PLAGUE AMONG GROUND SQUIRRELS IN CONTRA COSTA COUNTY, CALIFORNIA.

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HUMAN PLAGUE.

In August, 1903, a blacksmith from the town of Pacheco, Contra Costa County, was admitted to the German hospital in San Francisco suffering from plague, from which he subsequently died. While investigating his case Surgeon Rupert Blue was struck with the fact that the patient had shot ground squirrels three or four days prior to his illness. Inasmuch as he had not visited Oakland or San Francisco, which were then infected points, for over a month prior to his taking sick, it was evident that the infection had been contracted in Contra Costa County, and it was thought not improbable that the ground squirrel was the agent concerned in the transmission of the infection. In September of the same year a man employed in the construction of a railroad bridge near Danville died of bubonic plague in the Southern Pacific Hospital in San Francisco. He had been working for some time in San Ramon Valley, and had lived in a railroad camp where ground squirrels were frequently killed and used as articles of food.

In 1904 a woman living near Concord, Cal., died of the disease, and in the investigation which followed Passed Assistant Surgeon Donald H. Currie made a series of experiments which proved conclusively the susceptibility of the ground squirrel to bubonic plague. No suspicious cases were reported during the summer of 1904 or 1905, but in 1907, immediately after the earthquake, Doctor Blue saw a boy suffering from bubonic plague of the multiple bubonic type. This patient had shot squirrels in the Strawberry Canyon in the Berkeley Hills adjoining Contra Costa County, three or four days before he was taken ill. He stated that in several instances he was obliged to thrust his arm down in the squirrel burrow in order to extract the animal he had shot. It is quite easy to see how in this way he may have been bitten by a flea infected with plague. He recovered.

On July 15, 1908, a boy living on a ranch in the northern part of the county, about midway between Concord and Antioch, died of the disease, and on July 28 a young lady died of the disease at the head of the Pinole Canyon (usually called Briones Valley), midway between Martinez and Pinole. In both these latter cases an intimate association with ground squirrels was shown.

RODENT PLAGUE.

In 1903, while investigating the case of the blacksmith in Pacheco, Doctor Blue pointed out the possibility of the ground squirrel acting in the same rôle as the rat in the transmission of the disease. Doctor Currie's investigations served to confirm him in this belief, but it was not until 1908, in the investigation which followed the two human cases mentioned above, that natural plague in ground squirrels was demonstrated. It was known as early as 1903 that an epizootic was spreading among the ground squirrels, but in spite of many attempts on Doctor Blue's part and the offer of liberal rewards no naturally infected squirrels could be secured. In 1908 infected rats were found on a ranch adjoining that on which the boy died of plague, and in the autumn of the same year an infected squirrel was found near the house in which he had lived. A little later three infected squirrels were found near Bay Point, a few miles north of this place. This epizootic has continued until the present date, but it does not seem at present to kill as many ground squirrels as during the earlier years. It is stated by those who observed the squirrels closely at that time that they died by the thousands. They would emerge from their holes and stagger about as though they were intoxicated. Their fur was turned the wrong way, and, in many instances, they were emaciated and presented swellings beneath the jaws or in the axillæ. They were seen crawling on the ground in a dazed condition, apparently having lost all sense of direction, and could be easily killed with a stick. Several intelligent ranchers state that they opened the bodies of several of these squirrels, and that their lungs were dark red in color and resembled liver in consistence. They may have suffered from the pneumonic form of the disease. Undoubtedly many died in their holes; in fact, some of the ranchers state that the holes were so full of dead squirrels that no more could get in, and the others consequently died on the ground. As a result buzzards came in great flocks, and the air was charged with the stench of the decomposing bodies. For a time they decreased so greatly in numbers that it seemed as if the county had been permanently rid of an animal which had been a perennial pest, destroying many thousand dollars' worth of crops annually.

The epizootic is supposed to have entered the county by one of three routes, from the northern part along the coast of Suisun Bay, or by way of Moragua Valley on the west, or the Niles Canyon on the south. It is thought by many that the infection was imported by the rats from the sugar ships coming from Honolulu and anchoring along the coast of Suisun Bay. Be this as it may, the infection rapidly spread throughout the entire county. In 1906 the squirrel population, which, as has been stated, was tremendously diminished by the epizootic, began to increase again, and, while it has not reached its original numbers, it is only a question of time until this occurs unless some eradicative measures are directed against them.

THE GROUND SQUIRREL.

The ground squirrel most commonly found in this county is the *Otospermophilus Beecheyi* (Richardson), or *Citellus Beecheyi*, belonging to the Arctomyinæ. The following description is given by

Edgar Alexander Mearns, M. D., U. S. Army, in "Mammals of the Mexican Boundary of the United States," Bulletin 56 (1907), U. S. National Museum, pages 324–325:

Size smaller than *Otospermophilus grammurus* (nearly as large as the eastern gray squirrel) with a more slender body and shorter tail. Ears high and pointed. Mammæ, six pairs (P. $\frac{2}{2}$, A. $\frac{2}{2}$, I. $\frac{2}{2}$=12). Color above brown, grizzled, and annulated with black in a vermicular pattern; darkest anteriorly, and most grizzled and vermiculated posteriorly. Nape and sides of neck silver gray; this color prolonged backward above the shoulder in the form of stripes which are sometimes faintly traceable to the root of the tail, though usually ending about the middle of the body. Ears black outside, grayish or faintly rusty inside, and along posterior border. Top of head bister, slightly dusky above orbits, which are encircled by white. Sides of head grayish, mixed with yellowish brown. The tail, which is less bushy and shorter than in *O. grammurus*, is yellowish gray, the lateral hairs thrice annulated with black. Feet yellowish gray. Under surface of the body grayish white. The interscapular region is often blackish, more or less vermiculated with pale annuli. Length, 410 mm.; tail vertebræ, 170; hind foot, 55; ear above crown, 21; ear above notch, 27; length of head, 62; skull, 57 by 34 mm.

They usually exist in colonies, sometimes digging very extensive burrows which often honeycomb an entire hillside. The entrances to the burrows are approached by paths 2 or 3 inches wide worn in the grass by the running to and fro of the animal. Soft ground is usually chosen for digging the warren, but sometimes they burrow into hard adobe, and, in certain localities, they dig extensive tunnels in the soft limestone. The earth dislodged in digging the burrows is piled in a mound at the entrance of the hole. The tunnel usually makes a sharp preliminary drop and then points upward a distance of 2 or 3 feet. It then forks, one branch going to the storehouse and the other to the nest. Collateral branches are given off from these two main avenues to the various exits. The nest is built of straw, pieces of bark, and similar débris, and usually contains a great number of fleas. In the storehouse grain, fruit, and several varieties of wild seeds are laid by for the winter season. These are carried there in the cheek pouches of the animal. They may be observed playing about or eating the grain and seeds on which they subsist, and usually there are one or two sitting bolt upright by the entrance to the burrow. On the approach of the hunter they will whistle, and after a short time it is very easy to recognize the meaning of these signals. If one sharp whistle is given, the animal will usually sit still, and it is possible to get a shot. If he gives one sharp whistle and goes down into the hole, it is safe to wait a few minutes for him, but if he gives one sharp whistle followed by two or three trills in a descending scale it is simply a waste of time to wait for him to come out, because he has been thoroughly frightened and may not reappear for two or three hours. They spend the winters—that is, the wet months—in the foothills, and there the young are born in late March and early April. The litter varies from five to seven. In late April and early May most of the young squirrels have grown sufficiently to travel, and an emigration into the lowlands begins. This is not completed until late May, when the grain crops are harvested. By this time food in the hills has become relatively scarce, and the animals, descending into the valleys, subsist on fruit, garden truck, and grain. In the former instance their activities are particularly pernicious, and they have frequently been seen to cut off small branches laden with unripe prunes and drag them into their hole. While they do not build nests in the trees, they frequently dig extensive burrows at their roots,

and occasionally they are seen in the branches gathering nuts. They are very fond of elderberries, and will climb the trees in search of them.

SQUIRRELS AS HUMAN FOOD.

For many years a considerable proportion of the population of this region has eaten ground squirrels at certain seasons of the year, and it is stated that when in good flesh they are as good as, if not superior to, rabbits. Several families have been found who are in the habit of salting them down in large numbers and using them almost to the exclusion of other meats. In all probability the eating of squirrels is not in itself dangerous, provided they are well cooked, but the danger lies in the handling of them prior to cooking; that is, in skinning and preparing them. There are a large number of men who make their living by hunting these animals for the markets, and, until recently, large daily shipments were made. Realizing the danger of such a practice, Doctor Blue invited the attention of the state board of health to it, and, at his request, a resolution was passed forbidding the acceptance of ground squirrels for shipment by express companies and common carriers, unless accompanied by a certificate to the effect that they were intended for scientific purposes, and carried in sealed metal cans. This succeeded in a measure in putting a stop to this dangerous business, but a large number of private hunters continued to come into the county. The matter was then brought to the attention of the mayors of Oakland, Berkeley, and Alameda, with the result that the people were warned against the use of ground squirrels for food. An inspector was also stationed at the Fish ranch on the Tunnel road, which is the main thoroughfare into the county, with instructions to inform all persons passing with bags of squirrels of the danger to which they were exposing themselves. As a result, the practice of eating squirrels has very greatly diminished, and the market hunters have been obliged to seek other employment.

CONNECTION BETWEEN THE GROUND SQUIRREL AND BUBONIC PLAGUE.

In other parts of the world—eastern Siberia, northern Mongolia, and the base of the Himalayas, in northern India—it has been observed that an epizootic spreads among the Arctomyinæ, and that persons eating and handling these rodents contract bubonic plague. This has been treated of by several authors, notably Beliatsky, Reschtnikoff, Zabolotny, Rudenko, and Bannerman. These various authors give a description of an epizootic which very closely resembles that observed in Contra Costa County. It was not, however, proved that the disease existed among the Arctomyinæ of America until the summer of 1908. This fact, however, was considered of sufficient importance to warrant the beginning of an antiplague campaign in Contra Costa County.

There is reason to believe that the booby owl, which is a constant companion of the ground squirrel, occupying the same burrows with him, may play an important rôle in the dissemination of the epizootic. It is thought that this bird, flying from burrow to burrow, may carry infected fleas for long distances. If this be found true, the problem of the eradication of the epizootic will thereby be greatly complicated. Some of the ranchers of this vicinity firmly believe that the

booby owl does not harbor fleas, and state that it will transport horse manure long distances for the purpose of lining its nest. Their contention is that the ammonia generated by the decomposing manure will inhibit the growth and multiplication of fleas. As yet, no opportunity has occurred to disprove or verify this statement.

In 1909 a campaign against the ground squirrel was inaugurated. The immediate charge of the work was assigned to Passed Asst. Surg. W. C. Rucker, who had conducted part of the investigations during the previous summer, and was thoroughly familiar with the ground to be covered. Experiments were made with the various agents to be used in the destruction of ground squirrels, and an endeavor was made to obtain samples of the squirrel population from all parts of the county.

LOCATION AND TOPOGRAPHY OF CONTRA COSTA COUNTY.

Contra Costa County is one of the central counties of the State. It is bounded entirely on the west, north, and east by water, its western boundary being San Francisco Bay, its northern boundary the San Pablo and Suisun bays, its eastern boundary the San Joaquin River, and its southern boundary Alameda County. It is also bounded, to a certain extent, on the west by Alameda County, and is, therefore, in close proximity to all of the bay cities. Its western boundary line is within 9 miles of San Francisco and adjoins Berkeley. Its area is 734 square miles, or about 444,491 acres. Its topography is semimountainous with broad, rich, intervening valleys. Besides the range of hills bordering the western and northern portions of the county, there are two ranges of hills running in a general northerly and southerly direction, with large productive intervening valleys watered by substantial streams. In the center of the county stands Mount Diablo, a rugged peak about 3,800 feet in height. The valleys of Alhambra, Pacheco, Ignacio, Clayton, and San Ramon extend from Suisun Bay at Martinez on the north to the southern boundary line of the county beyond San Ramon. Numerous smaller valleys give off from these, and the great San Joaquin Valley begins in eastern Contra Costa County, extending from Mount Diablo on the west to the San Joaquin River on the east. The rich valleys afford an abundant food supply for the squirrel population, while the wild hill lands shelter them in winter from the rains and from human and animal foes. The proximity of the county to the bay cities, which have until recently been plague infected, and the constant presence of ships coming from oriental ports, in Suisun Bay, demonstrate how easily the infection could have been introduced into the county, and how readily it could be transferred to the cities, which have just been rid of plague at such great cost. The large area to be covered, the wide spread of the infection, and the character of the terrane all combine to render the campaign exceedingly difficult.

SQUIRREL ERADICATIVE AGENTS.

Poisonous gases—(1) Carbon bisulphide.—Two agents were found which gave good results in the poisoning of squirrels. The first of these was commercial carbon bisulphide. The carbon bisulphide of commerce is usually sold in 5-gallon zinc-lined cans. These are quite

heavy, and it is not wise to carry them. When poisoning, a 2-quart glass fruit jar having a screw top is best for the purpose. Waste is made up into balls and loosely tied with a string. Several of these balls are kept in the jar which is half full of carbon bisulphide, and when it is desired to place one in a hole they are taken up with a large pair of forceps made of heavy wire. Bisulphide should not be brought in contact with the skin, as its rapid evaporation will freeze the part and produce scars which heal with considerable difficulty. To use carbon bisulphide a piece of waste the size of an orange is saturated with the fluid and the wet ball placed in the mouth of the squirrel hole. When the saturated ball has been placed in the hole, earth is tamped tightly upon it so that the gas which is generated may have no opportunity to escape. All of the holes of the burrow are treated in this way. In some instances the ball is placed deep in the hole and then ignited. This is more or less dangerous as an explosion occurs, and, while the gas is thus disseminated to all parts of the warren, its action covers only a limited period of time, and is, therefore, not as certain as the first method mentioned. Experiments are now being made with carbon-bisulphide shells which may prove a rapid and efficacious means of squirrel destruction. These consist of shells made of waxed paper which is loosely packed with waste. Leading into it on either side is an insulated wire, the bare ends of which almost meet in the center of the shell. Just prior to using the waste is saturated with carbon bisulphide. When an electrical current is passed through the wire it sparks across the gap, thus igniting the bisulphide and producing an explosion. If one of these shells were placed in each hole of the warren and the earth tightly tamped behind it, and all discharged simultaneously, it is believed that the shock alone would be sufficient to kill everything in the warren.

Several of the manufacturers of pyrotechnic supplies are placing on the market shells which produce much smoke and gas and which are said to be useful in the extermination of squirrels.

Pumps: Thus far none of the pumps for introducing bisulphide into the tunnels has proven ideal. Many of them are efficacious, but are very heavy and slow in their delivery of gas. It is believed that a light and simple apparatus can be made by attaching an automobile pump to a tube guarded by a valve and leading to the bottom of a large square tin can, from the upper surface of which would lead a hose for carrying the gas into the hole. By pumping air through the can of bisulphide the gas would be generated and could thus be rapidly forced into the subterranean tunnels. Carbon bisulphide seems to be an ideal agent for the extermination of squirrels in a plague campaign, for the reason that it not only kills the squirrel but also the fleas upon him and in the tunnels, thus precluding the possibility of infected fleas remaining to perpetuate the epizootic in another colony of squirrels subsequently occupying the same burrow. The chief disadvantages of carbon bisulphide are its high explosive power, its liability to corrode the cans in which it is kept, and its cost, 11½ to 12 cents per pound in the California market. It can not be used when the ground is dry and cracked, and can, therefore, be applied with success only during the wet or winter months.

(*2*) *Sulphur dioxide.*—Sulphur dioxide, if properly applied, would fulfill all of the requirements of an ideal agent for poisoning squirrels. It is cheap and nonexplosive. It would kill both the squirrel and

his parasites. Thus far only one hand pump for introducing the gas produced by burning sulphur has been found on the market. If it could be obtained cheaply enough, compressed sulphur dioxide would be practicable. In common with all other gases, however, it is efficacious only when the ground is wet. The fluid obtained on cleaning Pintsch gas tanks has been recommended. It is cheap and said to be efficacious, but it is not easy to secure it in sufficient quantity for carrying on a work of this kind. Experiments are now being made with a view to determining the merit of this product as a pulicide.

