PUBLIC HEALTH REPORTS.

VOL. XXVII. JANUARY 12, 1912. No. 2.

THE TARBAGAN (ARCTOMYS BOBAC) AND PLAGUE.

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There seems to be considerable evidence that the tarbagan, *Arctomys bobac*, has been for many years associated with outbreaks of plague in Siberia, Mongolia, and Manchuria. This association has been mentioned in the writings of numerous Russian and other investigators and many hypotheses have been set forth. But, so far as the writer has been able to determine, no authentic proof has been forthcoming that the disease from which the tarbagan suffers and which is apparently transmissible to man, is true plague. Most of the statements concerning the disease heretofore have been quoted from the natives of the localities where this marmot lives, and until quite recently no writer has seen or described, after personal investigation, the disease in the tarbagan. And further there seem to be no positive or authoritative statements which fix the status of the tarbagan disease on a bacteriological or pathological basis.

THE TARBAGAN (ARCTOMYS BOBAC).

The tarbagan has been called by various authors sarbagan, sarabagan, tarabagan, phutiya, and han ta. The spelling, tarbagan, is that given by the Russian writers, who believe it to be of Transbaikal origin, and who have observed on the spot the disease to which this animal is subject.

The tarbagan is said to be indigenous to Thibet and common in Mongolia. At least six species of Arctomyinæ, the subfamily to which the tarbagan is said to belong, are reported to be found in various parts of Central Asia, but the so-called tarbagan appears to be the most widely spread. In Europe it is found as far west as Russia and eastern Germany. In Asia its habitat is given as Siberia, Mongolia, Thibet, and Manchuria.

According to Tchaouchov this animal is a hibernating rodent of the genus Marmota (synonym, Arctomys; subfamily, Arctomyinæ) and is classified as *Arctomys bobac*. There are many species of Arctomyinæ and Blue (1) notes 12 varieties for California. The American ground hog, woodchuck, and ground squirrel belong to this same family.

In the new National Museum there are specimens of an animal classed as *Marmota bobac*. This animal has rather long, coarse, yellow,

and light-brown fur, the tips of the hairs being dark. All the specimens are somewhat larger than the tarbagan as described below by Tchaouchov. Mr. G. S. Miller, curator of mammals at the museum, believes that the quality of the fur of these specimens argues against the statement that this species could be used to imitate to any large extent the fine fur of martin and sable. He states that our knowledge of the fauna of the region where the tarbagan is said to be found is far from complete and that it seems to him very probable that there is more than one species of rodentia included among the so-called tarbagans.

Pallas (2) in 1778 classified the tarbagan as *Marmota bobac.* Skschivan (19) and others refer to the tarbagan as *Arctomys bobac.* There seems but little doubt that the animal properly known as the tarbagan is this species.

The fur of the larger spermophiles known to inhabit Mongolia and northern Manchuria would lend itself more easily to the imitation of sable or martin, as it is of a finer quality. It may be that the so-called "tarbagan hunters" in reality trap several varieties of marmots and spermophiles, and it seems very possible that it may, at some future date, be determined definitely that the spermophiles of Mongolia, Manchuria, and Siberia are also instrumental in spreading plague. But until the fauna of these regions has been more accurately established and until more definite bacteriological and pathological evidence is advanced establishing the susceptibility of these rodents to plague it seems impossible to determine whether the *bobac* alone is responsible for the reported outbreaks of plague or whether other rodents may not harbor the bacillus of plague and transmit it to man.

Tchaouchov (3) describes the tarbagan as a little larger than a rabbit; 37 centimeters long, with a tail 9 centimeters; weight, from 6 to 8 kilograms; paws, short and heavy; the hind legs, larger and provided with stout claws for digging and for defense and attack; the upper lip, fleshy and bifurcated; the incisors, covered with steel-like enamel.

The animal lives in burrows extending 2 meters below the surface of the ground, with a passage 10 to 14 meters long leading into a nest or chamber 1 to 2 meters in diameter, the floor of which is covered with dried grass. The main burrow has several secondary passages for ventilation and exit. The tarbagan is found usually in large colonies, occupying a space several square kilometers in area and recognizable by the hummocks at the mouths of the burrows. They feed on herbs and roots, and in captivity will eat roots, cabbages, and similar foods, and will take milk readily.

With the beginning of October they shut themselves in their burrows to hibernate until March or April, filling the entrances to their burrows with dirt, stones, and grass. From time to time they awaken to get rid of accumulated feces, which they utilize to fill the cracks in their nests, but from December on they fall into a sort of catalepsy. At the beginning of spring they are lean from the lack of nourishment, and at this time the females bear from 4 to 6 young. The tarbagan in health utters a cry which sounds like "*pu p'a,*" and which, according to the Chinese, means "no harm."

Tarbagans are hunted now principally for their fur, which is in considerable demand, and is used to imitate martin and sable. Use is also made to some extent by the natives of their flesh which is said

to have the flavor of goose, and of their fat for greasing leathers and for lighting. One tarbagan will yield at least 2 kilograms of oil, the price of which varies between 10 and 30 cents in Siberia. This oil is very penetrating, and does not harden in the coldest weather. The fur is generally sold at a price of from 5 to 15 kopecks (2 to 7 cents). It is reported that from a single region (Kobdo-Oulaseutai) a half million skins are brought annually to the market place at Irbit.

PLAGUE IN TARBAGANS.

