
Do	June 21	1,000,000	170	32	....	....	....	3	....	6	....	....	2	....
Copenhagen	June 13	440,000	133	16	....	....	....	....	....	....	2	....	....	2
Dalny	June 6	33,513	15	2	....	....	....	....	....	....	....	....	....	....
Do	June 13	33,513	13	....	....	....	....	....	....	....	....	....	....	....
Denia	June 20	12,421	5	....	....	....	....	....	....	....	....	....	....	....
Dresden	June 13	541,400	131	22	....	....	....	....	....	....	....	2	1	1
Dublin	....do	394,525	150	27	....	....	....	....	....	....	1	....	3	2
Do	June 20	394,525	126	29	....	....	....	....	....	....	....	2	5	3
Dundee	....do	168,616	50	....	....	....	....	....	....	....	1	....	....	3
Durban	May 30	60,972	19	4	....	....	....	....	....	....	....	....	....	....
East London	....do	49,253	3	....	....	....	....	....	....	....	....	....	....	....
Edinburgh	June 20	350,524	99	....	....	....	....	....	....	....	....	....	1	4
Flushing	June 27	20,257	6	....	....	....	....	....	....	....	....	....	....	....
Fort-de-France	June 13	27,069	16	....	....	....	....	....	....	....	....	....	....	....
Do	June 20	27,069	13	....	....	....	....	....	....	....	....	....	....	....
Frankfort-on-the-Main	June 13	355,300	107	....	....	....	....	....	....	....	....	1	2	....
Do	June 20	355,300	98	....	....	....	....	....	....	....	3	....	1	1
Frontera	....do	9,000	1	....	....	....	....	....	....	....	....	....	....	....
Funchal	June 21	44,049	25	5	....	....	....	....	....	....	....	....	....	....
Geneva	June 13	118,500	28	....	....	....	....	....	....	....	....	....	....	....
Georgetown	May 9	36,567	47	5	....	....	....	....	....	....	....	....	....	....
Do	May 16	36,567	25	....	....	....	....	....	....	....	....	....	....	....
Do	May 23	36,567	64	8	....	....	....	....	....	....	....	....	....	....
Do	May 30	36,567	34	5	....	....	....	....	....	....	....	....	....	....
Ghent	June 20	165,033	41	5	....	....	....	....	....	1	....	....	....	....
Glasgow	June 26	782,110	264	....	....	....	....	....	....	1	1	1	9	11
Gottenborg	June 20	160,500	40	10	....	....	....	....	....	....	....	....	....	....
Greenock	....do	71,783	23	....	....	....	....	....	....	....	....	....	....	....