(3) *Hydrocyanic-acid gas.*—Hydrocyanic-acid gas used with proper precautions is a most excellent agent for exterminating the squirrels. It should not, however, be entrusted to careless or ignorant people, but only persons who have been carefully instructed as to its dangers and method of use should be allowed to employ it. A small tin pan 3 inches in diameter and 1 inch in depth containing 100 c. c. of 10 per cent sulphuric acid is set in the squirrel hole. All of the other holes of the warren are carefully tamped so that they are gas tight. A quantity of wet clay or adobe is placed near the mouth of the hole in which the gas is to be generated. One gram of potassium cyanide in a small paper bag is then placed in the sulphuric-acid solution. The length of time required for the acid to soak through the bag gives the workman a chance to close the hole quickly with the wet clay. The reaction which occurs may be expressed as follows: $2KCN + H_2SO_4 = 2HCN + K_2SO_4$. The gas will kill everything in the warren. This, in common with all other gaseous agents, can be used only when the ground is moist. Its advantages are its cheapness (about 7 cents per colony) and certainty. Its disadvantages are its extreme toxicity.

Poisoned grain.—The second agent which gives good success is poisoned wheat. The poisonous agent used is either strychnine sulphate or cyanide of potassium, preferably a mixture of the two, applied to wheat with a little glucose or other sweet material and then dried. The appended formula may be recommended:

Strychnine	ounce..	1
Cyanide of potassium	ounces..	2
Eggs	dozen..	1
Honey	pint..	1
Wheat or barley	pounds..	30

Stir eggs well, then mix in honey and again stir. Then put in dry powdered strychnine and cyanide and stir until well mixed.

Put wheat in large box or can and pour in the mixture of poison and stir until it is well distributed over the wheat. Stir two or three times during twenty-four hours, then spread out and dry. Before putting it out for the squirrels add oil of rhodium 1 drachm.

This agent is very effective when the food supply is limited, that is, during the winter months. Great care must be taken in the distribution of poisoned wheat lest domestic animals and quail and other birds be killed by it. It should all be placed in the squirrel hole itself, and never on the surface of the ground. This is especially necessary in pastures when the food is short, because valuable cattle cropping the grass close to the ground are apt to take it and be killed. It will thus be seen that the ideal time to carry on a squirrel eradicative campaign is the rainy season, as the squirrels are then localized in the foothills, the ground will hold the poisonous gas, and the reduced food supply will cause the consumption of the poisoned wheat.

Phosphorus.—Phosphorus has not proven as useful in the destruction of ground squirrels as in the poisoning of rats. It is dangerous to handle and serious fires may be started with it. After a few days exposure to the open air and the bright sunshine it quickly loses its toxic power, and it is therefore not recommended for this work.

Flooding.—Where there is a sufficient fall of water, flooding the squirrel warren will drive the squirrels out very effectually. If men are stationed around the edge of the colony with guns or clubs, great numbers may be slain, but flooding is useless unless this is done, because the squirrels will simply migrate to the high lands, to return as soon as their burrows are dry.

Natural enemies.—It has been hoped that some use might be made of the natural enemies of the squirrel in this campaign, but no one of the known natural enemies is ideal for this purpose. The coyote, wolf, fox, badger, skunk, mountain lion, gopher snake, and red-tailed hawk all prey upon the squirrel, but each is open to some objection. This matter is, however, being carefully studied out, and some plan may be evolved whereby use can be made of this means of killing squirrels. Several young sparrow hawks have been secured, and an endeavor is being made to train these birds to hunt squirrels, much as falcons were used in olden days. This may prove very useful on flat lands, where a hunter can not get close enough to the squirrels to secure a shot.

Traps.—Several varieties of traps have been experimented with, but none have proven very successful. A squirrel is a very wary animal, and he will not enter his hole if he sees anything unusual therein. So simple a thing as a ball of paper placed in the mouth of the hole will cause him to abandon that particular runway. Experiments are now being made with snares. These are made of fine wire, and it is hoped that in this way a large number of ground squirrels may be captured alive. This will afford the laboratory an opportunity to study the susceptibility to plague of squirrels from an infected locality, and a few may be captured in the early stages of plague, thus rendering it possible to study the natural form of the disease at close range.

Shooting.—After the preliminary experiments with the various poisonous agents, which could be conducted only while the ground was moist and the squirrels' food supply scanty, an endeavor was made to secure samples of the squirrel population from all portions of the county in order to determine the exact extent of the infection and, if possible, its percentage. A number of men were, therefore, stationed by the officer in charge at what were considered strategic points. For the most part these employees were taken from among the men who had been trained in the field work in San Francisco. Each was supplied with a single-barreled, 12-gauge shotgun, a cleaning rod, canvas knapsack, canvas-covered aluminum canteen, ammunition, squirrel tags, cans, chloroform, solder, indelible pencils, report blanks, and stationery. Unless the hunter wears some protection for the shoulder it may become bruised by the recoil of the gun. Each hunter, therefore, wears over the gun shoulder a pad of soft felt an inch in thickness, such as is used beneath horse collars. It was not found practicable to use rifles in this work on account of their danger to stock and the fact that, as a rule, they do not kill the ground squirrel outright. Until the fields became very dry it was practicable to use

shells loaded with black powder in the proportion of 3¼ drachms of powder to 1⅛ ounces of No. 8 soft shot. Later, on account of the danger of setting fire to the dry fields with the burning wads, it was found necessary to substitute smokeless powder. Ground squirrels are very hard to secure after having been shot. Frequently, even though badly mangled, they will crawl into their holes, and thus escape. The ideal charge for securing ground squirrels for purposes of examination is that which gives the maximum shock with the minimum laceration of the tissues. No. 8 shot is large enough to fill these requirements, and so many of them striking the animal causes great shock, while they are not large enough to tear the tissues badly. It has been found that squirrels are most often secured when they are shot on the run, and that almost invariably when they are shot sitting up they will fall into a hole, and thus escape. By shooting at the running squirrel the hunter has the double advantage of striking the animal when he is spread out, while at the same time he may choose the place where he wishes him to fall. It has been found that a heavy piece of wire with a sharp barb about an inch long on the end is a very effective instrument in extracting wounded squirrels from the burrows.

Dogs are now being trained for the purpose of retrieving squirrels. This will save the hunter a great deal of work, and will enable him to secure almost all of the squirrels which he wounds. It has been found that the early morning and late afternoon are the best times of day to shoot squirrels. They ordinarily do not come out of the holes when it is very warm, very cold, or very windy. It is not profitable to hunt in the same colony for more than two or three days at a time, as the squirrels soon become very "gun shy," and take to earth as soon as anyone approaches. Under ordinary conditions a hunter should shoot and secure at least 30 squirrels per day, although when they are very numerous the day's bag may reach 60 or 65. In one instance one man shot 131 in eight hours.

SEARCH FOR DEAD SQUIRRELS.

At the beginning of the campaign it was thought that the best way to secure plague-infected squirrels would be to make a careful search for their dead bodies. The employees were, therefore, instructed to make careful search for dead squirrels in and around colonies in which they were hunting. Out of 67 thus found not one has proved to be infected. This method has not, however, been abandoned, but little is expected from it, and it is thought that it is not improbable that the plague-stricken squirrels die in their holes.

TAGGING.

The squirrels are secured as soon as shot and a tag immediately attached to each. This is necessary, because they will sometimes revive and crawl away or the hunter may lose track of them. If they are tagged as soon as shot there is no danger of mistagging them, and the handling is reduced to the minimum. The tag shows where, when, how, and by whom captured, also the name of the nearest town, to facilitate locating the ranch on the map.

SHIPMENT OF SQUIRRELS.

Each evening the squirrels are placed in tin cans especially provided for the purpose. In the can is placed 75 c. c. of commercial chloroform for the purpose of killing fleas. The lid is then tightly applied and carefully sealed with solder. The can is then tagged and sent by express to the plague laboratory in San Francisco. It will thus be seen that every precaution is taken to protect expressmen and other persons handling the cans. In hot weather the squirrels must be rushed to the laboratory with the greatest expedition, as they are likely to decompose rapidly and generate considerable gas which will blow off the covers no matter how tightly they may be secured. This causes complaints on the part of the express companies and their employees. In many instances, however, it is very difficult to forward specimens prior to their decomposition. One hunter stationed in an isolated part of the county makes it his business to know whenever the ranchers in his vicinity are going to town, and gets them to carry his squirrels to the nearest village. There they are delivered to a foreman who ships them by stage to the nearest railroad; thence they are taken to Oakland, and by ferry to San Francisco.

Where two or more men are hunting in the same district (or where the bag is unusually large) large milk cans with especially prepared rubber gaskets are used. The lids are also secured by padlocks, one key of which is kept by the man sending the can, the other remaining at the laboratory. The small cans are used but once; the large cans are returned by express.

LABORATORY EXAMINATION.

On the arrival of the cans at San Francisco they are immediately transported to the laboratory by a special messenger with a wagon. They usually arrive in time for the squirrels to be examined within twenty-four hours after they are killed. When the squirrels arrive at the laboratory they are first liberally sprinkled with chloroform, after which they are given a bath of bichloride of mercury, 1 to 1000. They are then piled upon a large lead-topped table. One employee tacks them to shingles and passes them on to a second laboratory assistant, who makes a record of the tag and gives the shingle a number, so that if the tag should be lost it will be possible to tell where the squirrel came from in case it should be found infected. The squirrel thus prepared is passed to other men who have become expert in opening small mammals through their experience in handling rats during the San Francisco plague campaign. These men are very skillful in recognizing the gross lesions of bubonic plague, and as soon as a suspicious animal is found the dissection of it ceases. The attention of the bacteriologist is called to the squirrel, and in case he is unable to look at it immediately it is covered with a damp towel for the purpose of keeping off flies should any have found entrance to the laboratory. The dissection is then finished by the medical officer in charge of the laboratory, who dictates to a clerk the findings in each particular case. They are noted on a card, which becomes a part of the card index system of the laboratory. Inoculations are made into guinea pigs, and the usual cultures planted. All squirrels are carefully examined by

the medical officer in charge of the laboratory, but so expert have his assistants become that on two occasions only have they failed to lay aside squirrels which subsequently proved infected. The value of the gross pathological findings in the recognition of plague is thus very clearly demonstrated. As soon as a suspicious or positive squirrel is found the medical officer in charge of the field operations is notified. It is the policy to discontinue work on any colony of squirrels which has presented a considerable degree of infection, it being felt that the present object in that particular locality has thus been accomplished.

DANGER TO EMPLOYEES.

In all, 178 infected squirrels were found up to August 13, 1909. They came from almost every portion of the county in which the men have been at work. It will thus be seen that the employees handling squirrels are subjected to very great risk. Every precaution has been taken to reduce this to the minimum. They have been warned of the dangers of the work, and the opportunity to receive Haffkine's prophylactic has been offered them. Several of the hunters and laboratory assistants have taken this immunizing treatment. All employees have been warned not to thrust their arms down the squirrel tunnels in an endeavor to recover animals which they have wounded. There is not only the danger of being bitten by the squirrel, but they may also pick up some infected fleas in this way. Another danger is that rattlesnakes are sometimes in the holes. In fact, several employees were nearly bitten in this way. Each hunter carries in his knapsack a ball of waste saturated with chloroform. This is for the purpose of killing the fleas upon the squirrels, or at least stupefying them to the extent that they will not leave the sack.

WINTER CAMPAIGN.

It is planned that in the autumn, when the suitable time for poisoning squirrels arrives, and the ranchers have the time to take up the matter, a general campaign of education will be instituted and an endeavor made to enlist the cooperation of every person holding land in the county. Poison will be issued gratis, and the ranchers will be asked to distribute it under the direction of inspectors of the service. The state board of health and county board of supervisors will cooperate in every way in the prosecution of this work. Aside from the fact that the eradication of the ground squirrel is a public-health measure, the rancher will also feel that it is of the very greatest benefit to him in a financial sense. For years these pests have levied a heavy annual tax, and in some instances have destroyed entire crops. Therefore the rancher will have a double reason for giving his cooperation. The fact that the Federal Government, the State, and the county have all taken up their portion of the burden will offer another reason why each individual citizen should do his part. This campaign is aimed at the eradication of what would otherwise be a permanent focus for bubonic plague, and, therefore, a constant menace to the public health of the entire nation.

PLAGUE-INFECTED GROUND SQUIRRELS FOUND IN CONTRA COSTA COUNRY BETWEEN JUNE 4 AND AUGUST 13, 1909.[a]

Date.	Serial number.	Location.
June 4	1	Root's Ranch, Rancho Acalanes, Lafayette.
12	2	Stewartsville, sec. 10, T. 1 N., R. 1 E.
12	3	Do.
16	4	Mount Diablo tract, Clayton, sec. 13, T. 1 N., R. 1 W.
17	5	West Hartley, sec. 12, T. 1 N., R. 1 E.
17	6	Do.
17	7	Do.
17	8	Do.
17	9	Do.
17	10	Do.
17	11	Do.
17	12	Mount Diablo tract, sec. 13, T. 1 N., R 1 W.
17	13	Do.
17	14	Do.
17	15	Stewartsville, sec. 10, T. 1 N., R. 1 E.
18	16	Do.
18	17	Do.
18	18	Do.
18	19	West Hartley, sec. 12, T. 1 N., R. 1 E.
18	20	Do.
18	21	Mount Diablo tract, Clayton, sec. 13, T. 1 N., R. 1 W.
18	22	Keller's ranch, Clayton, sec. 12, T. 1 N., R. 1 W.
18	23	Do.
20	24	Do.
20	25	Do.
22	26	Mount Diablo tract, Clayton, sec. 13, T. 1 N., R. 1 W.
23	27	Keller's ranch, Clayton, sec. 12, T. 1 N., R. 1 W.
23	28	Do.
23	29	Do.
24	30	Lynch's ranch, Rancho San Ramon (Norris).
25	31	Nortonville road, sec. 8, T. 1 N., R 1 E.
25	32	Bailey's ranch, sec. 18, T. 1 N., R. 1 E.
25	33	Do.
28	34	Keller's ranch, Clayton, sec. 12, T. 1 N., R. 1 W.
29	35	Lynch's ranch, Rancho San Ramon (Norris).
30	36	Do.
30	37	Do.
30	38	Do.
July 1	39	Keller's ranch, Clayton, sec. 12, T. 1 N., R. 1 W.
2	40	Do.
2	41	Azaveda ranch, sec. 3, T. 1 S., R. 1 E.
6	42	Keller's ranch, Clayton, sec. 12, T. 1 N., R. 1 W.
7	43	McCabe ranch, Byron, sec. 10, T. 1 S., R. 3 E.
7	44	Nortonville road, sec. 8, T. 1 N., R. 1 E.
7	45	Keller's ranch, Clayton, sec. 12, T. 1 N., R. 1 W.
7	46	Do.
7	47	Naphtaly's ranch, Walnut Creek, sec. 3, T. 1 S., R. 2.
7	48	Bucholtz ranch, Rancho Cañada de los Vaqueros.
8	49	Naphtaly's ranch, Walnut Creek, sec. 3, T. 1 S., R. 2 W.
8	50	Joaquin ranch, Clayton, sec. 24, T. 1 N., R. 1 W.
8	51	Do.
9	52	Naphtaly's ranch, Walnut Creek, sec. 3, T. 1 S., R. 2 W.
9	53	Do.
9	54	Gunther's ranch, Clayton, NW. ¼, sec. 18, T. 1 N., R. 1 E.
10	55	Naphtaly's ranch, Walnut Creek, sec. 3, T. 1 S., R. 2 W.
10	56	Mattos ranch, sec. 10, T. 1 S., R. 1 E.
12	57	Bosco Grant, Rancho Cañada de los Vaqueros.
13	58	Meredith's ranch, Clayton, SW. ¼, sec. 7, T. 1 N., R. 1 E.
13	59	Do.
13	60	Madsen Bros. ranch, Rancho Laguna de los Palos Colorados.
14	61	Fraguelas ranch, Rancho Cañada de los Vaqueros.
14	62	Keller's ranch, Clayton, sec. 12, T. 1 N., R. 1 W.
15	63	Do.
15	64	Do.
15	65	Do.
15	66	Fraguelas ranch, Rancho Cañada de los Vaqueros.
15	67	Cope ranch, Danville, sec. 9, T. 1 S., R. 1 W.
17	68	Meredith's ranch, Clayton, SW. ¼, sec. 7, T. 1 N., R. 1 E.
17	69	Do.
17	70	Keller's ranch, Clayton, sec. 12, T. 1 N., R. 1 W.
17	71	Knox ranch, Danville, north of sec. 10, T. 1 S., R. 1 W.
17	72	Lucas ranch, Rancho Laguna de los Palos Colorados.
17	73	Madsen Bros. ranch, Laguna de los Palos Colorados (rancho).
18	74	Tormey's ranch, Clayton, sec. 27, T. 2 N., R. 1 W.
19	75	Taylor's ranch, sec. 10, T. 1 S., R. 3 W.
19	76	Do.