Tchaoushov (3) states that, according to Skschivan, the most ancient Thibetan writings describe a disease of tarbagans which was considered to be highly contagious and caused by worms found in the roots of certain plants, and which was transmitted to man; also that Tcherkashov first pointed out in 1867 that a large number of tarbagans died in certain years from a contagious disease, and that the natives who ate the flesh of these animals during the epizootic died, but he gives no details.

In 1892 there appeared a short article in a Transbaikal journal (4) in the form of an official warning from the authorities to the inhabitants against the dangers of the disease.

Biéliavski and Riéshetnikoff (5) in 1895 gave probably the best account of the disease in tarbagans published up to that time. They called it "tarabagania tchuma"; that is, plague (tchuma) arising in connection with the "tarabagania." Twenty-six cases were collected in the Akshin military district among six families between 1888 and 1894, and in addition they report six bodies of "Buriats" who were said to have died from this disease of tarbagans. That the six died from plague seems evident from the fact that a physician and his assistant who made necropsies on the bodies died from a disease which was proven to have been plague.

Biéliavski states that periodically the tarbagans are attacked by an epizootic, usually beginning in the autumn just before the hibernating season. According to him, the disease is highly contagious and is spread to man by eating the flesh of the animal, but more easily by simple contact with sick tarbagans. He visited the village of Soktui after an outbreak in a Cossack family in 1894. The first case, a male, in this family was traced to the tarbagan. The natives are well informed of the existence of the disease among the tarbagans and during epizootics refrain from touching the sick animals.

Riéshetnikoff was of the opinion that the epizootic in this rodent usually breaks out in years of great drought, when the animal is forced to go without food and water, and that the disease spreads to man by contact.

Podbielski (6) believed that tarbagans became infected by feeding on grass which had been contaminated by bodies of hunters and native nomads who had died from plague and who had been left by their companions and were later devoured by wild animals. He was also of the opinion that in Mongolia there are certain permanent plague foci in the ground from which tarbagans become infected.

Tchaoushov (3) states that he is of the opinion that the disease appears first in man and then spreads to the rats and tarbagans, both of which subsequently may be the cause of the disease in man (by fleas and by contact with dead tarbagans). He believes the

disease, which he is convinced is plague, is less dangerous for man than rat plague, because ordinarily man is not associated with tarbagans in the same manner that he is with rats. Tarbagans affected with this disease have nearly all died by the approach of winter, and only the healthy ones hibernate. It might be supposed that the sick animals, at the approach of winter, would hide in the empty summer burrows and die there, and that from these burrows in the spring a fresh outbreak of the epizootic might occur. But according to Skschivan (7) and others, the disease makes its appearance only at the end of summer and the beginning of autumn, when the tarbagans, on account of thirst and hunger, devour the human plague cadavers left on the ground.

Skschivan (7) has observed that the disease manifests itself usually during the autumn in many different localities near endemic foci, and that the disease is readily conveyed to man, in whom are observed all the usual signs of plague.

Schreiber (8), according to Tchaoushov (2), believed that the disease in tarbagans was true plague, identical with plague in man, but that the disease was not peculiar to this species as glanders is peculiar to horses. Schreiber (9) was sent by the Russian Government at the end of 1905 into the infected region in Mongolia for a scientific investigation of the disease. In his paper he stated that he had been unable to observe the disease either in man or the tarbagan, apparently on account of the fact that the disease breaks out only in the autumn and that he arrived in the region too late to find cases. His reports of outbreaks, obtained from the natives, are similar to those of other writers. In a summary he gave certain reasons which seemed to him to militate against the identity of the disease in the tarbagan with true plague in man: (1) The undoubted occurrence of these epizootics without human beings being infected. (2) The fact that field mice, which are known to be susceptible to plague, do not contract the tarbagan disease. (3) The fact that domestic animals escape it.

Kokossoff, according to Tchaoushov (3), is the only physician who has observed sick tarbagans; but he speaks only of the loss of the instinct of self-preservation, in addition to the symptoms mentioned by other writers.

Clemow (10), in 1900, in a paper on plague in the lower animals, called attention to the infection of the tarbagan with a disease supposed by many writers to be plague and also summarized the article by Biéliavski and Riéshetnikoff. He believed that it was not possible to be certain of the nature of the disease in tarbagans, but that it could only be asserted that there was (1900) in Transbaikalia, near the Mongolian frontier, a center of endemic disease which, if not identical with plague, had many points in common with it and that the most important respect in which the disease appeared to differ from plague was in the absence of marked mental symptoms. The description of the pulmonary symptoms resembles to a considerable extent that of the symptoms of plague pneumonia. He also stated that there is a center of undoubted plague in eastern Mongolia and that it is said to be associated with the tarbagan.

While there seems to be sufficient evidence to associate the tarbagan directly with outbreaks of plague in Siberia, Matignon (11) and Zabolotny (12), who were sent into Mongolia to study the outbreaks that

had been occurring there since 1888, reported that they found no evidence of mortality among rats or domestic animals. Matignon, however, mentions the interesting fact that, for a number of years, the "Belgium fathers" had observed a disease in the tarbagans; but neither Matignon nor Zabolotny appear to have seen this disease. Up to 1900 there seems to be no evidence as to the identity of the disease in man and the marmot in the Mongolian center, or of its transmission from one to the other.

In 1896 there occurred in Mongolia a particularly severe epidemic. The symptoms reported were those of plague. The majority of those affected had buboes and Zabolotny obtained cultures from some of the cases, which cultures were later demonstrated to contain virulent plague organisms.