Weekly mortality table, foreign and insular cities—Continued.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—									
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Guayaquil	June 13	70,000	63	5	5	....	2	1	....	....	....	....	....	2
Hamburg	June 20	854,472	229	29	....	....	....	....	....	....	....	1	2	2
Havre	....do....	132,430	47	15	....	....	....	....	....	1	....	....	....	....
Honolulu	June 13	39,306	21	3	....	....	....	....	....	....	....	....	....	....
Hull	June 20	271,137	74	....	....	....	....	....	....	....	....	....	3	1
Kobe	May 23	363,593	141	....	....	....	....	....	....	2	....	....	....	....
Do	May 30	363,593	124	....	1	....	....	....	....	1	....	1	....	....
Do	June 6	363,593	120	....	....	....	....	....	....	1	....	2	....	....
Do	June 13	363,593	111	....	....	....	....	....	....	2	....	2	....	....
La Rochelle	June 21	31,553	8	2	....	....	....	....	....	....	....	....	....	....
Lausanne	June 13	56,000	13	....	....	....	....	....	....	....	....	....	....	....
Leeds	June 20	477,107	109	13	....	....	....	....	....	....	....	....	1	4
Leith	....do....	84,689	19	1	....	....	....	....	....	....	....	....	2	....
Liege	....do....	174,423	41	4	....	....	....	....	....	....	....	....	2	1
Liverpool	....do....	753,208	223	23	....	....	....	....	....	....	9	2	8	5
London	....do....	7,323,327	1,444	....	....	....	....	....	....	2	13	10	48	22
Lübeck	....do....	95,000	25	....	....	....	....	....	....	....	....	....	....	....
Lyon	....do....	472,114	162	28	....	....	....	....	....	1	1	1	....	....
Madras	May 29	509,346	359	....	1	5	....	1	....	....	....	....	3	....
Magdeburg	June 13	248,052	61	6	....	....	....	....	....	....	1	3	1	....
Manaos	June 6	50,000	39	5	....	....	1	....	....	....	....	....	....	....
Do	June 13	50,000	35	1	....	....	2	....	....	....	....	....	....	....
Manchester	June 20	631,533	164	23	....	....	....	....	....	....	3	1	6	3
Manzanillo	June 27	1,700	2	....	....	....	....	....	....	....	....	....	....	....
Matamoras	....do....	8,000	3	....	....	....	....	....	....	....	....	....	....	....
Messina	May 30	107,000	38	1	....	....	....	....	....	1	1	2	....	....
Do	June 6	107,000	36	....	....	....	....	....	....	3	....	....	....	....
Do	June 13	107,000	32	1	....	....	....	....	....	5	....	....	....	....
Do	June 20	107,000	31	3	....	....	....	....	....	4	....	1	....	....
Milan	June 7	900,000	221	39	....	....	....	....	....	5	1	1	2	....
Do	June 14	900,000	175	29	....	....	....	....	....	4	....	....	1	....
Do	June 21	900,000	172	29	....	....	....	....	....	1	....	....	....	....
Monterey	June 28	100,000	67	4	....	....	....	....	....	1	....	....	2	....
Montreal	July 4	378,856	.....	20	....	....	....	....	....	....	....	3	....	5
Moscow	June 13	1,335,104	677	64	....	....	....	11	5	3	7	6	19	6
Munich	....do....	556,000	188	28	....	....	....	....	....	....	3	....	1	2
Nagasaki	May 31	173,118	57	....	....	....	....	....	....	....	....	....	....	....
Do	June 7	173,118	49	....	....	....	....	....	....	....	....	....	....	....
Do	June 14	173,118	31	....	....	....	....	....	....	....	....	....	....	....
Naples	June 13	593,729	242	18	....	....	....	....	....	....	....	....	....	....
Do	June 20	593,729	265	15	....	....	....	....	....	....	....	....	1	....
Newcastle-on-Tyne	....do....	272,969	75	....	....	....	....	....	....	....	....	....	....	1
Nottingham	June 13	239,753	56	....	....	....	....	....	....	....	....	1	....	....
Nuevo Laredo	June 27	8,000	2	1	....	....	....	....	....	1	....	....	....	....
Ottawa	June 20	76,260	29	....	....	....	....	....	....	....	....	....	....	....
Do	June 27	76,260	25	....	....	....	....	....	....	....	....	....	....	....
Para	June 13	185,000	56	9	....	....	3	....	....	1	....	....	....	....
Do	June 20	185,000	53	9	....	....	2	....	....	1	....	....	....	....
Paris	....do....	2,776,394	777	180	....	....	....	....	....	5	5	5	12	3
Plymouth	....do....	116,000	24	....	....	....	....	....	....	....	....	1	....	....
Rangoon	May 23	252,155	217	6	38	8	....	....	....	....	....	....	....	....
Do	May 30	252,155	236	4	54	13	....	....	....	....	....	....	....	....
Rio de Janeiro	May 31	628,675	313	48	....	....	....	73	....	2	....	....	....	1
Do	June 7	628,675	345	52	....	....	2	293	....	1	....	....	1	....
Do	June 14	628,675	349	57	....	....	....	100	....	1	....	1	1	1
Rotterdam	June 27	407,346	83	....	....	....	....	....	....	....	5	2	....	....
St. John, N. B	July 4	40,789	8	1	....	....	....	....	....	....	....	....	....	....
St. Petersburg	June 13	1,678,000	872	143	....	....	....	11	1	42	18	8	67	7
St. Stephen, N. B	July 4	2,840	1	....	....	....	....	....	....	....	....	....	....	....
Salina Cruz	June 14	4,000	6	....	....	....	....	....	....	....	....	....	....	....
Do	June 21	4,000	7	....	....	....	....	....	....	....	....	....	....	....
Santiago de Cuba	June 27	45,497	22	3	....	....	....	....	....	....	....	....	....	....
Shanghai	May 31	544,500	153	14	....	....	....	2	....	....	....	1	....	....
Do	June 7	544,500	169	20	....	....	....	....	....	....	....	....	....	....
Do	June 14	544,500	159	18	....	....	....	1	....	....	....	....	....	....
Sheffield	June 13	440,000	109	12	....	....	....	....	....	1	....	....	....	4
Do	June 20	440,000	102	18	....	....	....	....	....	1	1	....	....	2
Singapore	May 23	258,324	273	24	1	....	....	1	....	5	....	....	....	....
Southampton	June 20	122,196	20	2	....	....	....	....	....	....	....	....	....	1
South Shields	....do....	115,535	23	1	....	....	....	....	....	....	....	....	....	1
Stettin	....do....	256,000	99	5	....	....	....	....	....	....	1	1	....	....
Stockholm	June 13	337,460	97	11	....	....	....	....	....	....	....	1	....	2
Sunderland	June 20	157,495	33	3	....	....	....	....	....	....	....	1	....	....

Weekly mortality table, foreign and insular cities—Continued.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—										
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Tamatave	May 23	7,086	1	....	.....	....	....	....	....	....	....	....	....	....
Do	May 30	7,086	1	....	.....	....	....	....	....	....	....	....	....	....
Tarragona	June 20	20,400	9	....	.....	....	....	....	....	1	....	....	....	....
Tegucigalpa	June 17	24,000	19	....	.....	....	....	....	....	....	....	....	....	....
Do	June 24	24,000	8	....	.....	....	....	....	....	....	....	....	....	....
Valencia	June 13	250,000	81	9	.....	....	....	1	....	1	....	....	1	....
Do	June 20	250,000	96	6	.....	....	....	....	....	....	1	....	....	....
Veracruz	June 27	32,000	25	5	.....	....	....	....	....	....	....	....	....	....
Vevey	June 13	14,000	1	....	.....	....	....	....	....	....	....	....	....	....
Victoria, B. C	June 27	27,500	5	....	.....	....	....	....	....	....	....	....	....	....
Vigo	June 20	36,000	8	1	.....	....	....	....	....	....	....	....	....	....
Warsaw	May 16	764,611	265	50	.....	....	....	4	....	3	2	1	1	7
West Hartlepool	June 20	66,750	17	....	.....	....	....	....	....	....	....	....	....	....
Winnipeg	June 27	117,000	19	....	.....	....	....	....	....	1	....	....	....	....
Do	July 4	117,000	19	....	.....	....	....	....	....	....	....	....	....	....
Zurich	June 20	177,329	49	8	.....	....	....	....	....	....	....	....	....	1

By authority of the Secretary of the Treasury:

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