[a] Previous to June 4, 1909, 4 infected squirrels had been found as follows: August 5, 1908, at Farias ranch, Concord, 1; August 29, 1908, at Morton ranch, 1; August 25, 1908, at Southern Pacific Railroad tracks, near Morton Foundry, 1; September 19, 1908, in field near Bay Point, 1.

PLAGUE-INFECTED GROUND SQUIRRELS FOUND IN CONTRA COSTA COUNTY BETWEEN JUNE 4 AND AUGUST 13, 1909—Continued.

Date.	Serial number.	Location.
July 19	77	Taylor's ranch, sec. 10, T. 1 S., R. 3 W.
19	78	Do.
19	79	Meredith's ranch, Clayton, SW. ¼, sec. 7, T. 1 N., R. 1 E.
19	80	Do.
20	81	Do.
20	82	Do.
20	83	Sherburne's ranch, sec. 35, T. 1 S., R. 1 W.
21	84	Lewis ranch, Curry Cañon, Morgan Territory, sec. 4, T. 1 S., R. 1 E.
21	85	Mount Diablo Tract, Clayton, sec. 13, T. 1 N., R. 1 W.
21	86	Devlin's ranch, sec. 10, T. 1 S., R. 3 W.
22	87	Sturgis ranch, Hookston, Rancho Cañada del Hambre.
22	88	Meredith's ranch, Clayton, SW. ¼ sec. 7, T. 1 N., R. 1 E.
22	89	Morese ranch, Danville, sec. 31, T. 1 S., R. 1 W.
22	90	Keller's ranch, Clayton, sec. 12, T. 1 N., R. 1 W.
22	91	Dario's ranch, Rancho Cañada de los Vaqueros.
22	92	Do.
22	93	Do.
22	94	Do.
23	95	Domingo's ranch, sec. 15, T. 1 S., R. 3 W.
23	96	Meredith's ranch, Clayton, SW. ¼, sec. 7, T. 1 N., R. 1 E.
23	97	Cardoza ranch, sec. 20, T. 1 N., R. 1 E.
23	98	Do.
23	99	Do.
23	100	Do.
25	101	Meredith's ranch, Clayton, SW. ¼ sec. 7, T. 1 N., R. 1 E.
25	102	Keller's ranch, Clayton, sec. 12, T. 1 N., R. 1 W.
25	103	Cardoza ranch, Morgan Territory, sec. 20, T. 1 N., R. 1 E.
26	104	Meredith's ranch, Clayton, SW. ¼ sec. 7, T. 1 N., R. 1 E.
26	105	Brubeck's ranch, Rancho Arroyo de las Nueces y Bolbones.
26	106	Do.
26	107	Do.
26	108	Hartz's ranch, Danville, Rancho San Ramon (Carpentier).
27	109	Brubeck's ranch, Walnut Creek. (See 105.)
27	110	Do.
27	111	Do.
27	112	Bailey's ranch, Clayton, sec. 18, T. 1 N., R. 1 E.
27	113	Do.
27	114	Rose ranch, sec. 23, T. 1 S., R. 3 W.
27	115	Do.
27	116	Naphtaly's ranch, Walnut Creek, sec. 3, T. 1 S., R. 2 W.
27	117	Do.
28	118	Sturgis ranch, Walnut Creek, Rancho Cañada del Hambre.
28	119	Naphtaly's ranch, Walnut Creek, sec. 3, T. 1 S., R. 2 W.
29	120	Do.
29	121	Burgess ranch, Rancho Laguna de los Palos Colorados.
30	122	Pigott's ranch, Walnut Creek, Rancho Cañada del Hambre.
30	123	Keller's ranch, Clayton, sec. 12, T. 1 N., R. 1 W.
30	124	Do.
30	125	Do.
31	126	Cardoza's ranch, Morgan Territory, sec. 20, T. 1 N., R. 1 E.
31	127	Lacassie's ranch, Walnut Creek, Rancho Cañada del Hambre.
31	128	Do.
31	129	Sturgis ranch, Hookston, Rancho Cañada del Hambre.
Aug. 1	130	Keller's ranch, Clayton, sec. 12, T. 1 N., R. 1 W.
1	131	Do.
1	132	Do.
1	133	Cardoza ranch, Rancho de los Vaqueros.
1	134	Burgess ranch, Rancho Laguna de los Palos Colorados.
1	135	Pigott's ranch, Rancho Cañada del Hambre.
2	136	Lacassie's ranch, Walnut Creek, Rancho Cañada del Hambre.
2	137	Do.
2	138	Cardoza ranch, Rancho Laguna de las Palos Colorados.
2	139	Sturgis ranch, Walnut Creek, Rancho Cañada del Hambre.
2	140	Brubeck's ranch, Rancho Arroyo de los Nueces y Bolbones.
3	141	Oleson ranch, sec. 6, T. 1 N., R. 3 E.
3	142	Do.
3	143	Haffley ranch, sec. 6, T. 1 N., R. 3 E.
3	144	Do.
4	145	Sec. 10, T. 1 S., R. 3 W.
4	146	Do.
5	147	Mount Diablo tract, sec. 13, T. 1 N., R. 1 W.
5	148	Meredith's ranch, SW. ¼, sec. 7, T. 1 N., R. 1 E.
6	149	Silva Ranch, sec. 4, T. 2 S., R. 2 E.
6	150	Do.
6	151	Keller's ranch, sec. 12, T. 1 N., R. 1 W.
7	152	Naphtaly's ranch, sec. 3, T. 1 S., R. 2 W.
7	153	Do.
8	154	Silva Ranch, sec. 6, T. 2 S., R. 2 E.
8	155	Do.
8	156	Do.

PLAGUE-INFECTED GROUND SQUIRRELS FOUND IN CONTRA COSTA COUNTY BETWEEN JUNE 4 AND AUGUST 13, 1909—Continued.

Date.	Serial number.	Location.
Aug. 8	157	Souza Ranch, sec. 6, T. 2 S., R. 2 E.
9	158	Silva Ranch, sec. 6, T. 2 S., R. 2 E.
9	159	Do.
9	160	Olsen Ranch, sec. 6, T. 1 N., R. 3 E.
10	161	Meredith's ranch, SW. ¼, sec. 7, T. 1 N., R. 1 E.
10	162	California Vineyard Co., SE. ¼, sec. 14, T. 1 N., R. 1 W.
10	163	Do.
10	164	Buckley Ranch, sec. 9, T. 1 S., R. 3 W.
10	165	Sturgis Ranch, Rancho Canada del Hambre.
10	166	Donovan Ranch, sec. 6, T. 1 N., R. 1 E.
11	167	Mount Diablo tract, sec. 14, T. 1 N., R. 1 W.
11	168	Silva Ranch, sec. 14, T. 1 S., R. 3 W.
13	169	Silva Ranch, sec. 6, T. 2 S., R. 2 E.
13	170	Do.
13	171	Do.
13	172	Nunez Ranch, sec. 6, T. 2 S., R. 2 E.
13	173	Do.
13	174	Do.

NOTE.—The dates given in the foregoing list are those on which the diagnosis was confirmed by bacteriological examination.

UNITED STATES.

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

SAN FRANCISCO, CAL.

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

Week ended August 7, 1909.

Sick inspected	2
Plague	0
Dead inspected	80
Plague	0
Premises inspected	2,197
Houses disinfected	35
Houses destroyed	4
Buildings condemned	13
Nuisances abated	194
Rats found dead	13
Rats trapped	2,054
Total rats taken	2,067
Rats identified:	
Mus norvegicus	1,612
Mus rattus	48
Mus musculus	385
Mus alexandrinus	9
Total	2,054
Rats identified as to sex:	
Male	802
Female	817
Total	1,619
Rats examined bacteriologically	1,145
Plague rats	0
Poisons placed	39,844

ALAMEDA COUNTY, CAL. (EXCLUSIVE OF OAKLAND).

Last case of human plague: Sickened 10 miles east of Sunol, July 27, 1909.
Last case of rodent plague: Found 1 mile west of Altamont, July 30, 1909.

Week ended August 7, 1909.

Sick inspected	1
Plague	0
Dead inspected	44
Plague	0
Necropsies held	3

OAKLAND, CAL.

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

Week ended August 1, 1909.

Dead inspected	16
Plague	0
Necropsies held	2
Premises inspected	522
Premises reinspected	213
Premises cleaned	60
Garbage cans installed	10
Nuisances abated	70
Rats found dead	43
Rats trapped	733
Rats identified:	
Mus norvegicus	774
Mus rattus	1
Mus musculus	38
Mus alexandrinus	1
Total	814
Rats examined bacteriologically	776
Plague rats	0
Ground squirrels caught	240
Ground squirrels examined bacteriologically	240
Plague squirrels	0

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

Last case of human plague: Sickened, July 21, 1908.
Last case of rodent plague: Found, August 7, 1909.

Week ended July 31.

Dead inspected	1
Plague	0
Ranches inspected	245
Ground squirrels shot	2,479
Ground squirrels found dead	8
Ground squirrels examined bacteriologically	2,487
Ground squirrels infected with *B. pestis*	30

Week ended August 7, 1909.

Dead inspected	1
Plague	0
Ranches inspected	211
Ground squirrels shot	2,188
Ground squirrels found dead	4
Ground squirrels examined bacteriologically	2,110
Ground squirrels infected with *B. pestis*	23

Plague-infected ground squirrels obtained from the following places:

July 29, 1909.

Domingo's ranch	1

August 2, 1909.

Olsen's ranch	2
Haffley's ranch	2

August 4, 1909.

Domingo's ranch	1
Mount Diablo tract, near Clayton	1
Meredith's ranch, near Clayton	1

August 5, 1909.

Silva ranch, near Oakley	2
Keller's ranch, near Clayton	1
Naphtaly ranch, near Walnut Creek	2

August 6, 1909.

Silva ranch, near Oakley	2
Souza's ranch (near Oakley)	1
Buckley's ranch	1
Sturgis ranch	1

August 7, 1909.

Silva ranch (near Oakley)	3
Olsen's ranch	1
Donovan's ranch (near Clayton)	1

POINT RICHMOND, CAL.

Week ended August 7, 1909.

Sick inspected	2
Plague	0
Dead inspected	5
Plague	0

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

Passed Assistant Surgeon Glover reports, August 9:

SEATTLE, WASH.

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

Week ended August 7, 1909.

Rats received	1,164
Rats necropsied	996
Plague rats found	0
Plague-infected rats to date	21

Plague laboratory work, month of June, 1909.

Assistant Surgeon Chapin reports, August 9, through Passed Assistant Surgeon Glover:

During the month of June, 1909, 3,783 rats were delivered at the laboratory and 3,508 were necropsied. No plague-infected rats were found. Thirty-six fleas were found on 12 rats examined.

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

CALIFORNIA—*Los Angeles.*—Month of July, 1909. Estimated population, 300,000. Total number of deaths reported, 330, corresponding to an annual death rate of 13.2 per 1,000 of population, including enteric fever 3, measles 1, whooping cough 5, diphtheria 3, and 66 from tuberculosis. Cases of contagious diseases reported: Diphtheria 25, enteric fever 23, scarlet fever 32, measles 34, and tuberculosis 47.

San Diego.—Month of July, 1909. Estimated population, 42,500. Total number of deaths, 45, including 6 from tuberculosis. Cases: Measles 2, enteric fever 4, and tuberculosis 4.

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

KENTUCKY—*Louisville.*—Month of July, 1909. Estimated population, 260,416. Total number of deaths, 373, corresponding to an annual death rate of 15.34 per 1,000 of population, including enteric fever 12, scarlet fever 1, diphtheria 2, and 51 from tuberculosis. Cases: Scarlet fever 31, enteric fever 44, and diphtheria 7.

MARYLAND—*Baltimore.*—Report for the six months ended June 30, 1909. Estimated population, 581,000. Total number of deaths, 5,190 (white, 3,881; colored, 1,309), including enteric fever 40, measles 46, scarlet fever 9, diphtheria 44, whooping cough 29, and 753 from tuberculosis. Cases: Diphtheria 436, scarlet fever 226, enteric fever 168, measles 2,814, whooping cough 276, and pulmonary tuberculosis 463. The deaths from all causes correspond to an annual death rate of 17.8 per 1,000 of population.

Washington County.—Month of July, 1909. Estimated population, 55,000. Total number of deaths, 80, including enteric fever 3, and 7 from tuberculosis. Cases: Enteric fever 13 and measles 6.

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

NEW HAMPSHIRE—*Manchester.*—Month of July, 1909. Estimated population, 68,000. Total number of deaths, 184, corresponding to an annual death rate of 30.48 per 1,000 of population, including diphtheria 5, whooping cough 2, and 8 from tuberculosis. Cases: Scarlet fever 13, measles 153, diphtheria 19, and enteric fever 1.

NEW YORK—*Buffalo.*—Month of July, 1909. Estimated population, 415,532. Total number of deaths, 525, corresponding to an

annual death rate of 14.4 per 1,000 of population, including enteric fever 12, scarlet fever 9, diphtheria 1, measles 1, whooping cough 2, and 49 from tuberculosis. Cases: Enteric fever 50, scarlet fever 140, diphtheria 24, measles 60, whooping cough 31, and tuberculosis 97.

Yonkers.—Month of July, 1909. Estimated population, 72,200. Total number of deaths, 92, corresponding to an annual death rate of 14.4 per 1,000 of population, including scarlet fever 1, enteric fever 1, and 9 from tuberculosis. Cases: Scarlet fever 50, enteric fever 7, diphtheria 15, measles 3, and tuberculosis 15.

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

PENNSYLVANIA—*Pittsburg.*—Annual report for the year 1907. Estimated population, 403,330. Total number of deaths, 7,387, corresponding to a death rate of 18.3 per 1,000 of population. Causes of deaths include diphtheria 108, scarlet fever 39, measles 48, whooping cough 165, enteric fever 505, and 408 from tuberculosis. Cases: Diphtheria 695, scarlet fever 722, measles 752, whooping cough 606, smallpox 1, enteric fever 4,514, and tuberculosis 692.

Month of April, 1909. Total number of deaths, 731, corresponding to an annual death rate of 14.4 per 1,000 of population, including diphtheria 16, scarlet fever 4, measles 28, whooping cough 5, enteric fever 22, and 64 from tuberculosis. Cases: Diphtheria 29, scarlet fever 70, enteric fever 51, tuberculosis 195, whooping cough 150, and measles 82.

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

WASHINGTON—*Tacoma.*—Month of July, 1909. Estimated population, 120,000. Total number of deaths, 55, corresponding to an annual death rate of 5.4 per 1,000 of population, including scarlet fever 2, diphtheria 2, enteric fever 1, and 11 from tuberculosis. Cases: Pulmonary tuberculosis 4, scarlet fever 46, measles 6, enteric fever 9, and diphtheria 12.