From the symptoms of the disease in Siberia and Mongolia as reported by several writers, and from the fact that Zabolotny recovered the bacillus of plague from patients in Mongolia dying from a disease giving the same symptoms found in cases in Siberia, it would seem probable that both regions suffer from what is undoubtedly true plague. And, further, considering the fact that the tarbagan is common throughout these regions and is quite definitely associated with the disease in man in Siberia, it seems also very probable that this animal plays an equally important rôle in Mongolia.

Tchaoushov (3), in a recent article, reaches the following conclusions regarding the presence of plague in the tarbagan: "(1) The tarbagan is the marmot of Asia, which is distinguishable in no way from that of Europe. (2) Plague in tarbagans is proven only in Asia and especially near certain plague centers. Plague in tarbagans has never been proven in Kamchatka and Altai. (3) Tarbagans, in case of necessity, eat meat and are able without doubt to devour human plague cadavers left on the ground, and, as a consequence, to become infected with plague. (4) Plague does not appear spontaneously among tarbagans. They become infected with plague by the intermediation of human cadavers, and are able then to give plague to man when he hunts them. (5) The mortality among tarbagans is due to various causes. Besides plague, it suffers from other contagious diseases, without speaking of the mortality due to famine. (6) In devouring plague cadavers tarbagans become infected by way of the external mucous membranes and cutaneous lesions. (7) The natives and Transbaikal Cossacks become infected with plague in removing the skins from tarbagans when a friction with infectious material takes place, and also by the intermediation of fleas from tarbagans. With the mucous membranes of the digestive tract intact it is difficult to admit the possibility of infection by meat. (8) It is necessary to admit that in the Transbaikal Province there exists or has existed an endemic plague center similar to that which exists in the government of Astrakhan."

PLAGUE IN MANCHURIA, 1910–11, AND THE TARBAGAN.

The severe outbreak of plague in Manchuria during the winter of 1910–11 has been stated to have originated among tarbagan hunters in eastern Mongolia and northwestern Manchuria (13) (14). Zabolotny seems of the opinion that rodents played no part in the spread of the disease. The prevalent type was pneumonic of a most viru-

lent nature, and spread from man to man by direct contact. Many rats were examined bacteriologically, but not one was found infected.

The native Mongols and "Buriats" are said to be well acquainted with the dangers of handling sick tarbagans, which for years have been supposed to suffer from a disease transmissible to man. The Chinese coolies from Manchuria and northern China are brought into eastern Mongolia and northwestern Manchuria to trap the tarbagans for their fur. These coolies as a rule are unable to recognize sick tarbagans and have no knowledge of the dangers in handling sick animals and so take no precautions. It is said that at least 96,000 Chinese went into Manchuria in the autumn of 1910 to trap tarbagans and to work on the farms, most of them returning to their homes in October, at which time the tarbagan begins to hibernate.

Evidence points to the fact that plague originated among coolies who handled tarbagans, which, during the autumn of 1910, were reported to have suffered from some sort of epizootic. The pneumonic form of the disease is quite common among the tarbagan hunters. The symptoms of the disease in this and other epidemics of plague bear a striking resemblance to that of the symptoms of the disease described by Biéliavski and other writers, among the natives of Siberia and Mongolia, and supposed by many to be plague and to be contracted from tarbagas.

SYMPTOMS OF THE DISEASE OF TARBAGANS.

There are numerous descriptions given of this disease of tarbagans scattered in the literature, many by Russian writers, and they are all quite similar in most details. The following is a summary from the description of Ch'uan (15), Biéliavski (5), and others:

The infected animals cease their barking, become languid, and their movements slow and unsteady. If they leave their burrows, they are unable to get back to them and thus fall a prey to their natural enemies, wolves, dogs, and eagles. If the sick do find their way back to their burrows, the healthy ones refuse them admission, and they soon die outside. Ch'uan states that they become deaf, their eyes red, and partially blind. Their paws become bloodless. The native hunters are able to determine the presence of the disease by making incisions in the paws of freshly killed tarbagans. If these bleed, the animal is healthy, but if diseased they find only coagulated blood, which finding they believe is positive evidence of the disease.

In a majority of the diseased tarbagans, a tense reddish swelling is found under the shoulder. This may be very small and indeed absent. If absent, the natives rely upon the blood clot in the paw.

Wolves seem fond of the flesh of the diseased tarbagans, but neither they nor dogs, who also devour dead tarbagans, appear to contract the disease.

SYMPTOMS OF THE TARBAGAN DISEASE IN MAN.

There seems to be sufficient evidence that the natives of Siberia, Mongolia, and neighboring countries in which the tarbagan is found suffer at certain periods from a contagious and highly fatal disease, which is contracted directly from this marmot either by handling naturally infected animals or in some instances by eating the flesh of animals that have the disease. The disease in man was referred to as "tarbagania chuma" by Rudenko (16), who is said to have discovered

it among the tarbagan hunters. Many Russian writers have described localized epidemics in tarbagan hunters and members of native tribes, and mention is often made that plague is endemic in these regions. Their description of the symptoms in these outbreaks seems to justify calling the disease plague.

Kokosoff (17) reported 11 fatal cases with the following symptoms: The members of the family in which the disease originated had all been engaged in skinning tarbagans. The symptoms in all were identical; severe headache, then a rise in temperature to about 41.6 C., followed by inflammation of the lymphatic glands in the axilla, and in some the submaxillary glands. Vomiting and diarrhea before death were noted. The illness lasted from four to seven days and was fatal in all his cases.