Smallpox in the United States as reported to the Surgeon-General, Public Health and Marine-Hospital Service, June 26 to August 27, 1909.

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

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

Place.	Date.	Cases.	Deaths.	Remarks.
California:				
Berkeley	July 25-31	1		
Hobart Mills	Apr. 1-30	1		
Sacramento	June 6-12	1		
San Francisco	June 6-July 3	2		
Truckee	Mar. 23	3		
Total for State		8		
Connecticut:				
New Haven	May 1-31	1		
Total for State		1		
District of Columbia:				
Washington	Aug. 8-14	1		
Total for District		1		
Georgia:				
Macon	June 14-July 11	8		
Total for State		8		
Illinois:				
Alexander County—				
Cairo	May 1-June 30	25		
Champaign County	Apr. 1-May 31	25		
Christian County	Apr. 1-May 31	35		
Clay County	Apr. 1-30	1		
Clinton County	Apr. 1-June 30	7		
Cook County—				
Chicago	June 20-July 3	4		
Dewitt County	May 1-31	7		
Edwards County	Apr. 1-May 31	3		
Effingham County	Apr. 1-30	2		
Fayette County	May 1-31	2		
Franklin County	Apr. 1-May 31	2		
Fulton County	Apr. 1-June 30			Present.
Gallatin County	Apr. 1-May 31	16		
Iroquois County	May 1-31	1		
Jackson County	Apr. 1-May 31	14		
Murphysboro	Apr. 1-May 31	40		
Knox County	Apr. 1-30	8		
Lake County	Apr. 1-July 31	14		
Lasalle County	Apr. 1-30	3		
McDonough County	Apr. 1-30	25		
McHenry County—				
Marengo	May 1-June 30	97		
Macoupin County	Apr. 1-May 31	6		
McLean County	June 1-30	1		
Madison County	May 1-June 30	2		
Marion County	Apr. 1-June 30	14		
Massac County—				
Metropolis	Apr. 1-May 31	29		
Montgomery County	May 1-June 30	2		
Peoria County	Apr. 1-June 30	13		
Peoria	June 1-July 31	37		
Perry County	Apr. 1-July 31	13		
Pulaski County	May 1-31	5		
Rock Island County—				
Moline	June 1-July 31	2		
St. Clair County—				
East St. Louis	May 1-June 30	11		
Saline County	May 1-31	30		
Sangamon County	Apr. 1-30	1		
Springfield	May 29-July 9	3		
Schuyler County	May 1-31	1		
Shelby County	Apr. 1-July 31	3		
Stephenson County	May 1-31	4		
Tazewell County	May 1-31	5		
Pekin	Apr. 1-July 31	70		
Union County	Apr. 1-May 31	5		
Vermilion County	Apr. 1-May 31	2		
Danville	June 14-Aug. 1	11		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Illinois—Continued.				
Warren County	June 1–July 31	3		
Will County—				
Joliet	July 1–31	1		
Williamson County	Apr. 1–May 31	6		
Winnebago County	June 1–30	1		
Woodford County	Apr. 1–July 31	25		
Total for State		637		
Indiana:				
Allen County	May 1–31	5		
Fort Wayne	June 6–Aug. 14	79		
Carroll County	June 1–30	1		
Clay County	June 1–30	4		
Dearborn County	May 1–31	4		
Dekalb County	June 1–30	1		
Delaware County	May 1–31	1		
Muncie	June 20–July 10	4		
Fayette County	June 1–30	1		
Gibson County	May 1–31	5		
Grant County	May 1–June 30	3		
Greene County	June 1–30	2		
Marion County—				
Indianapolis	June 14–20	1		
Montgomery County	May 1–June 30	9		
Parke County	May 1–31	1		
Pulaski County	May 1–31	2		
St. Joseph County	June 1–30	4		
South Bend	June 13–Aug. 14	5		
Vanderburgh County	May 1–June 30	26		
Vermilion County	May 1–June 30	41		
Vigo County	June 1–30	4		
Wayne County	May 1–June 30	10	1	
White County	May 1–31	2		
Total for State		215	1	
Iowa:				
Cedar Rapids	July 1–31	1		
Keokuk	May 1–31	3		
Ottumwa	June 1–30	1		
Total for State		5		
Kansas:				
Allen County	May 1–31	5		
Atchison County	June 1–30	7		
Brown County	June 1–30	1		
Chautauqua County	May 1–31	3		
Cherokee County	May 1–31	1		
Coffey County	May 1–31	1		
Comanche County	June 1–30	3		
Cowley County	May 1–31	14		
Crawford County	May 1–31	20		
Pittsburg	May 1–June 30	4		
Decatur County	June 1–30	12	1	
Dickinson County	May 1–June 30	1		
Doniphan County	May 1–June 30	20		
Douglas County	May 1–31	1		
Elk County	May 1–31	1		
Ellsworth County	June 1–30	1		
Franklin County	May 1–31	5		
Geary County	May 1–31	4		
Graham County	June 1–30	6		
Greenwood County	May 1–31	3		
Jackson County	May 1–June 30	24		
Jefferson County	May 1–31	2		
Jewell County	May 1–31	6		
Kearny County	May 1–31	1		
Labette County—				
Parsons	May 1–June 30	8		
Lyon County	May 1–31	27		
Marshall County	May 1–June 30	225		
Montgomery County	May 1–June 30	3		
Nemaha County	June 1–30	1		
Osage County	May 1–June 30	32		
Osborne County	May 1–June 30	11		
Ottawa County	May 1–31	3		
Phillips County	May 1–31	1		
Pottawatomie County	May 1–June 30	7		
Pratt County	May 1–31	5		
Rawlins County	May 1–31	13		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Kansas—Continued.				
Republic County	June 1–30	1		
Riley County	May 1–June 30	8		
Rush County	June 1–30	2		
Russell County	June 1–30	1		
Saline County	May 1–31	2		
Sedgwick County	May 1–31	11		
Wichita	July 11–Aug. 7	5		
Shawnee County	May 1–31	8		
Topeka	May 1–June 30	38		
Smith County	May 1–31	11		
Sumner County	May 1–31	3		
Thomas County	May 1–31	1		
Wabaunsee County	May 1–31	6		
Wyandotte County	May 1–31	4		
Kansas City	June 13–July 17	10		
Total for State		593	1	
Kentucky:				
Covington	June 13–July 3	5		
Lexington	June 20–July 31	14		
Newport	June 14–July 25	4		
Paducah	June 13–26	3		
Total for State		26		
Louisiana:				
New Orleans	June 13–Aug. 7	11		
Total for State		11		
Maryland, general	Mar. 1–Apr. 30	9		
Total for State		9		
Massachusetts:				
Lawrence	June 27–July 3	1		
Total for State		1		
Michigan:				
Bay County—				
Bay City	June 1–30	1		
Calhoun County	June 1–30	1		
Chippewa County	May 1–31	1		
Delta County	June 1–30	1		
Eaton County	May 1–June 30	21		
Emmet County	June 1–30	1		
Houghton County	May 1–31	1		
Huron County	June 1–30	1		
Ingham County	May 1–31	1		
Jackson County	May 1–31	1		
Kalamazoo County—				
Kalamazoo	July 4–24	2		
Kent County—				
Grand Rapids	June 6–26	2		
Lapeer County	June 1–30	1		
Marquette County	May 1–June 30	6		
Muskegon County	May 1–June 30	6		
Newaygo County	June 1–30	1		
Oceana County	May 1–31	1		
Ottawa County	May 1–June 30	7		
Saginaw County	May 1–June 30	17		
Saginaw	July 25–31	1		
St. Clair County	May 1–June 30	4		
Schoolcraft County—				
Manistique	June 1–30	27		
Tuscola County	May 1–31	4		
Wayne County—				
Detroit	May 1–31	1		
Total for State		110		
Minnesota, general	Mar. 1–Apr. 30		3	
Becker County	June 15–21	5		
Bigstone County	June 8–14	1		
Carver County	July 6–12	1		
Faribault County	June 7–14	2		
Hennepin County—				
Minneapolis	May 1–June 30	39		
Hubbard County	May 25–31	1		
Itasca County	May 25–June 14	7		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Minnesota, general—Continued.				
Lesueur County	June 1–7	1		
McLeod County	May 25–31	1		
Marshall County	June 8–July 5	6		
Meeker County	May 25–31	5		
Morrison County	June 21–28	1		
Nobles County	May 25–June 21	2		
Olmsted County	June 8–14	2		
Pine County	May 25–31	1		
Ramsey County—				
St. Paul	Apr. 1–May 31	10		
Redwood County	June 1–7	1		
Rock County	June 1–7	1		
St. Louis County	May 25–June 21	3		
Duluth	June 10–July 30	18		
Sibley County	June 22–28	3		
Steele County	May 25–June 21	3		
Wabasha County	May 25–31	2		
Wadena County	May 25–June 21	10		
Waseca County	May 25–31	8		
Wright County	June 15–21	1		
Total for State		135	3	
Missouri:				
Kansas City	June 13–26	2		
St. Joseph	May 30–July 24	19		
St. Louis	June 20–Aug. 14	6		
Total for State		27		
Montana:				
Carbon County	June 1–30	4		
Cascade County—				
Great Falls	June 1–30	1		
Chouteau County	June 1–30	1		
Custer County	June 1–30	1		
Dawson County	May 1–31	5		
Deerlodge County	May 1–31	1		
Fergus County	June 1–30	1		
Flathead County	May 1–31	4		
Gallatin County	May 1–31	4		
Jefferson County	May 1–31	2		
Lewis and Clark County—				
Helena	May 1–31	1		
Missoula County—				
Missoula	June 1–30	1		
Park County	May 1–June 30	21		
Livingston	May 1–June 30	10		
Sanders County	May 1–31	1		
Silverbow County	June 1–30	5		
Butte	June 11–Aug. 12	28		
Teton County	May 1–31	1		
Valley County	May 1–31	1		
Yellowstone County	May 1–31	1		
Total for State		94		
Nebraska:				
Lincoln	May 1–July 31	34		
Total for State		34		
New York, general	May 1–June 30	433		
Total for State		433		
North Carolina:				
Beaufort County	June 1–30	1		
Bladen County	Apr. 1–30	5		
Buncombe County	Apr. 1–30	1		
Caldwell County	Apr. 1–June 30	19		
Camden County	Apr. 1–June 30	70		
Carteret County	Apr. 1–30	1		
Craven County	Apr. 1–June 30	8		
Cumberland County	May 1–31	1		
Duplin County	Apr. 1–June 30	25		
Johnston County	Apr. 1–30	2		
Harnett County	June 1–30	3		
Lee County	Apr. 1–30	6		
Madison County	May 1–June 30	7		
Mecklenburg County	May 1–31	2		
Mitchell County	Apr. 1–30			Present

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
North Carolina—Continued.				
Nash County	June 1–30	1		
Onslow County	Apr. 1–30	2		
Pamlico County	May 1–31	4		
Pasquotank County	Apr. 1–May 31	15		
Pitt County	Apr. 1–June 30	17		
Robeson County	June 1–30	8		
Rowan County	May 1–June 30	16		
Sampson County	Apr. 1–June 30	51		In extreme northern part.
Transylvania County	May 1–31	5		
Wake County	Apr. 1–30	2		
Watauga County	June 1–30	12		
Wayne County	May 1–31	14		
Wilson County	Apr. 1–30	1		
Yancey County	Apr. 1–May 31	8		
Total for State		307		
North Dakota:				
Bottineau County	May 1–31	1		
Grand Forks County	May 1–31	6		
Lamoure County	May 1–31	1		
McHenry County	May 1–31	1		
Ward County	May 1–31	8		
Total for State		17		
Ohio:				
Cincinnati	June 12–July 2	4		
Dayton	July 18–24	1		
Total for State		5		
Oklahoma:				
Oklahoma	Apr. 3–Aug. 7	50		
Total for State		50		
Oregon:				
Portland	Apr. 1–June 30	26		
Total for State		26		
Pennsylvania:				
Philadelphia	July 10–24	4		
Total for State		4		
Tennessee:				
Knoxville	June 20–July 17	6		
Total for State		6		
Texas:				
Archer County	June 1–30	1		
Baylor County	June 1–30	22		
Bee County	June 1–30	6		
Bexar County	June 1–30	1	1	
San Antonio	June 13–July 17	10		
Bowie County	June 1–30	7		
Cameron County	June 1–30	1		
Cherokee County	June 1–30	1		
Childress County	June 1–30	4		
Ellis County	May 1–June 30	2		
Galveston County	June 1–30	1		
Galveston	June 19–25	1		
Gonzales County	May 1–June 30	6	2	
Grayson County	June 1–30	9		
Harris County	June 1–30	12		
Harrison County	June 1–30	15		
Henderson County	June 1–30	15		
Jefferson County	May 1–June 30	3		
Jones County	June 1–30	2		
Kinney County	June 1–30	1	1	
Lamar County	June 1–30	12		
Matagorda County	May 1–June 30	10		
McLennan County	June 1–30	19		
Milam County	June 1–30	5		
Runnels County	May 1–June 30	17		
San Saba County	Apr. 9–June 30	11		
Smith County	June 1–30	10		
Stephens County	June 1–30	33	1	
Tarrant County	May 1–June 30	19	3	
Fort Worth	June 1–July 31	5		

Smallpox in the United States, etc.—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Texas—Continued.				
Travis County	May 1–June 30	19		
Upshur County	May 1–June 30	2		
Van Zandt County	May 1–June 30	6		
Webb County				
Laredo	June 19	1		
Wharton County	June 1–30	2		
Wichita County	June 1–30	5		
Williamson County	June 1–30	4	1	
Total for State		300	9	
Utah:				
Box Elder County	May 1–31	3		
Cache County	June 1–30	1		
Carbon County	June 1–30	1		
Davis County	May 1–June 30	23		
Emery County	June 1–30	1		
Garfield County	May 1–31	1		
Salt Lake County	May 1–June 30	25		
Salt Lake City	June 1–30	56		
San Pete County	May 1–June 30	24		
Summit County	May 1–June 30	39		
Tooele County	May 1–31	5		
Uinta County	May 1–31	1		
Utah County	May 1–31	6		
Weber County	May 1–31	3		
Total for State		189		
Virginia:				
Lynchburg	June 20–26	1		
Total for State		1		
Washington:				
Spokane	June 6–July 3	7		
Tacoma	May 14–June 27	6		
Total for State		13		
Wisconsin:				
Ashland County	Jan. 1–Mar. 31	8		
Barron County	Jan. 1–Mar. 31	47		
Buffalo County	Jan. 1–Mar. 31	5		
Burnett County	Jan. 1–Mar. 31	11		
Calumet County	Jan. 1–Mar. 31	1		
Chippewa County	Jan. 1–Mar. 31	87	1	
Clark County	Jan. 1–Mar. 31	13		
Columbia County	Jan. 1–Mar. 31	1		
Douglas County	Jan. 1–Mar. 31	8		
Dunn County	Jan. 1–Mar. 31	35	2	
Fond du Lac County	Jan. 1–Mar. 31	1		
Jackson County	Jan. 1–Mar. 31	1		
Juneau County	Jan. 1–Mar. 31	39		
La Crosse County—				
La Crosse	June 13–July 10	2		
Manitowoc County	Jan. 1–Mar. 31	33		
Marathon County	Jan. 1–Mar. 31	1		
Milwaukee County—				
Milwaukee	June 21–27	2		
Oconto County	Jan. 1–Mar. 31	1		
Outagamie County—				
Appleton	June 20–July 31	22		
Ozaukee County	Jan. 1–Mar. 31	13		
Pepin County	Jan. 1–Mar. 31	2		
Pierce County	Jan. 1–Mar. 31	4		
Polk County	Jan. 1–Mar. 31	2		
St. Croix County	Jan. 1–Mar. 31	47		
Sheboygan County	Jan. 1–Mar. 31	40		
Taylor County	Jan. 1–Mar. 31	5		
Trempealeau County	Jan. 1–Mar. 31	3		
Vernon County	Jan. 1–Mar. 31	51		
Washburn County	Jan. 1–Mar. 31	8		
Waukesha County	Jan. 1–Mar. 31	5		
Waupaca County	Jan. 1–Mar. 31	24		
Waushara County	Jan. 1–Mar. 31	1		
Winnebago County	Jan. 1–Mar. 31	4		
Total for State		527	3	
Grand total for the United States		3,793	17	

Plague in the United States as reported to the Surgeon-General, Public Health and Marine-Hospital Service, August 2–27, 1909.

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

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

[For smallpox and plague, see special tables.]

Cities.	Week ended—	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	Aug. 14	38,973	16	1	1	5									
Ann Arbor, Mich	Aug. 7	14,509	6	1								2			
Ashtabula, Ohio	Aug. 14	12,949	2		1										
Baltimore, Md	do	508,957	231	22	33	46	5	7		3	1	1		29	4
Bayonne, N. J	do	32,722		1				3		2		2			
Berkeley, Cal	July 31	13,214	8		1										
Do	Aug. 7	13,214	6							1					1
Biddeford, Me	Aug. 14	16,145	14												
Biloxi, Miss	do	5,467	2			1									
Binghamton, N. Y	do	38,647	18		1			1		2	1		1		
Boston, Mass	do	560,892	221	65	19	17	1	14		32		7		3	
Braddock, Pa	do	15,654	13			1		15	1		1	2			
Bradford, Pa	do	15,029	5		1					2					
Bridgeport, Conn	do	70,996	29	11	4			1		2					
Brockton, Mass	do	40,063	9	4	1									2	
Butte, Mont	Aug. 12	30,470	15	2	2					3	1				
Cambridge, Mass	Aug. 14	91,886	29	8	4	1		2		6		2		2	
Camden, N. J	do	75,935	27			2				9	1				
Camden, S. C	do	2,441	3		1										
Carbondale, Pa	do	13,536	4			2									
Charlotte, N. C	Aug. 13	18,091	6		3	8									
Chelsea, Mass	Aug. 14	34,072	12												
Chicago, Ill	do	1,698,575	595	74	69	35	4	43	4	49	4	42	3	78	6
Chicopee, Mass	do	19,167	11	1						1					
Cincinnati, Ohio	do	325,902	115	31	14	12	3	5		5	2	2		1	
Clinton, Mass	do	13,667	5												
Columbus, Ga	do	17,614	10		1										
Covington, Ky	do	42,938	16		1	6									
Danville, Ill	do	16,534		1	1	7	1								
Detroit, Mich	do	285,704	127					9		9	1				
Duluth, Minn	Aug. 13	80,000	24	4	6		1	14	1	6		2		1	1
Dunkirk, N. Y	Aug. 14	11,616	5												
Elmira, N. Y	do	35,672	11	1	1	1				5					
Elkhart, Ind	do	15,184	8			12	1								
Evansville, Ind	do	59,007	21	2	5	10									
Everett, Mass	do	24,336	8	3											
Fall River, Mass	do	104,863	54	5	3	5	1	6		3				1	
Findlay, Ohio	do	17,613	2												
Fort Wayne, Ind	do	45,115	18			1		2							
Galesburg, Ill	do	18,607	6												
Galveston, Tex	do	37,789	2	3	1	1	1			2					
Gloucester, Mass	do	26,121	10												
Greensboro, N. C	do	10,035	6			1	2								
Harrison, N. J	do	10,596	5			1									
Haverhill, Mass	do	37,175	18	3	2	2				2				10	
Homestead, Pa	Aug. 7	12,554	11	2	1					1					
Hyde Park, Mass	Aug. 14	13,244	7												
Indianapolis, Ind	Aug. 15	169,164	69		10	18	2	2		1		4		4	2
Jacksonville, Fla	Aug. 14	28,429	21	1	3	1		6							
Jersey City, N. J	Aug. 8	206,433	68	2	6	1		3	1	4	2	2			
Johnstown, Pa	Aug. 14	35,936	17	2	1	3	1	1		1		3		24	
Kansas City, Kans	do	51,418	30		2	2	5			4					
Kearny, N. J	do	10,896	4	1	1					1		2			
Kingston, N. Y	do	24,535	9		1		1								
Knoxville, Tenn	Aug. 7	32,637	8				1								
Do	Aug. 14	32,637	17		1	2	1					1			
La Crosse, Wis	do	28,895	7		2					1					
La Fayette, Ind	Aug. 16	18,116	6												

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.
Lancaster, Pa	Aug. 14	41,459	12	3	1	5	....	1	....	....	....	1	....	....	....
Lebanon, Pa	...do	17,628	4	1	....	....	....	....	....	....	....	....	....	....	....
Los Angeles, Cal	Aug. 7	102,479	65	7	6	5	1	3	....	5	3	5	....	7	....
Lowell, Mass	Aug. 14	94,969	39	2	3	2	2	6	....	1	....	5	1	....	....
Lynchburg, Va	...do	18,891	....	....	....	2	....	1	....	....	....	....	....	1	....
Lynn, Mass	Aug. 7	68,513	27	....	2	....	....	1	....	3	1	....	....	....	1
Do	Aug. 14	68,513	22	....	2	2	....	2	....	4	....	....	....	....	....
McKeesport, Pa	July 10	34,227	20	1	....	3	1	....	....	....	....	2	....	2	....
Do	July 17	34,227	17	1	....	3	....	....	....	....	....	1	....	5	....
Do	July 24	34,227	23	....	....	5	....	1	....	....	....	....	....	5	....
Do	July 31	34,227	22	3	1	2	....	2	....	....	....	....	....	1	....
Malden, Mass	Aug. 14	33,664	16	1	....	2	....	....	....	2	....	....	....	....	....
Manchester, N. H	...do	56,987	23	1	1	1	....	1	....	6	2	5	....	....	....
Manitowoc, Wis	Aug. 7	11,786	2	....	....	....	....	2	....	....	....	....	....	....	....
Do	Aug. 14	11,786	3	1	1	....	....	2	....	....	....	....	....	....	....
Marinette, Wis	...do	16,195	1	....	....	....	....	....	....	1	....	....	....	....	....
Marlboro, Mass	Aug. 7	13,609	5	....	....	....	....	....	....	....	....	....	....	....	....
Massillon, Ohio	Aug. 17	11,944	3	....	....	....	....	1	....	....	....	....	....	....	....
Medford, Mass	Aug. 14	18,244	8	....	1	....	....	....	....	....	....	7	....	....	....
Melrose, Mass	...do	12,962	2	1	1	....	....	1	....	....	....	....	....	....	....
Milwaukee, Wis	...do	285,315	99	9	2	13	....	15	1	7	...	4	3	9	....
Mobile, Ala	Aug. 7	38,469	13	....	1	....	....	....	....	....	....	....	....	....	....
Montclair, N. J	Aug. 14	13,962	5	....	....	....	....	....	....	....	....	....	....	1	....
Montgomery, Ala	Aug. 13	30,346	11	....	1	....	1	....	....	....	....	....	....	....	....
Moline, Ill	Aug. 14	17,248	9	....	....	....	....	....	....	....	....	....	....	....	....
Mount Vernon, N.Y	...do	21,228	9	....	....	....	....	1	....	1	....	....	....	....	....
Nanticoke, Pa	Aug. 15	12,616	9	1	....	....	....	....	....	....	....	....	....	....	....
Nashville, Tenn	Aug. 14	80,865	36	4	1	12	4	1	....	....	....	....	....	1	....
Nebraska City, Nebr	...do	7,200	1	....	....	....	....	1	....	....	....	....	....	5	....
Newark, N. J	...do	246,070	106	14	15	5	1	10	....	20	....	....	....	....	....
New Bedford, Mass	...do	63,442	46	3	....	6	....	4	....	1	....	7	....	1	....
Newburyport, Mass	...do	14,478	6	3	....	....	....	....	....	....	....	....	....	....	....
New London, Conn	Aug. 7	17,548	11	....	2	....	....	....	....	....	....	....	....	....	1
Do	Aug. 14	17,548	9	....	1	....	....	....	....	1	....	....	....	....	....
New Orleans, La	...do	278,104	108	32	19	12	3	10	1	4	1	....	....	....	1
Newport, Ky	...do	28,301	17	....	3	....	1	....	....	....	....	....	....	....	....
Newton, Mass	...do	33,587	10	....	1	....	....	....	....	....	....	1	....	3	....
New York, N. Y	...do	3,437,202	1,474	431	158	71	9	87	6	173	20	216	16	44	13
Niagara Falls, N. Y	...do	19,457	8	....	3	5	....	1	....	....	....	1	....	....	....
Norristown, Pa	...do	22,265	14	1	1	1	....	....	....	....	....	....	....	1	....
North Adams, Mass	...do	24,200	8	....	....	3	1	....	....	....	....	....	....	....	....
Northampton, Mass	...do	18,643	4	....	....	....	....	1	....	....	....	....	....	....	....
Orange, N. J	...do	24,141	13	1	1	1	1	3	....	1	....	1	....	....	....
Peekskill, N. Y	...do	10,358	11	....	....	....	....	....	....	1	....	1	1	....	....
Philadelphia, Pa	Aug. 7	1,293,697	450	109	50	49	9	17	....	43	9	17	1	10	1
Pittsburg, Pa	Aug. 14	321,616	147	46	9	16	3	7	....	2	1	2	....	12	3
Pittsfield, Mass	...do	21,766	11	....	1	....	1	....	....	....	....	....	....	....	....
Plainfield, N. J	...do	15,369	5	1	....	....	....	1	....	1	....	....	....	....	....
Portland, Me	...do	50,145	11	....	2	1	....	....	....	1	1	1	....	....	....
Portsmouth, Va	Aug. 17	17,427	9	....	1	4	1	....	....	1	....	....	....	....	....
Pottstown, Pa	Aug. 14	13,696	7	1	1	2	....	1	....	1	....	2	....	....	....
Providence, R. I	...do	175,597	55	11	5	10	1	6	....	3	1	3	....	....	....
Racine, Wis	...do	29,102	8	....	2	....	....	....	....	1	....	....	....	....	....
Reading, Pa	Aug. 16	78,961	31	1	8	4	....	3	....	2	....	....	....	9	....
Richmond, Va	Aug. 14	85,050	39	5	3	10	....	....	....	1	....	....	....	3	....
Rock Island, Ill	...do	19,493	3	....	....	....	1	....	....	2	....	....	....	....	....
Sacramento, Cal	July 3	29,282	13	....	1	....	....	....	....	1	....	14	....	....	....
Do	July 19	29,282	10	....	....	....	....	....	....	2	....	6	....	1	....
Do	July 26	29,282	8	....	....	1	....	....	....	2	....	8	....	....	....
St. Louis, Mo	Aug. 14	575,238	253	45	20	30	....	12	2	18	1	5	....	18	1
San Francisco, Cal. [a]	July 3	342,782	93	21	14	11	1	5	1	8	1	7	....	6	1
Do	July 10	342,782	113	23	12	8	1	4	....	3	1	3	....	5	2
Do	Aug. 7	342,782	89	28	9	8	1	4	....	5	....	3	....	3	....
San Jose, Cal	...do	21,500	3	....	....	....	....	....	....	....	....	....	....	....	....
Schenectady, N. Y	Aug. 14	31,682	13	1	....	1	....	2	....	5	....	1	....	....	....
Somerville, Mass	...do	61,643	19	....	1	2	....	3	....	5	2	....	....	....	....
South Bend, Ind	...do	35,999	17	1	1	2	....	....	....	....	....	....	....	....	....
South Bethlehem, Pa	...do	13,241	13	....	1	....	....	....	....	....	....	....	....	....	....
Spokane, Wash	Aug. 7	38,848	16	....	1	2	....	6	....	3	....	2	....	....	....
Springfield, Mass	Aug. 14	62,059	34	1	4	1	1	1	....	9	1	1	....	....	....
Springfield, Ohio	...do	38,253	7	3	1	....	....	....	....	....	....	....	....	....	....
Steelton, Pa	...do	12,068	4	1	....	....	....	....	....	2	....	....	....	....	....
Superior, Wis	...do	31,091	3	....	....	....	....	1	....	4	....	....	....	....	....
Tacoma, Wash	Aug. 8	37,714	17	....	3	1	....	6	1	....	....	....	....	....	....

[a] Reported out of date.

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.
Taunton, Mass	Aug. 14	31,036	13	1	1	....	....	....	....	....	....	....	....	3	1
Terre Haute, Ind	do	36,673	24	....	1	....	....	....	....	1	....	....	....	....	1
Titusville, Pa	do	8,244	....	....	....	....	....	....	....	....	....	1	....	....	....
Trenton, N. J	do	73,307	....	7	2	10	....	2	....	1	....	....	....	....	....
Waltham, Mass	do	23,481	....	....	1	....	....	....	....	1	....	....	....	....	....
Washington, D. C	do	278,718	104	24	19	32	2	21	....	3	....	2	....	10	2
Weymouth, Mass	do	11,324	3	....	....	....	....	....	....	1	....	....	....	....	....
Wheeling, W. Va	Aug. 7	38,878	11	4	1	5	....	....	....	3	....	....	....	....	....
Williamsport, Pa	Aug. 14	28,757	7	2	....	....	....	....	....	....	....	....	....	....	....
Wilmington, Del	do	76,508	29	....	6	....	....	....	....	....	....	....	....	....	....
Woburn, Mass	do	14,254	3	....	1	....	....	....	....	....	....	....	....	....	....
Worcester, Mass	do	118,421	54	11	6	3	....	....	....	1	....	1	....	7	....
York, Pa	Aug. 7	33,708	....	....	....	3	....	....	....	1	....	....	....	....	....
Do	Aug. 14	33,708	....	....	....	3	....	....	....	....	....	....	....	....	....
Zanesville, Ohio	do	23,538	7	....	1	11	1	....	....	....	....	....	....	....	....

FOREIGN AND INSULAR.

AZORES.

Report from St. Michaels—Measures taken for the eradication of plague—Destruction of rats.

Consul Creevey reports, July 8, in response to request from the bureau, dated May 26, for information relative to plague in the islands:

No deaths from plague and no new cases of the disease have occurred on the island of Fayal since April 1, and none on the island of Terceira since June 16, on which date 3 new cases, one of which proved fatal, were reported.

At Terceira the disease had been prevalent for about 6 months before it was diagnosed as plague. An appeal was then made to the home government at Lisbon and several physicians who had had experience in treating plague in India were sent to the islands. Their efforts have been efficacious, not alone in treating the disease, but also in initiating a campaign against rats. This began with a general cleaning up of the towns and villages, not only where the disease was known to exist, but throughout all the islands of the Azores. Inspectors were appointed to examine carefully individual premises and to supply rat poison gratis. A bounty is paid for each rat or mouse tail. In the city of Ponta Delgada the municipality has recently adopted an ordinance which provides that each tax or rate payer shall deliver annually a proportionate number of rat tails, or their equivalent in cash. The sanitary commission is now providing rat bait, which is placed where rats are found, and after several days is replaced by the same mixture, to which poison has been added. The results are reported to be satisfactory.

During the past year isolation hospitals and disinfection plants have been erected at Terceira and St. Michaels, and strict quarantine is maintained against the plague-infected islands.

BARBADOS.

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

Acting Assistant Surgeon Urquhart reports, July 31:

Week ended July 31. Bills of health issued to 6 vessels, having a total of 42 passengers and 286 members of crews. One vessel was fumigated. Sanitary condition of vessels, passengers, crews, and cargoes, good. Sanitary condition of port good. No quarantinable diseases were reported.

BRITISH HONDURAS.

Report from Belize, fruit port.

Acting Assistant Surgeon Mengis reports:

Week ended August 12. 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.
Aug. 6	Belize	Mobile	18	2	0
6	Harry T. Inge	New Orleans	34	4	17
12	Jose	New York via Central American ports.	31	0	6

CHINA.

Reports from Amoy—Inspection of vessel—Cholera, plague, and smallpox—Plague declared epidemic.