Riéshetnikoff (5) gave the period of incubation as four or five days. He noted the usual symptoms observed by other writers, and added pains in the thorax, accompanied by a dry cough and a disagreeable expectoration, sometimes tinged with blood. Respiration and pulse rate were increased and later weakened.

This disease in man is commonly pneumonic in character, and the tarbagans are said to suffer from a similar type of disease.

EXPERIMENTAL PLAGUE IN TARBAGANS.

At the appearance of plague in a Russian village near the Dalai Nor station, in Manchuria, in 1905, Tchaoushov (3) made some laboratory experiments with nine healthy tarbagans. They were divided into four series. The first series received an injection of fluid from a human plague bubo; the second, an emulsion of sputum containing a considerable number of the cocco bacillus of plague; the third, some bouillon culture; and the fourth, two tarbagans, were put into a cage with infected tarbagans. He summarized the results of his experiments as follows:

(1) Tarbagans are susceptible of being infected with the *Bacillus pestis* by the common methods used in other laboratory animals, guinea pigs, rats, mice, rabbits, and monkeys. (The friction method was not tried.)

(2) Tarbagans can be infected by the way of the nasal and ocular mucous membranes.

(3) It was not possible to determine the mode of the infection of the two tarbagans living in a cage with infected tarbagans; whether by fleas, which conveyed the virus from the infected, or to the fact that they devoured the bodies of the infected animals. One undoubtedly died of plague and the other had plague, but recovered.

(4) The pathological lesions in the tarbagans affected with plague could not be distinguished from those described in other laboratory animals.

(5) The caged tarbagans ate meat, as the natives had affirmed for a long time. He states that there is no doubt that tarbagans at large will eat meat (human cadavers) when vegetable food fails them, and that the discovery by Podbielski of human bones in and around tarbagan burrows proves it completely.

Shibayama (18) reports that experimentally the tarbagan is not so susceptible to plague as the rat. He gave a tarbagan a subcutaneous injection of one one-hundredth part of a loopful of a pneumonic strain from the recent Manchurian epidemic. The animal died several days later. Few alterations were found in the internal organs.

Skschivan (19) stated that the virulence of an organism plays an important rôle in inoculation experiments. He used an old culture of a plague organism that had so lost its virulence that by injecting one to two agar cultures into the abdominal cavity of a

guinea pig a chronic form of plague was produced with a wasting and a thickening of the great omentum. He failed to infect guinea pigs by rubbing this same culture into the shaved abdominal wall after the method of Albrecht and Ghon. He then repeated the same experiments with this nonvirulent culture in a "tarbagan (*Arctomys bobac*)" brought to him from Mongolia. By rubbing it into the shaved skin he produced a slight infection, and a subsequent subcutaneous inoculation caused a general septicæmia with a hemorrhagic plague pneumonia, but without local reaction or bubo formation.

BACTERIOLOGY OF THE DISEASE OF TARBAGANS.

From the data at hand there appears to be no positive bacteriological proof that the disease which at times becomes epizootic among tarbagans is true plague. Inspired perhaps by the recent epidemic in Manchuria and China, a scientific mission was organized, according to a recent article (20), by the Pasteur Institute in May, 1911, with the object of studying the origin of plague in the Kirghiz Steppes. No other report of their findings has appeared in the literature to the writer's knowledge, but it is to be hoped that they have been able to definitely establish the rôle played by the tarbagan in the propagation and spread of plague in these regions.

Kitasato (21) at the International Plague Conference at Mukden in April, 1911, agreed with others that the responsibility of the tarbagan must be discussed as a fact not yet bacteriologically proven. However, there appear in the literature several references (22) to the fact that bacilli presenting all the characteristics of *bacillus pestis* have been found in this marmot and also in the bodies of natives who have died from a disease contracted by handling sick tarbagans or by eating their flesh. No details of such findings have been found after rather an extensive search of the literature.

FLEAS ON TARBAGANS.

On account of the rôle played by fleas on rats and ground squirrels in the spread of plague it will be interesting to definitely determine if tarbagans harbor these parasites and if fleas are responsible for the spread of the disease among these rodents and its transmission to man. The existence of some such agent might be predicted, as plague is reported to exist in certain places in Siberia and Mongolia in endemic form both among animals and man.

Petrie (23), of the Lister Institute, a British delegate to the International Conference at Mukden in April, 1911, reports having examined 12 tarbagans sent direct from Manchuria to Mukden. Thirty-five fleas were found, with an average of 3 per animal, 12 being found on one. April was considered the season of least prevalence of fleas, and his findings suggest that tarbagans, during the flea-breeding season, are infested with fleas. The fleas found were unusually large, and appeared to resemble the flea belonging to the genus *hystrichopsylla*.

Tuck (24) suggests the flea as an intermediate host and states that there seems to be no great mortality among tarbagan hunters while in the field, but that the disease spreads rapidly when these hunters return to the market places in winter and crowd into insanitary dwellings.

SUMMARY.

Plague is known to be endemic in several regions in Siberia and Mongolia. From remote times, the tarbagan, a marmot common in these regions, has been observed to suffer from a fatal epizootic, beginning in the autumn before the hibernating season. The symptoms of this disease suggest plague. The tarbagan is hunted in the late autumn for its fur. Plague is reported to break out among hunters of tarbagans, especially among imported coolies, who, unlike the natives, are unable to detect sick animals.