Passed Assistant Surgeon Foster reports, July 6 and 20:

Week ended July 3. No bills of health issued from this office.

There were 95 deaths from plague, 11 from cholera, and 8 from smallpox in Amoy.

The health authorities of the port and imperial maritime customs have declared plague to be epidemic in this port.

Week ended July 17. Supplemental bill of health was issued July 11 to the British steamship *Kaifong*, with 57 in the crew and 43 cabin passengers for Manila, Cebu, and Iloilo. Temperatures were taken at the time of sailing and 3 passengers who were found to have fever were rejected. Two passengers were rejected for trachoma. There were 73 deaths from plague and 26 from cholera in Amoy.

Quarantinable diseases for the period June 1 to June 30, 1909, reported from Kang-Thau, a village on Amoy Island, 4 miles from the city of Amoy: Plague, 37 cases with 19 deaths; cholera, 2 cases with 1 death; smallpox, 1 case with no deaths; total number of cases and deaths for the period April 1 to June 30, 1909, plague 117 cases with 59 deaths; cholera, 4 cases with 2 deaths; smallpox, 7 cases with 1 death.

July 16 the British consul in Amoy issued a notice to the effect that the government of Hongkong had declared Amoy infected with bubonic plague.

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

Passed Assistant Surgeon McKeon reports, July 13:

Week ended July 10. Restrictions enforced by Hongkong remain as reported July 3.

Restrictions enforced against Hongkong remain as reported July 3.

Quarantinable disease.—Plague 4 cases, 2 deaths.

Aliens for Honolulu and Pacific coast ports.—Examined, 44; rejected, 4.

Aliens for Philippine Islands.—Examined, 7; rejected, 0.

Vessels inspected and granted bill of health, 9.

Reports from Shanghai—Inspection of vessels—Smallpox.

Acting Assistant Surgeon Ransom reports, July 14 and 21:

Week ended July 10. Supplemental bills of health granted to 4 steamships having an aggregate personnel of 1,570. There were inspected 3 vessels, 241 members of crews, and 5 cabin passengers. Manifests were viséed for 6,094 pieces of freight.

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

Week ended July 17. Supplemental bill of health granted to 1 steamship, the total personnel of which numbered 388. There were inspected 14 steerage passengers, and their baggage, numbering 12 pieces, was disinfected. Manifests were viséed for 3,956 pieces of freight. There were examined 16 emigrants for San Francisco per steamship *Nippon Maru*, 14 of whom were passed, and 2 recommended for rejection on account of trachoma.

CUBA.

Report from Cienfuegos—Inspection of vessels—Sanitary conditions.

Acting Assistant Surgeon Suarez reports, August 9:

Week ended August 7.

Vessels inspected	4
Bills of health issued	4
Vessels fumigated	1
Members of crews inspected	124

The sanitary condition of the city and port continues fair; no quarantinable disease reported.

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

Passed Assistant Surgeon Amesse reports, August 16:

Week ended August 14.

Bills of health issued	21
Vessels inspected	16
Crew of outgoing vessels inspected	745
Passengers of outgoing vessels inspected	613

For the first ten days of August, the district inspectors of Habana report the inspection of 17,844 houses and the detection of 44 breeding places for mosquitoes, of which 24 were collections of the larvæ of *Stegomyia*. The oiling brigades petrolized 14,451 deposits of water in the streets and commons; 26,373 cans and similar receptacles were collected and removed to the city dumping grounds; 8,000 linear meters of ditching were cleaned, and 1,070 square meters cleared of vegetation.

Report from Matanzas—Inspection of vessels.

Acting Assistant Surgeon Nuñez reports, August 16:

Week ended August 14. Bills of health issued to 8 vessels clearing for United States ports, having an aggregate number of 214 members of crew and 27 passengers, of which 25 were bound for various ports in Cuba and 2 for New Orleans. They were all in good sanitary condition up to the time of inspection.

No quarantinable disease reported during the week.

Report from Santiago—Inspection of vessels—Sanitary work.

Acting Assistant Surgeon Wilson reports, August 10:

Week ended August 7. Bills of health issued to 9 vessels bound for the United States and its dependencies. No vessel fumigated. No case of quarantinable disease reported.

The sanitary department reports 2,463 inspections of houses and the finding of larvæ in 4 water deposits.

GUATEMALA.

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

Acting Assistant Surgeon Ames reports:

Week ended August 7. Present officially estimated population, 350. General sanitary condition of this port and the surrounding country during the week, good. *Stegomyia calopus* present. No quarantinable disease exists.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
Aug. 4	Belize	Mobile	18	0	0
5	H. T. Inge	New Orleans	32	16	1

Temperature taken of all persons on steamship *H. T. Inge* day of sailing.

HAWAII.

Reports from Honolulu—Examination of rats for plague infection.

Chief Quarantine Officer Hobdy reports, August 2:

HONOLULU.

Week ended July 31.

Total rats taken	559
Trapped	559
Found dead	0
Examined bacteriologically	364
Plague rats	0
Classification of rats trapped:	
Mus alexandrinus	46
Mus musculus	251
Mus norvegicus	101
Mus rattus	161
Average number of traps set daily	1,294
Rat from Hilo still under investigation	1

Plague in vicinity of Hilo.

Doctor Hobdy further reports, August 23:

One plague case 5 miles north of Hilo, August 19; proved fatal August 20. Three plague cases at Olaa plantation, August 20, 21, and 22; 2 fatal. Active measures taken. (A case of plague was reported at Olaa plantation October 5, 1907. See Public Health Reports, November 1, 1907, page 1571.)

HONDURAS.

Report from Ceiba, fruit port—Stegomyia and Anopheles present.

Acting Assistant Surgeon Jumel reports:

Week ended August 11. Present officially estimated population, 6,800. General sanitary condition of this port and the surrounding country during the week, good. *Stegomyia calopus* present; *Anopheles* abundant.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.	Pieces of baggage disinfected.
Aug. 6	Rosina	33	6	1	0
8	Fjell	17	1	1	0
9	Navigator	21	0	0	0

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

Report from Puerto Cortez, fruit port.

Acting Assistant Surgeon Wailes reports:

Week ended August 11. Present officially estimated population, about 2,500. General sanitary condition of this port and the surrounding country, good.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.	Pieces of baggage disinfected.
Aug. 6	Utstein	17	3	.....	.....
10	Ellis	.....	5	.....	.....

Reports from Tela, fruit port.

Acting Assistant Surgeon Roe reports:

Week ended August 7. Present officially estimated population, about 1,500. 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.
Aug. 2	Bodo	Mobile	18	0	0
7	Fjell	....do	.....	0	0

Week ended August 15. General sanitary condition of this port and the surrounding country during the week, good.

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.
Aug. 15	Agnella	Mobile			0

INDIA.

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

Acting Assistant Surgeon Allan reports, July 22:

Week ended July 17. Bill of health issued to the steamship *Neidenfels*, bound for Boston and New York, with a total crew of 57. The usual precautions were taken, holds fumigated, rat guards placed on wharf lines, and Asiatics' effects disinfected.

Week ended July 10. At Calcutta there were 28 deaths from cholera, 2 from smallpox, and 29 from plague; in Bengal, 36 cases of plague with 32 deaths; in India, 558 cases of plague with 462 deaths.

ITALY.

Report from Naples—Inspection of vessels—Examination of emigrants—Smallpox—Case of smallpox among emigrants for steamship Hamburg.

Surgeon Geddings reports, August 2:

Vessels inspected at Naples and Palermo, week ended July 31.

NAPLES.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of baggage inspected and passed.	Pieces of baggage disinfected.
July 25	San Giorgio	New York	553	50	380
26	Hamburg	do	445	110	850
28	Pannonia	do			
28	Madonna	do	476	50	680
28	Duca degli Abruzzi	do	1,142	180	1,520
29	Dinnamare	do			
29	Italia	do	153	25	230
	Total		2,769	415	3,660

PALERMO.

July 30	Italia	New York	220	200	50

Rejections recommended.

NAPLES.

Date.	Name of ship.	Trachoma.	Favus.	Suspected trachoma.	Suspected favus.	Smallpox.	Other causes.	Total.
July 25	San Giorgio	7	1	4			5	17
26	Hamburg	15		16		1	7	39
28	Pannonia							
28	Madonna	10		2			1	13
28	Duca degli Abruzzi	21		18	1		14	54
29	Dinnamare							
29	Italia	2		2			1	5
	Total	55	1	42	1	1	28	128

PALERMO.

July 30	Italia	10		6			1	17

Smallpox in Naples.—During the week ended August 1, there were 22 cases of smallpox, with 2 deaths reported at the health office of the city of Naples.

A case of smallpox was discovered at the examination of the steerage passengers for the steamship *Hamburg*, July 26. The patient was transferred to the Cotugno hospital for contagious diseases. The family, consisting of 5 members, arrived on the same day from Toritto (Bari). The 4 contacts were vaccinated and placed under observation.

JAPAN.

Report from Yokohama—Inspection and fumigation of vessels.

Passed Assistant Surgeon Cumming reports, July 26:

Week ended July 24. Bills of health issued to 6 steamships.

Of these vessels, 2 were fumigated to destroy vermin and 2 which lay at the dock wore rat guards while alongside the wharf.

Forty-three persons were bathed and their effects were disinfected, and 93 pieces of baggage were disinfected. Freight was, when necessary, inspected.

No rat or human plague was reported during the week.

Report from Kobe—Inspection of vessels—Dysentery—Plague on island of Shikoku.

Acting Assistant Surgeon Knight reports, July 28:

Week ended July 24. Supplemental bills of health granted to 2 steamships. There were inspected 70 members of crew and 379 steerage passengers. Manifests were viséed for 3,901 pieces of freight, amounting to 146 tons.

July 27, 25 cases of dysentery with 2 deaths were reported at Chiyofumura, Yamaguchi-Ken. At Nagoya 459 cases have been reported to date, from 40 to 50 new cases appearing daily; the disease is still on the increase.

Three cases of plague, with 1 death, are reported on the island of Shikoku, 160 miles southwest of Kobe.

Report from Nagasaki—Sanitary conditions—Examination of emigrants.

Acting Sanitary Inspector Thompson reports, July 17:

Week ended July 17. No quarantinable disease reported in this consular district.

Two Japanese aliens for San Francisco were examined and passed; 9 for Honolulu were examined, 8 passed; recommended for rejection on account of trachoma, 1.

MEXICO.

Report from the Superior Board of Health of Mexico—No yellow fever reported in Mexico for the week ended August 7.

In compliance with articles 1 and 2 of the International Sanitary Convention held at Washington, October 14, 1905, the president of the superior board of health of Mexico reports that for the week ended August 7 no case of nor death from yellow fever was registered in the Republic of Mexico and that prophylactic measures against the disease continue to be carried out.

Report from Coatzacoalcos—Inspection and fumigation of vessels.

Acting Assistant Surgeon Thompson reports, August 12:

Week ended August 11. Three vessels inspected; 1 vessel fumigated. No illness occurred on board and all were well at time of sailing.

Report from Manzanillo—Yellow fever at Colima.

The following information was received from the Department of State under date of August 21:

The American Consul at Manzanillo, Mexico, in a telegram dated August 19, reports yellow fever at Colima.[a]

Reports from Progreso—Inspection and fumigation of vessels—Yellow fever at Merida.

Acting Assistant Surgeon Harrison reports, August 7 and 14:

Week ended August 7.

Vessels dispatched	5
Vessels fumigated, included in above	2
Members of crews carried by vessels	253
Passengers from this port	12

Sanitary conditions showed no important changes.

Week ended August 13.

Vessels dispatched	5
Vessels fumigated	3
Members of crews	215
Passengers from Progreso	20

[a] Colima is the capital of the State of Colima and is situated about 30 miles from the Pacific coast port of Manzanillo, and on the railroad.

Sanitary conditions remained unchanged; no quarantinable disease reported.

One case of yellow fever is reported in the lazaretto in Merida.

Report from Tampico—Inspection of vessels—Sanitary conditions.

Acting Assistant Surgeon Stowe reports, August 12:

Week ended August 11.

Vessels inspected	4
Bills of health issued	4
Members of crews of outgoing vessels inspected	124
Passengers of outgoing vessels inspected	14
Vessels fumigated prior to sailing	0

Sanitary condition of port and surrounding country, good. No cases of quarantinable disease occurred during the week.

Reports from Veracruz—Inspection and fumigation of vessels—Campaign against mosquitoes.

Acting Assistant Surgeon Carter reports, August 9:

Week ended August 8.

Bills of health issued	9
Vessels inspected	5
Vessels fumigated	4
Passengers inspected	118
Members of crews inspected	336

Sanitary condition of Veracruz and vicinity remains good, no contagious disease having been reported.

The sanitary authorities are making a vigorous campaign against mosquitoes. All standing water is oiled, and the inspection of houses, sewers, patios, etc., is very carefully conducted.

Smallpox outbreak in vicinity of Veracruz.

Doctor Carter further reports, August 12:

An outbreak of smallpox has occurred at Medellin, a small town 15 kilometers distant from Veracruz. The patients, 6 in number, were removed for treatment to the Veracruz lazaretto, where one died. Four are recovering and there has been 1 new case. The lazaretto is situated 2½ miles from the city, and the smallpox patients were not allowed to enter the city, but were taken directly to the lazaretto.

NETHERLANDS.

Precautions against the introduction of epidemic cerebro-spinal meningitis.

The following information is received from the American legation at The Hague, through the Department of State, under date of August 10:

By royal decree of July 16, the laws in regard to precautions against contagious diseases and the prevention of infection from incoming vessels are extended to include epidemic cerebro-spinal meningitis.

NICARAGUA.

Report from Bluefields, fruit port—Stegomyia present.

Acting Assistant Surgeon Layton reports:

Ten days ended August 3. Present officially estimated population, 2,500. General sanitary condition of this port and the surrounding country during the week, good. Mosquitoes are numerous, *Stegomyia calopus* being especially abundant.

Bills of health issued to the following-named vessels:

Date.	Vessel.	Destination.	Number of crew.	Number of passengers from this port.	Number of passengers in transit.
July 28	Agnella	Mobile	17	3	0
Aug. 1	Imperator	New Orleans	21	12	0

PERU.

Reports from Callao—Inspection and fumigation of vessels—Status of plague in Peru—Smallpox in Lima—Plague in Chilean ports.

Acting Assistant Surgeon Gutierrez reports, July 26 and 30:

Week ended July 10. Four steamships and one sailing vessel, having an aggregate personnel of 348 members of crews and 110 cabin and 204 steerage passengers, were fumigated.

Week ended July 17. One steamship, having an aggregate personnel of 98 in the crew and 59 cabin and 70 steerage passengers, was fumigated.

The following is the latest report on plague in Peru received from the Director de Salubridad Publica:

Locality.	Cases July 2.	New.	Recovered.	Died.	Remaining July 15.
Department of Lima	3	2	3	1	1
Department of Callao	5	0	2	2	1
Department of Libertad	1	4	0	2	3
Department of Cajamarca	8	0	6	1	1
Department of Arequipa	3	0	3	0	0
Department of Piura	1	3	2	2	0
Department of Ica	0	1	0	0	1

Week ended July 24. Two steamships, with an aggregate personnel of 153 members of crews, 95 cabin and 34 steerage passengers, fumigated.

Plague in Chile: Iquique, July 16, 7 cases in the lazaretto; 1 case in the past week.

The ports infected with plague are Ilo, Mollendo, Chala, Cerro Azul, Callao, Salaverry, Pacasmayo, Eten, and Paita.

No cases of plague have occurred at Callao since June 30.

One case of smallpox was isolated in the lazaretto at Lima.

Bills of health report plague in Chile as follows: Antofagasta, July 10, 4 cases isolated in the lazaretto; Iquique, July 11, 7 cases isolated in the lazaretto, 5 cases and 2 deaths in the past week.

PHILIPPINE ISLANDS.

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

Chief Quarantine Officer Heiser reports, July 6:

Week ended July 3. No quarantinable diseases were reported in the city of Manila.

Cholera was reported in the provinces as follows:

Provinces.	Cases.	Deaths.
Samar	10	3
Leyte	8	8
Albay	59	59
Cebu	3	2
Pampanga	30	20
Total	110	92

Consular bills of health issued at the port of Manila: July 3, the Japanese steamship *Turugisan Maru*, coal laden, en route from Miiki to Iloilo, with 45 members of crew and 2 cabin passengers, was granted a bill of health, after the usual inspection.

PORTO RICO.

Report from Ponce—Transactions of service, month of July, 1909.

Acting Assistant Surgeon Ferrer-Torres reports, August 2, through Chief Quarantine Officer Grubbs:

Month of July, 1909.

Vessels inspected	13
Vessel disinfected	1
Vessels in quarantine	2
Passengers inspected:	
Incoming	147
In transit	861
Members of crews inspected	659
Passengers in quarantine	1
Immigrants inspected	53
Rejections	0
Bills of health issued	15
Pieces of baggage disinfected	7

VENEZUELA.

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

Acting Assistant Surgeon Kellogg reports, August 8:

Bills of health issued week ended August 7.

Date.	Vessel.	Destination.	Crew.	Passengers in transit.	Passengers taken.
Aug. 2	Thorsa	New York	18	0	0
2	Dictator	Galveston	39	0	0
5	Prins Willem I	New York	40	2	10

Rats examined bacteriologically		12
Plague rats		0
Rats identified:		
Mus decumanus	11	
Mus alexandrinus	1	
		12
Fleas identified (from rats):		
Pulex cheopis	22	
Other species	0	
		22

The only measure against plague taken at La Guaira is the payment of a bounty for rats. All rats which are in a suitable condition are turned over to this office for examination.

A case of plague occurred August 6 at Caracas. The usual precautions are being taken, including fumigation in the immediate vicinity and the plastering up of rat holes.

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

ARGENTINA—*Rosario de Santa Fe.*—Month of May, 1909. Estimated population, 171,024. Total number of deaths, 290, including diphtheria 4, measles 1, smallpox 1, enteric fever 14, whooping cough 1, scarlet fever 1, and 39 from tuberculosis.

AUSTRIA-HUNGARY—*Brunn.*—Month of June, 1909. Estimated population, 108,944. Total number of deaths, 275, corresponding to an annual death rate of 30 per 1,000 of population, including tuberculosis 66, whooping cough 1, scarlet fever 3, and 14 from measles.

BRAZIL—*Ceara.*—Month of June, 1909. Estimated population, 55,000. Total number of deaths, 105, including enteric fever 8, whooping cough 2, and 22 from tuberculosis.

CANADA—*British Columbia—Vancouver.*—Month of July, 1909. Estimated population, 66,500. Total number of deaths, 58, including whooping cough 1, and 7 from tuberculosis. Cases: Smallpox 1, measles 16, scarlet fever 14, diphtheria 2, whooping cough 14, and enteric fever 5.

FRANCE—*Calais.*—Month of July, 1909. Estimated population, 80,000. Total number of deaths, 86, corresponding to an annual death rate of 12.8 per 1,000 of population, including enteric fever 1, and 22 from tuberculosis.

Nice.—Month of May, 1909. Estimated population, 150,881. Total number of deaths, 208, corresponding to an annual death rate of 15.6 per 1,000 of population, including enteric fever 2, measles 1, diphtheria 3, whooping cough 1, and 33 from tuberculosis.

Roubaix.—Month of July, 1909. Estimated population, 121,115. Total number of deaths, 134, corresponding to an annual death rate of 13.2 per 1,000 of population, including scarlet fever 1, measles 1, and 26 from tuberculosis.

GERMANY—*Munich.*—Month of June, 1909. Estimated population, 556,000. Total number of deaths, 820, corresponding to an annual death rate of 16.8 per 1,000 of population, including scarlet fever 5, measles 15, diphtheria 6, whooping cough 7, and 152 from tuberculosis.

GREAT BRITAIN—*England and Wales.*—The deaths registered in 76 great towns in England and Wales during the week ended July 31, 1909, correspond to an annual rate of 10.8 per 1,000 population, which is estimated at 16,445,281.

London.—Nine hundred and fifty-seven deaths were registered during the week, including measles 9, scarlet fever 4, diphtheria 19, whooping cough 17, tuberculosis 98, enteric fever 3, and 26 from diarrhea. The deaths from all causes correspond to an annual rate of 10.3 per 1,000. In Greater London 1,343 deaths were registered. In the "outer ring" the deaths included 6 from measles, 3 from scarlet fever, 1 from diphtheria, and 5 from whooping cough.

Ireland.—The average annual death rate represented by the deaths registered during the week ended July 31, 1909, in the 21 principal town districts of Ireland was 15.4 per 1,000 of the population, which is estimated at 1,142,308. The lowest rate was recorded in Lurgan, viz, 4.4, and the highest in Galway, viz, 35 per 1,000.

Scotland.—The deaths registered in 8 principal towns during the week ended July 31, 1909, correspond to an annual rate of 11.8 per 1,000 of the population, which is estimated at 1,839,038. The highest rate of mortality was recorded in Greenock, viz, 18.8, and the lowest in Paisley, viz, 10.2 per 1,000. The aggregate number of deaths registered from all causes was 423, including diphtheria 1, enteric fever 2, measles 3, scarlet fever 4, and 15 from whooping cough.

JAMAICA—*Kingston.*—Month of July, 1909. Estimated population, 52,065. Total number of deaths, 139, including enteric fever 13, and 13 from tuberculosis.

MALTA.—Four weeks ended July 24, 1909. Estimated population, 212,888. Total number of deaths, 565, corresponding to an annual death rate of 33.8 per 1,000 of population, including whooping cough 5, enteric fever 11, diphtheria 1, and 17 from tuberculosis.

RUSSIA—*Riga.*—Month of May, 1909. Estimated population, 350,000. Total number of deaths, 607, corresponding to an annual death rate of 20.4 per 1,000 of population, including diphtheria 8, typhus fever 27, enteric fever 3, smallpox 5, measles 4, scarlet fever 18, whooping cough 1, and 87 from tuberculosis.

Cholera, yellow fever, plague, and smallpox, from June 26 to August 27, 1909.

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

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

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

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Amoy	June 13–17	.....	66	
Hankau	July 17	1	1	
Kang Thau	Apr. 1–June 30	4	2	
Swatow	May 11–29	.....	.....	Present in vicinity.
Germany:				
Konigsberg	July 21	.....	1	
India:				
Bombay	May 30–July 20	.....	108	
Calcutta	May 16–July 10	.....	324	
Madras	May 29–July 16	.....	5	
Negapatam	May 8–14	.....	4	
Rangoon	May 16–July 10	.....	12	
Indo-China:				
Saigon	May 9–July 3	19	13	
Philippine Islands:				
Manila	.....	.....	.....	Fourth quarter 1908, 308 cases and 190 deaths; first quarter 1909, 1 death (imported).
Provinces	.....	.....	.....	Fourth quarter 1908, 7,330 cases and 4,292 deaths; first quarter 1909, 2,221 cases and 1,405 deaths.
Albay	June 27–July 3	59	59	
Cebu	May 16–July 3	18	8	
Dapitan	May 9–15	.....	.....	Present.
Iloilo	May 23–June 19	28	18	
Leyte	June 6–July 3	14	10	
Moro	May 29–July 3	9	9	
Mountain	June 20–26	27	15	
Negros Occidental	May 9–15	8	2	
Negros Oriental	May 16–June 26	105	71	
Pampanga	May 9–July 3	77	52	
Pangasinan	June 13–19	1	.....	
Samar	May 9–July 3	38	25	
Sorsogon	May 9–15	8	2	
Russia	.....	.....	.....	August 27, 1909. July 23, present in Drissa, Kostroma, Kreutzburg, Mahlgraben, Muravjevo, Onega, Pinega, Polotzk, Radsiwilischki, Reval, Schaulen, and Tver.
Archangel	June 26–July 23	189	115	
Baku, government	July 4–10	1	.....	
Chmalysk, district	July 1	1	.....	
Cronstadt	June 30–July 13	40	17	July 30, still present.
Eastland, government	July 1	1	.....	
Finland—				
Mariengam	June 23–24	1	1	
Viborg	July 9–16	1	.....	
Hungerburg	July 30	.....	.....	Present.
Jaroslav	July 4–10	3	1	July 30, still present.
Kief	July 30	.....	.....	Present.
Kretsky, district	July 1	1	.....	
Mitau	July 15	2	1	
Moscow	July 9–24	6	2	
Novgorod, government	July 4–17	33	15	
Olonets, government	June 20–July 17	6	3	
Polotzk	June 27–29	103	33	
Pskov	July 1–17	8	3	
Riga	July 1–31	76	18	
Rjasin	June 24–July 16	3	3	Do.
Rubinsk	July 30	.....	.....	Do.
Simbirsk	July 13	1	.....	
St. Petersburg, government	June 9–July 5	265	60	
St. Petersburg	June 2–July 30	3,441	1,319	
Vilna	July 11–17	1	1	
Vitebsk	July 9–16	8	3	
Vologda, government	July 4–17	99	42	
Siam:				
Bangkok	Apr. 25–May 28	1	.....	
Straits Settlements:				
Singapore	May 9–June 5	.....	18	

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

YELLOW FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Barbados, general	June 13–20	1		St. Joseph Parish, Dec. to June, 14 deaths not previously reported.
Brazil:				
Bahia	May 22–July 2	34	15	
Manaos	May 23–July 3		7	
Para	May 30–July 31	29	29	
Pernambuco	Apr. 15–30	3		
British Guiana:				
Suddie	July 22	1	1	35 miles from Georgetown.
Ecuador:				
Guayaquil	May 23–July 24		32	
Mexico:				
Colima	Aug. 19			Present.
Merida	June 5–Aug. 13	3		
Panama:				
Canal Zone—				
Ancon	Mar. 1–31			1 case at Culebra Island quarantine station from a vessel, and 1 fatal case en route from Guayaquil.

PLAGUE.

Australia:				
Adelaide	Apr. 30–May 1	1		
Mackay	Jan. 21–June 6	2	2	
Sydney	Apr. 18–May 29	5	1	
Azores:				
Terceira	June 16	3	1	
Brazil:				
Bahia	June 5–July 16	14	7	
Rio de Janeiro	May 17–July 10	2	1	
Chile:				
Antofagasta	May 9–30	13	5	July 10, 4 cases in the lazaretto.
Iquique	May 20–July 16	17	8	July 16, 7 cases in the lazaretto.
China:				
Amoy	June 1–July 17		555	
Canton	May 9–July 17	300	192	
Chinchew	May 22			Epidemic.
Hongkong	May 2–July 10	76	70	
Kang Thau	Apr. 1–June 30	117	59	
Pollam	May 23–29	8	7	
Swatow district	May 16–July 1		350	July 1, 200 cases still present in Touchowfu and Yin Shan; July 19, present in Swatow.
Ecuador:				
Chunchi	June 1–30	3	1	
Guayaquil	May 23–July 24		27	
Huigra	May 1–31	14	3	
Egypt:				
Alexandria	May 30–July 13	5	4	
Port Said	May 29–July 13	9	3	
Provinces—				
Assiout	May 14–July 2	38	7	
Beherach	June 1–July 15	28	10	
Galyoobeeyeh	June 2–July 10	4	2	
Garbieh	June 2–July 11	15	10	
Fayoum	June 3–23	15	6	
Menouf	Jan. 18–July 15	77	15	
German East Africa:				
Muanza district	Apr. 30–May 22		12	
Hawaii:				
Hilo	Aug. 19–20	1	1	In vicinity.
Honolulu	July 20	1		The case arrived on the s. s. Korea, had been ill 11 days, and probably received infection at Hongkong.
Olaa plantation	Aug. 20–22	3	2	
India:				
Bombay Presidency and Sind.	May 16–July 3	1,197	1,033	
Madras Presidency	May 16–July 3	313	185	
Bengal	May 16–July 3	649	553	
United provinces	May 16–July 3	1,166	1,088	
Punjab	May 16–July 3	6,950	5,968	
Burma	May 16–July 3	423	415	
Central provinces, including Berar.	May 16–July 3	42	34	
Mysore State	May 16–July 3	276	201	

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

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India—Continued.				
Rajputana and Ajmer-Merwara.	May 16–July 3	997	833	
Kashmir	May 16–June 12	4	3	
Central India				
Coorg				
Hyderabad State				
Northwest Province				
Grand total		12,017	10,313	
Bahrien Island, Persian Gulf	May 29–June 4		4	
Indo-China:				
Saigon	May 9–July 3	21	20	
Japan:				
Formosa	May 23–July 17	223	156	In south and central parts.
Kobe	May 30–July 17	12	8	
Osaka	July 4–10	1	1	
Shikoku, island	July 17	3	1	
Tokyo	June 26	3		
Yokohama	May 25–July 12	18	12	
Mauritius	Apr. 1–May 31	9	9	
Peru:				
Arequipa, department	May 8–July 1	10	2	
Chala	July 3–15			Present.
Mollendo	July 3–15			Do.
Cajamarca, department	May 8–July 15	20	6	
Callao, department	May 8–July 1	8	1	
Callao	June 20–July 15			Do.
Ica, department	July 3–15	1		
Lambayeque, department	May 8–June 10	14	10	
Eten	July 15			Do.
Libertad, department	May 8–July 1	11	7	
Salaverry	July 15			Do.
Lima, department	May 8–July 15	13	8	
Cerro Azul	July 15			Do.
Moquegua, department				
Ilo	July 15			Do.
Pescadores islands	June 27–July 3	4		From s. s. Lodore.
Piura, department	June 18–July 15	11	8	
Paita	June 20–July 15			Present.
Siam:				
Bangkok	Apr. 25–June 28	13	13	
Trinidad:				
Port of Spain	June 13–July 18	6	5	
Turkey in Asia:				
Adalia	June 25–July 11	2		
Beirut	June 25–July 4	1		In Harrett Aryk.
Uruguay:				
Montevideo	May 1–June 30		2	
Venezuela:				
Caracas	June 18–Aug. 6	8	1	
Zanzibar	July 26	1		

SMALLPOX.

Algeria:				
Algiers	May 1–July 24	26	15	
Bona	June 1–30	16	7	
Argentina:				
Buenos Aires	Mar. 1–May 31		11	
Rosario	Apr. 1–May 31	2	2	
Austria:				
Galicia	June 6–July 31	6		
Silesia	June 20–July 31	16		
Belgium:				
Antwerp	July 18–24	4		
Brazil:				
Bahia	May 22–July 16	23	7	
Pernambuco	Apr. 1–May 31		27	
Rio de Janeiro	May 17–July 10	51	20	
Santos	May 10–16		1	
São Paulo	May 10–June 27		7	
Canada:				
British Columbia—				
Vancouver	June 1–July 31	4		
Nova Scotia—				
Halifax	June 13–Aug. 7	5		
Quebec—				
Montreal	June 17			2 cases additional at Grosse Isle on s. s. Virginian.