Tarbagans are reported to be susceptible to inoculations with the *bacillus pestis*, and fleas have been found on them. A priori, from the rôle played by ground squirrels and their fleas in the transmission of plague, the hypothesis that a similar rôle is performed by the tarbagan is presented. This has, however, only the value of an hypothesis since bacteriological and pathological proofs are as yet lacking.

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UNITED STATES.

MODIFICATION OF RESTRICTIONS RELATIVE TO IMMIGRANTS.

On account of the fact that cholera conditions throughout Europe warrant such action, the State Department has been requested to cable advices to the consular officers of Germany, Belgium, Holland, Great Britain, France, Italy, and Austria-Hungary that until further notice the detention at foreign ports of departure of steerage passengers destined for the United States will be no longer required on account of cholera, unless from known cholera-infected districts.

ESTABLISHMENTS LICENSED FOR THE PROPAGATION AND SALE OF VIRUSES, SERUMS, TOXINS, AND ANALOGOUS PRODUCTS.

The following table contains a list of the establishments holding, on January 1, 1912, licenses issued by the Treasury Department in accordance with the act of Congress approved July 1, 1902, entitled "An act to regulate the sale of viruses, serums, toxins, and analogous products in the District of Columbia, to regulate interstate traffic in said articles, and for other purposes."

The number of the license of each firm is also given, together with the names of the several products for which licenses have been granted.

No. of license.	Establishments.	Products.
1	Parke, Davis & Co., Detroit, Mich.....	Diphtheria antitoxin, antigonococcic serum, antistreptococcic serum, antitetanic serum, antituberele serum, tuberculins, bacterial vaccines, erysipelas and prodigiosus toxins (Coley), vaccine virus, normal goat serum, normal horse serum, thyreodectomized horse serum, and thyreodectomized goat serum.
2	H. K. Mulford Co., Philadelphia, Pa...	Diphtheria antitoxin, antidysenteric serum, antimeningococcic serum, antipneumonic serum, antistreptococcic serum, antitetanic serum, tuberculins, vaccine virus, normal horse serum, bacterial vaccines, and antirabic virus.
3	Dr. H. M. Alexander & Co., Marietta, Pa.	Diphtheria antitoxin, antirabic virus, vaccine virus, and normal horse serum.
5	Fluid Vaccine Co., Milwaukee, Wis....	Vaccine virus.
8	The Cutter Laboratory, Berkeley, Cal..	Diphtheria antitoxin, antistreptococcic serum, tuberculins, bacterial vaccines, and vaccine virus.
9	Frederick Stearns & Co., Detroit, Mich.	Diphtheria antitoxin, streptolytic serum, and pneumolytic serum.
11	Pasteur Institute of Paris, Paris, France.	Diphtheria antitoxin, antidysenteric serum, antimeningococcic serum, antiplague serum, antistreptococcic serum, sérum antivenimeux, antitetanic serum, and antiplague vaccine.
12	Chemische Fabrik auf Actien, Berlin, Germany.	Diphtheria antitoxin and antistreptococcic serum.

No. of license.	Establishments.	Products.
14	Health Department of the City of New York.	Diphtheria antitoxin, antitetanic serum, antirabic virus, vaccine virus, tuberculin, and antimeningococcic serum.
16	National Vaccine and Antitoxin Institute, Washington, D. C.	Diphtheria antitoxin, antigonococcic vaccine, vaccine virus, normal horse serum, antistaphylococcic vaccine, antistreptococcic vaccine, and antityphoid vaccine.
17	Lederle Antitoxin Laboratories, New York City.	Diphtheria antitoxin, antistreptococcic serum, antitetanic serum, suspension of lactic acid bacilli, vaccine virus, and antityphoid vaccine.
18	Burroughs, Wellcome & Co., London, England.	Diphtheria antitoxin, antigonococcic serum, antidysenteric serum, anticolon-bacillus serum, antistaphylococcic serum, antistreptococcic serum, antityphoid serum, tuberculins, and bacterial vaccines.
19	Memorial Institute for Infectious Diseases, Chicago, Ill.	Diphtheria antitoxin.
21	Swiss Serum and Vaccine Institute, Berne, Switzerland.	Diphtheria antitoxin, antidysenteric serum, antimeningococcic serum, antipneumonic serum, antiplague serum, antistreptococcic serum, tuberculins, anticholera vaccine, antiplague vaccine, antityphoid vaccine, and antitetanic serum.
22	Institut Bactériologique de Lyon, Lyons, France.	Antidiphtheric serum and normal goat serum.
23	Bacterio-Therapeutic Laboratory, Asheville, N. C.	Tuberculins.
24	Farbwerke, vormals Meister Lucius und Brüning, Hoechst-on-Main, Germany.	Diphtheria antitoxin, antidysenteric serum, antimeningococcic serum, antipneumonic serum, antistreptococcic serum, antitetanic serum, and tuberculins.
25	Tuberculin Society of St. Petersburg, St. Petersburg, Russia.	Tuberculinum purum.
27	Institut Pasteur de Lille, Lille, France.	Sérum antivenimeux.
28	Bacteriologisches Institut Lingner, Dresden, Germany.	Pyocyanase.
29	The Behringwerk, Marburg, Germany.	Antitetanic serum and tuberculin.
30	Dr. G. H. Sherman, Detroit, Mich.....	Bacterial vaccines.
31	E. Merck, Darmstadt, Germany.....	Antidiphtheric serum, antimeningococcic serum, antipneumonic serum, antistreptococcic serum, normal horse serum (dried), normal horse serum, and leucofermantin (antitryptic sheep serum).
32	Kalle & Co., Biebrich, Germany.....	Tuberculin (Rosenbach).
33	American Biologic Co., Kansas City, Mo.	Antirabic virus.
34	The Béraneck Laboratory, Neuchatel, Switzerland.	Tuberculin (Béraneck).
35	Dr. Carl Spengler, Davos-Platz, Switzerland.	I. K. immune blood.

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

[Adopted since Jan. 1, 1910.]

BERKELEY, CAL.

PUBLIC LAUNDRIES AND WASHHOUSES—REGULATION OF.

SECTION 1. It shall be unlawful from and after the passage of this ordinance for any person, firm, corporation, or association of persons to establish and operate a public laundry or washhouse within that portion of the city of Berkeley lying east of the following-described line: Commencing at a point on the northern boundary line of the city of Berkeley 100 feet westerly from the intersection of said northern boundary line and the westerly line of Shattuck Avenue; thence southerly and parallel with the meandering westerly line of Shattuck Avenue to the northerly line of Carlton Street; thence easterly along said northerly line of Carlton Street to the easterly line of Fulton Street; thence southerly along said easterly line of Fulton Street and said line extended southerly to the southern boundary line of the city of Berkeley.

SEC. 2. It shall be unlawful from and after the passage of this ordinance for any person, firm, corporation, or association of persons to establish and operate a public laundry or washhouse within the corporate limits of the city of Berkeley in any building the exterior walls of which are within 20 feet of the exterior walls of any other building occupied and used for residence purposes or for a public school.

SEC. 3. It shall be unlawful for any person, firm, corporation or association of persons to establish, maintain, operate or carry on a public laundry or washhouse within the corporate limits of the city of Berkeley in any building, or any portion thereof, or in any annex or outhouse thereto, that shall be occupied or used, either directly or indirectly, as a public hall, store, restaurant, or lodging house, or that is frequented or occupied by many persons, or that is occupied as a stopping place by transient guests, or that is frequented by persons likely to spread infectious, contagious, or loathsome diseases, or that is occupied or used or frequented, directly or indirectly, for any immoral or unlawful purpose.

SEC. 4. It shall be unlawful, within the corporate limits of the city of Berkeley, for any person, firm, corporation, or association of persons to employ in the conduct or operation of a public laundry or washhouse any person suffering from any contagious, infectious, or loathsome disease, or to permit any person suffering from any contagious, infectious, or loathsome disease to lodge, sleep, frequent, or remain in any portion of any building used for the purpose of operating or conducting a public laundry or washhouse, or in any outhouse or annex to any building in which a public laundry or washhouse is being operated or carried on.

SEC. 5. Excepting in cases where clothes are dried by the forced circulation of heated air, or by circulation of the clothes mechanically through air artificially heated, it shall be unlawful for any person, firm, corporation, or association of persons conducting, maintaining, or operating a public laundry or washhouse within the corporate limits of the city of Berkeley to dry any article of clothing washed in such laundry in any room other than one used exclusively for drying purposes, which room must be entirely shut off from any other room, excepting that it may be connected with another room by means of a door opening thereto, in which event such door shall always be kept closed when not being used by a person entering or leaving such drying room, and must be ventilated by means of at least two windows opening to the outer air, which windows shall be on different sides of the room.

SEC. 6. It shall be unlawful for any person, firm, corporation, or association of persons conducting, maintaining, or operating a public laundry or washhouse within the corporate limits of the city of Berkeley to wash or permit to be washed any article of clothing in any room the floor of which is not constructed of cement and drained into the public sewer by means of a cast-iron pipe above ground and a cast-iron or iron-stone pipe under ground, which drainpipe shall be connected with a 9 by 9 inch drainage cesspool set in flush with such floor, and which cesspool shall be trapped and vented so as to prevent sewer gases from entering into such room.

SEC. 7. Any person, firm, corporation, or association of persons who shall violate any of the provisions of this ordinance shall be guilty of a misdemeanor, and, upon conviction thereof, shall be punished by a fine of not exceeding $500 or by imprisonment not exceeding six months, or by both such fine and imprisonment.

SEC. 8. Ordinance No. 407–A is hereby repealed.

SEC. 9. This ordinance shall take effect and be in force 30 days from and after its final passage. [Ordinance in effect Aug. 5, 1910.]

NEW ORLEANS, LA.

STABLES AND MANURE—DESTRUCTION OF BREEDING PLACES OF FLIES.

SECTION 1. Be it ordained by the council of the city of New Orleans, that it shall be the duty of the owner or occupant having on their premises any horse, mule, cow, or other animal, to remove or cause to be removed all manure from the said premises twice weekly from March 15 to December 1, and once a week from December 1 to March 15, and said owner or occupant shall be required to store in screened receptacles, not accessible to flies, all such manure pending its removal.

SEC. 2. Be it further ordained, etc., that it shall be the duty of the owner or occupant or tenant or keeper of any boarding, sales, livery, or other stables where such stock or animals are kept, to remove or cause to be removed, all manure from said stables or premises, twice weekly from March 15 to December 1, and once a week from 1st of December to the 15th of March, and said owner or occupant or tenant or keeper shall be required to store in fly-proof receptacles, not accessible to flies, all such manure pending its removal.