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

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Ceylon:				
Colombo	May 23–29	2		
Chile:				
Valparaiso	May 16–29			Present.
Santiago	May 29			Still present.
China:				
Amoy	June 1–July 10	24	31	May 9–15; present.
Hankow	Apr. 25–June 12			Present among natives.
Hongkong	May 2–June 26	16	12	
Kang Thau	Apr. 1–June 30	7	1	
Shanghai	May 10–July 11		7	Among natives.
Tientsin	June 27–July 3	1	2	
Egypt, general	Apr. 30–July 1	1,133	260	
Cairo	May 21–July 8		13	
Suez	May 21–July 8	46	3	
Ecuador:				
Guayaquil	June 1–30	2		
France:				
Marseille	June 1–30		5	
Paris	May 23–July 31	37	2	
Toulon	July 25–31		1	
Germany, general	May 30–June 19	15		
Great Britain:				
Cardiff	July 6	1		
Liverpool	June 21–26	2		Case June 22, from s. s. Canada.
India:				
Bombay	May 26–July 20		66	
Calcutta	May 16–July 10		122	
Madras	May 22–July 9		11	
Rangoon	May 12–July 10		18	
Indo-China:				
Saigon	May 9–July 10	20	14	
Italy, general	May 31–Aug. 1	42		
Genoa	June 1–July 31	12		
Naples	May 31–Aug. 1	198	33	
Ottiana	June 23	1		
Rome	Mar. 7–13	1	1	
Japan:				
Formosa	June 13–19	1		
Moji	June 6	1		From s. s. Selja.
Osaka	Jan. 1–May 31	3		
Yokohama	June 1–7	1		
Java:				
Batavia	May 6–July 10	15		
Mauritius:				
Port Louis	Apr. 1–30	1	1	
Mexico:				
Aguascalientes	June 21–27		1	
Guadalajara	June 11–Aug. 9	2	2	
Mexico	May 16–July 10		71	
Monterey	June 14–Aug. 8		24	
Veracruz	June 1–19	2	2	
Norway, general	Apr. 1–May 30	3		
Panama:				
Canal Zone—				
Ancon	Mar. 1–31	1		At Culebra Island quarantine station; from a vessel.
Peru:				
Lima	July 4–10	1		In the lazaretto.
Philippine Islands:				
Manila	May 9–June 19	16	6	Fourth quarter, 1908, 28 cases and 8 deaths; first quarter, 1909, 55 cases and 16 deaths.
Portugal:				
Lisbon	May 30–July 31	80		
Russia:				
Libau	May 6–Aug. 1	4		
Moscow	May 16–July 24	294	79	
Odessa	May 30–July 31	22	1	
Riga	June 6–July 31	38		May 1–30, 5 deaths.
St. Petersburg	May 16–July 24	252	51	
Warsaw	Apr. 25–July 11		12	
Siam:				
Bangkok	Apr. 25–June 28	2	1	
Siberia:				
Vladivostok	May 15–June 3	4	1	
Spain:				
Barcelona	June 1–Aug. 2		33	
Huelva	May 1–June 30		8	
Madrid	May 1–July 31		238	

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

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Spain—Continued.				
Seville	May 1–June 30		2	
Tarragona	July 20–26		1	
Valencia	May 30–July 31	51	3	
Vigo	May 23–July 24		7	
Straits Settlements:				
Singapore	May 16–July 10		2	
Switzerland:				
Aargau, canton	June 20–26	1		
Fribourg, canton	June 13–19	1		
Geneva, canton	May 30–June 26	9		
Tripoli:				
Tripoli	May 23–July 10	50	11	
Turkey in Asia	July 19			Present in interior.
Bagdad	May 9–20			Present.
Bassorah	May 23–June 26			Do.
Hadjin	July 19			Do.
Smyrna	May 7–July 1		28	
Turkey in Europe:				
Constantinople	May 31–Aug. 1		8	
Uruguay:				
Montevideo	Apr. 1–June 30		5	

Weekly mortality table, foreign and insular cities.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—									
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Aberdeen	July 31	181,918	36	....	....	....	....	....	....	....	....	....	....	....
Aguascalientes	Aug. 1	40,000	82	1	....	....	....	....	....	....	....	....	1	1
Do	Aug. 8	40,000	74	3	....	....	....	....	....	....	....	....	....	....
Aix la Chapelle	July 17	160,020	61	5	....	....	....	....	....	....	....	....	3	3
Amoy	June 26	400,000	197	....	103	3	....	12	....	....	....	....	....	....
Do	July 3	400,000	191	....	95	11	....	8	....	....	....	....	....	....
Do	July 10	400,000	165	....	79	25	....	1	....	....	....	....	....	....
Amsterdam	July 31	565,553	113	23	....	....	....	....	....	....	....	2	2	4
Antwerp	July 24	323,921	72	6	....	....	....	....	....	....	1	....	6	1
Athens	...do....	241,058	69	16	....	....	....	....	5	11	....	....	1	....
Baracoa	July 31	27,000	6	1	....	....	....	....	....	....	....	....	....	....
Barcelona	July 26	600,000	300	15	....	....	....	2	....	8	....	5	....	....
Do	Aug. 2	600,000	310	12	....	....	....	2	....	2	....	3	....	1
Barmen	July 24	162,100	27	4	....	....	....	....	....	....	....	....	....	....
Basel	...do....	131,000	28	7	....	....	....	....	....	....	....	....	....	1
Belize	Aug. 5	9,113	5	....	....	....	....	....	....	....	....	....	....	....
Bergen	July 31	87,749	15	3	....	....	....	....	....	....	....	....	....	....
Berlin[a]	May 22	2,100,902	599	100	....	....	....	....	....	....	16	11	15	5
Do	July 10	2,100,902	560	83	....	....	....	....	....	....	18	13	14	9
Do	July 17	2,100,902	512	84	....	....	....	....	....	1	11	7	10	5
Birmingham	July 31	558,336	119	10	....	....	....	....	....	....	1	....	4	....
Bluefields	...do....	2,500	1	....	....	....	....	....	....	....	....	....	....	....
Bombay	July 13	977,822	475	34	21	17	....	7	....	....	....	....	2	....
Bordeaux	July 31	253,000	86	14	....	....	....	....	....	....	....	2	....	....
Bremen	...do....	235,648	50	8	....	....	....	....	....	....	....	....	1	....
Breslau	July 24	335,186	182	27	....	....	....	....	....	1	1	1	....	3
Bristol	July 31	377,642	77	11	....	....	....	....	....	....	1	....	2	1
Brussels	July 24	704,975	146	11	....	....	....	....	....	4	....	2	3	1
Budapest	...do....	804,200	....	....	....	....	....	....	....	2	....	2	1	....
Cairo	July 8	701,866	828	35	....	....	....	1	9	19	....	15	46	....
Calcutta	July 3	847,796	429	21	41	56	....	5	....	....	....	....	....	....
Chemnitz	July 24	276,940	85	11	....	....	....	....	....	....	1	2	....	....
Cienfuegos	...do....	37,000	18	....	....	....	....	....	....	....	....	....	....	....
Do	July 31	37,000	13	....	....	....	....	....	....	....	....	....	....	....
Coburg	July 17	23,400	12	....	....	....	....	....	....	....	....	....	....	1
Do	July 24	23,400	7	1	....	....	....	....	....	....	....	....	....	....
Cognac	July 31	19,483	12	....	....	....	....	....	....	1	....	....	....	....

[a] Reported out of date.

Weekly mortality table, foreign and insular cities—Continued.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—										
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Cologne	July 24	472,087	130	12	.....	.....	.....	.....	.....	.....	3	1	2	[5
Colon	July 31	16,000	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Constantinople	July 25	1,000,000	218	31	.....	.....	.....	.....	.....	5	.....	.....	1	.....
Do	Aug. 1	1,000,000	287	25	.....	.....	.....	1	.....	12	1	1	1	.....
Copenhagen	July 17	448,000	117	.....	.....	.....	.....	.....	.....	.....	.....	1	2	4
Denia	...do.....	12,431	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	July 24	12,431	3	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dresden	...do.....	546,400	150	22	.....	.....	.....	.....	.....	.....	.....	.....	5	.....
Dundee	July 31	169,409	38	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....
Durban	July 10	60,244	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Edinburgh	July 31	355,366	93	9	.....	.....	.....	.....	.....	.....	1	.....	2	5
Flushing	...do.....	21,208	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Frankfort on the Main	July 17	366,200	83	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do	July 24	366,200	86	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....
Frontera	...do.....	9,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	July 31	9,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Geneva	July 17	121,500	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ghent	July 24	164,579	52	1	.....	.....	.....	.....	.....	.....	1	.....	3	2
Gibraltar	July 25	26,830	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Aug. 1	26,830	6	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Glasgow	Aug. 6	872,021	176	.....	.....	.....	.....	.....	.....	1	2	.....	.....	5
Gothenburg	July 24	162,400	37	9	.....	.....	.....	.....	.....	1	.....	.....	1	.....
Greenock	July 31	72,500	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Guadalajara	July 29	125,000	105	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Do	Aug. 5	125,000	111	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	July 17	75,000	65	10	2	.....	3	.....	.....	1	.....	.....	.....	2
Do	July 24	75,000	74	8	2	.....	3	.....	.....	2	.....	.....	1	.....
Halifax	July 31	50,000	5	2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Do	Aug. 7	50,000	19	4	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Hamburg	July 24	872,252	227	38	.....	.....	.....	.....	.....	2	6	5	1	3
Hamilton, Bermuda	Aug. 2	20,205	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Aug. 9	20,205	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Havre	July 24	132,430	43	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hilo	...do.....	3,500	6	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Hongkong	June 26	315,616	.....	.....	5	.....	.....	.....	.....	2	.....	.....	.....	.....
Do	July 3	315,616	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hull	July 24	275,552	62	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Konigsberg	...do.....	239,100	73	14	.....	1	.....	.....	.....	.....	.....	1	3	.....
La Guaira	July 25	10,000	14	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lausanne	July 17	60,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leeds	July 31	484,012	102	8	.....	.....	.....	.....	.....	.....	.....	.....	5	2
Leipzig	July 24	537,686	126	13	.....	.....	.....	.....	1	2	1	.....	1	3
Leith	July 31	85,721	25	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Liege	July 24	176,280	47	1	.....	.....	.....	.....	.....	.....	.....	.....	8	.....
Liverpool	July 31	760,357	213	17	.....	.....	.....	.....	.....	1	2	4	8	3
Lisbon	June 12	406,869	145	21	.....	.....	.....	.....	.....	.....	1	2	.....	.....
London	July 24	4,833,938	926	90	.....	.....	.....	.....	.....	.....	8	6	24	17
Do	July 31	4,833,938	957	98	.....	.....	.....	.....	.....	3	4	19	9	17
Lubeck	July 24	97,000	26	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lyon	...do.....	472,114	139	25	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
Madras	July 9	509,346	420	.....	.....	1	.....	1	.....	.....	.....	.....	2	.....
Magdeburg	July 17	249,878	74	8	.....	.....	.....	.....	.....	.....	.....	2	.....	1
Do	July 24	249,878	62	6	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Managua	July 17	22,278	27	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manaos	July 10	52,000	32	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	July 17	52,000	40	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	July 24	52,000	51	2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Manchester	July 31	631,533	169	15	.....	.....	.....	.....	.....	.....	2	.....	5	1
Mannheim	July 17	183,317	6	5	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Manzanillo	Apr. 24	15,855	4	2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Do	May 1	15,855	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Matamoros	Aug. 7	8,000	5	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mazatlan	...do.....	22,000	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Milan	July 25	900,000	192	35	.....	.....	.....	.....	.....	1	1	2	4	.....
Do	July 31	900,000	197	31	.....	.....	.....	.....	.....	1	.....	1	10	.....
Moncton, N. B	Aug. 7	13,500	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Monterey	Aug. 8	100,000	82	10	.....	.....	.....	1	.....	1	.....	.....	.....	.....
Montreal	Aug. 7	389,837	194	14	.....	.....	.....	.....	.....	3	3	3	1	3
Moscow	July 17	1,335,104	1,088	13	.....	1	.....	5	.....	1	20	9	20	4
Do	July 24	1,335,104	1,217	67	.....	.....	.....	4	.....	7	21	16	26	6
Munich	July 17	566,000	159	25	.....	.....	.....	.....	.....	.....	1	1	5	.....
Nagasaki	July 18	175,936	43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

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.
Naples	July 31	593,729	295	....	....	....	....	2	....	....	....	....	....	....
Newcastle-on-Tyne	...do....	281,584	67	11	....	....	....	....	....	1	....	1	....	1
Niew-chwang	June 26	60,000	11	2	....	....	....	....	....	....	1	....	....	....
Do	July 3	60,000	12	....	....	....	....	....	....	....	....	....	....	....
Do	July 10	60,000	9	1	....	....	....	....	....	....	....	....	....	....
Nottingham	July 24	260,000	58	....	....	....	....	....	....	....	1	....	2	....
Nuevo Laredo	Aug. 7	8,000	4	1	....	....	....	....	....	....	....	....	....	....
Odessa	July 24	520,000	238	18	....	....	....	....	....	2	4	2	3	....
Para	July 17	185,000	93	4	....	....	4	....	....	....	....	....	....	....
Do	July 24	185,000	65	7	....	....	3	....	....	....	....	....	....	....
Do	July 31	185,000	87	10	....	....	1	....	....	....	....	....	....	....
Paris	...do....	2,776,304	750	162	....	....	....	....	....	2	3	2	18	2
Penang	July 3	102,520	69	15	....	....	....	....	....	....	....	....	....	....
Plymouth	July 31	124,180	19	....	....	....	....	....	....	....	....	....	....	....
Port Elizabeth	July 17	32,959	14	4	....	....	....	....	....	....	....	....	....	....
Port of Spain	July 10	60,000	33	....	1	....	....	....	....	1	....	....	....	....
Do	July 17	60,000	40	....	....	....	....	....	....	2	....	....	....	....
Prague	July 24	229,965	123	32	....	....	....	....	....	1	3	1	1	....
Rangoon	July 3	252,155	214	4	22	2	....	3	....	....	....	....	....	....
Rotterdam	July 31	414,491	97	....	....	....	....	....	....	1	....	1	....	....
St. Petersburg	July 17	1,678,000	1,134	89	....	325	....	3	7	10	5	7	33	7
Santa Cruz de Teneriffe	July 24	46,000	14	2	....	....	....	....	....	....	....	....	....	....
Santiago de Cuba	Aug. 7	53,614	14	....	....	....	....	....	....	....	....	....	....	....
Shanghai	July 3	550,000	143	21	....	....	....	2	....	....	....	4	....	....
Singapore	...do....	260,000	197	19	....	....	....	....	....	1	....	....	....	....
Southampton	July 31	124,667	25	2	....	....	....	....	....	....	....	1	....	....
South Shields	...do....	117,627	34	4	....	....	....	....	....	....	1	....	1	1
Stettin	July 24	230,000	90	11	....	....	....	....	....	1	1	1	1	1
Stockholm	July 17	339,582	87	17	....	....	....	....	....	....	....	1	....	2
Sunderland	July 31	159,137	43	3	....	....	....	....	....	1	....	....	1	1
Tarragona	July 26	20,400	6	....	....	....	....	1	....	....	....	....	....	....
Do	July 31	20,400	12	1	....	....	....	....	....	4	....	....	....	....
Tegucigalpa	July 27	24,000	10	....	....	....	....	....	....	....	....	....	....	....
Tripoli	July 17	42,000	.....	4	....	....	....	2	....	1	....	....	....	....
Do	July 24	42,000	.....	5	....	....	....	4	....	1	....	....	....	....
Turin	July 23	381,439	140	14	....	....	....	....	....	4	....	....	1	....
Valencia	July 17	240,000	99	4	....	....	....	....	....	3	....	1	....	....
Do	July 24	240,000	85	4	....	....	....	....	....	2	....	1	....	....
Victoria, B. C	Aug. 7	30,000	5	1	....	....	....	....	....	....	....	....	....	....
Vienna	July 24	2,064,037	588	100	....	....	....	....	....	....	5	3	6	3
Vigo	July 31	40,000	18	4	....	....	....	1	....	....	....	....	....	....
Vladivostok	June 28	85,004	21	....	....	....	....	....	....	....	....	....	....	....
Do	July 5	85,004	16	....	....	....	....	....	....	....	....	....	....	....
Warsaw	June 19	764,054	283	51	....	....	....	....	4	....	9	....	4	4
West Hartlepool	July 31	66,750	14	....	....	....	....	....	....	....	....	....	....	....
Winnipeg	Aug. 7	122,000	36	2	....	....	....	....	....	2	....	....	....	....
Yokohama	July 19	392,870	.....	....	1	....	....	....	....	....	....	....	....	....
Zanzibar	June 30	75,000	42	8	....	....	....	....	....	....	....	....	....	....
Do	July 7	75,000	24	1	....	....	....	....	....	....	....	....	....	....

By authority of the Secretary of the Treasury:

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