SEC. 3. Be it further ordained, etc., that from June 1 to October 1 manure shall not be used as a fertilizer on gardens, sidewalks, lots, or other open areas, unless and until thoroughly mixed with soil and so covered with soil that flies will not be attracted thereto.

SEC. 4. Be it further ordained, etc., that no manure shall be dumped and left on the street, sidewalk, alley, or open area or lot in any inhabited section nor be used to grade, in whole or in part, any sidewalk, street, alley, open area or lot in said section. And any site used as a public dump for manure shall not be within 300 feet of any building used in whole or in part for dwelling purposes.

SEC. 5. Be it further ordained, etc., that manure shall be conveyed through the streets in the city of New Orleans in such vehicles only as are properly protected against flies by suitable covering.

SEC. 6. Be it further ordained, etc., that all manure stacked or piled for fertilizing purposes on any truck farm or garden in thickly settled neighborhoods shall be so stacked or piled at a distance of not less than 25 feet from any building used, in whole or in part, for dwelling purposes, and shall be stored in a closed bin or screened receptacle, so as to prevent access of flies thereto.

SEC. 7. Be it further ordained, etc., that wherever the duty is put upon the owner of any premises or stable or lot or open area or public place in this ordinance in the owner's absence it shall be the duty of the agent of said owner to comply with the provisions of this ordinance; and for the purposes thereof, any person receiving or collecting rent or attending to said property in any manner shall be deemed to be the agent of the owner.

SEC. 8. Be it further ordained, etc., that any person who shall violate any of the provisions of this ordinance shall be subject to a fine of not less than $5 nor more than $25, or imprisonment in the parish prison for a term of not less than 10 nor more than 30 days, or both, at the discretion of the recorder having jurisdiction of same. [Ordinance adopted June 27, 1911.]

PITTSBURGH, PA.

PLUMBERS, PLUMBING, AND WATER-CLOSETS.

SECTION 1. Be it ordained and enacted by the city of Pittsburgh, in select and common councils assembled, and it is hereby ordained and enacted by the authority of the same, that for the purpose of enforcing the requirements of the laws and regulations relating to plumbing and house drainage, a plumbing inspector shall be permitted to enter any house or building, ground, or premises in the city of Pittsburgh at all times during the 24 hours, day or night, to thoroughly examine said plumbing, drainage, or any nuisance that would affect the public health; and he shall notify or cause to be notified the owner, agent, or occupant of the ground or premises in or on which such violation or nuisance shall be found, to correct, remove, or abate the same in a manner prescribed by the acts of the general assembly approved June 7, 1901, and May 14, 1909.

SEC. 2. No person or persons shall hinder or obstruct or in any manner interfere with any plumbing inspector of the department of public health of the city of Pittsburgh in the performance of his or her duties as such.

SEC. 3. When insanitary conditions exist in any public building, schools, churches, or colleges in the city of Pittsburgh, which in the opinion of the department of public health is a menace to the health of the people who may assemble there, and notice having been served to correct same and said notice not having been complied with, the department of public health shall thereupon order such building or buildings closed until said conditions are corrected and a certificate issued for the reopening of said building or buildings.

SEC. 4. All occupied dwelling houses shall be provided with properly wasted, trapped, and vented sinks with running water for the accommodation of each family occupying said house or houses.

SEC. 5. Floors of water-closet apartments, when in cellars or basements, shall be of some nonabsorbent material. Floors of market houses, restaurants, or hotel kitchens shall be of some nonabsorbent material, such as tile, cement, or asphalt.

SEC. 6. Water-closet apartments must not have direct communication with any dining room or kitchen, nor shall any water-closet be placed in any dining room or kitchen. Water-closet apartments must not be placed in a dining room, kitchen, or sleeping apartment nor have direct communication with a public dining room, restaurant, or kitchen, nor be placed in any room or compartment which has not direct communication with external air either by window or air shaft of at least 4 square feet. And when any window ventilating any water-closet compartment or bathroom opens directly into a vent shaft, no window or any room other than water-closet compartment, bathroom, pantry, or hall shall open into such vent shaft.

SEC. 7. Before any permits for any sewer connections are issued, the plumber will be required to file plans and specifications for plumbing of said building or buildings, and no permit will be issued to carry sewer or drains farther than curb line without said plans and specifications for the completion of the entire work of plumbing and drainage in said proposed building or buildings.

SEC. 8. Any person or persons who shall fail, neglect, or refuse to comply with, or who shall violate any of the provisions of this ordinance, shall upon conviction thereof in a summary proceeding before any police magistrate or alderman in the city of Pittsburgh, be sentenced to pay a fine of not more than $50, and in default of payment thereof to be imprisoned in the county jail for a period not more than 30 days. [Ordinance adopted May 29, 1911.]

ST. PAUL, MINN.

COMMON DRINKING CUP—PROHIBITED IN PUBLIC PLACES.

SECTION 1. That the use of a common or public drinking cup or receptacle for drinking water in any hotel, restaurant, victualing house, theater, factory, store, office building, school, public hall, railway station, railway car, or in any public place in the city of St. Paul, or the furnishing of such common drinking cup or receptacle for use in any such place, is hereby prohibited.

SEC. 2. Any person violating the terms of this ordinance shall be guilty of a misdemeanor, and upon conviction thereof shall be subject to a fine of not less than $5 nor more than $25, nor by imprisonment for not less than 5 days nor more than 25 days. [Ordinance adopted May 16, 1911.]

SEATTLE, WASH.

SWIMMING POOLS AND NATATORIUMS—REGULATION OF.

SECTION 1. It shall be and it is hereby declared unlawful for any person to conduct, manage, or maintain any natatorium, swimming pool, or tank in the city of Seattle, or for any person to bathe in or use any such natatorium, swimming pool, or tank without complying with all the requirements, rules, and regulations in this ordinance contained for the protection and safety of the health and lives of the patrons of such natatoriums, pools, or tanks. The commissioner of health of the city of Seattle, or his duly authorized agents, are hereby charged with the enforcement of the provisions of this ordinance.

SEC. 2. All pools or tanks shall be thoroughly cleaned at least once each week in a manner and by the use of such disinfecting agents or cleansing materials as may be required by the commissioner of health, and all such pools or tanks shall be emptied and the water therein completely changed at least twice each week.

SEC. 3. The sides and bottoms of all pools or tanks shall be white, so that objects may be clearly seen, so far as possible, in all portions of the pool or tank.

SEC. 4. The management of all natatoriums, swimming pools, or tanks shall provide a sufficient number of attendants, instructors, and life savers, with qualifications and training sufficient to enable them in case of necessity to protect and save the lives of those using such pools or tanks: *Provided*, That the provisions of this section shall not apply to clubs and athletic institutions patronized by members only: *Provided, however*, That such institutions shall have attendants and swimming instructors on duty at all times while women and children, under the age of 16 years, are using the pools or tanks therein; but no child under the age of 12 years shall be permitted to use or occupy any pool or tank, whether open to the public generally or not, unless accompanied by a parent or other mature and responsible person.

SEC. 5. No intoxicated person, or one afflicted with tubercular abscesses, venereal or other infectious or contagious disease, shall use or be permitted to use any swimming pool or tank.

SEC. 6. No person shall use, or be permitted to use, any pool or tank while the same is being emptied, or refilled, or while the same is empty, and no patron shall be allowed in or about the same at such time.

SEC. 7. All chutes constructed and used in or above any swimming pool or tank shall be constructed in a safe and proper manner, and no person shall slide down such chute while standing or in a kneeling position.

SEC. 8. All swimming pools or tanks shall be provided with a mechanical filter satisfactory to the commissioner of health, cuspidors shall be kept and maintained in all dressing rooms and at the edge of all pools, and gutters shall be constructed at the edge of all pools or tanks of such depth and of such design as will effectually prevent water or other matter from flowing or falling into such pool or tank.

SEC. 9. All persons before entering any swimming pool or tank shall be required to thoroughly cleanse the body through the use of the shower or other similar device maintained and used for such purpose.

SEC. 10. That all the provisions of this ordinance requiring changes or alterations in construction in natatoriums, swimming pools, or tanks, and the installation of filters, shall be carried out as required by the commissioner of health, but all such changes, alterations, and installations must be made and fully completed and installed within six months from the time of the taking effect of this ordinance.

SEC. 11. That hereafter, before the construction of any natatorium, swimming pool, or tank, the plans and specifications for such structure shall be submitted to and approved by the commissioner of health before a permit therefor shall be issued by the building department.

SEC. 12. No patron, attendant, instructor, or other person while bathing or while engaged or working in or about any pool or tank shall smoke or chew tobacco in any form, and it shall be unlawful for any person to expectorate in the water of any tank or pool, or to blow the nose therein, or in or at any other place than in cuspidors provided for such purpose, and conspicuous signs shall be posted in all such natatoriums, pools, or tanks calling attention to the fact that spitting is prohibited except in the cuspidors and showing the places where such cuspidors are located.

SEC. 13. That a copy of this ordinance shall be posted, and kept posted, in a conspicuous place in all natatoriums, swimming pools, and tanks for the guidance and information of the public and patrons of such places.

SEC. 14. That any person violating or failing to comply with the provisions of this ordinance shall be deemed guilty of a misdemeanor, and upon conviction shall be fined in any sum not exceeding $100, or shall be imprisoned in the city jail for a term not exceeding 30 days, or may be both fined and imprisoned.

SEC. 15. This ordinance shall take effect and be in force 30 days from and after its passage and approval, if approved by the mayor; otherwise it shall take effect at the time it shall become a law under the provisions of the city charter. [Ordinance passed May 15, 1911.]

SYRACUSE, N. Y.

GARBAGE AND REFUSE—CARE AND COLLECTION.

SEC. 7. Subdivision A. Every owner, lessee, or occupant of any building, premises, or place of business shall provide, or cause to be provided, and at all times keep, suitable and sufficient receptacles for receiving and holding all garbage that may accumulate from said building, place of business, or upon said premises or the portion thereof where they may reside. No such receptacle shall be kept on any sidewalk or in any public place longer than may be necessary for the removal of the contents thereof, and all receptacles designed for the reception of garbage shall be provided with proper covers and at all times shall be kept securely closed. Unless kept within private grounds of residences and sufficiently removed from adjoining premises to prevent any offense, the receptacles herein mentioned shall be kept in such places as the commissioner may direct. Said receptacles shall be used only for garbage; ashes and rubbish shall be excluded therefrom.

No vehicle for carrying offal, swill, garbage, or rubbish, the contents of any cesspool or sink, or any manure, or other nauseous substances, except when actually engaged in collecting such materials, shall stand before any residence, building, or place of business; nor shall any such vehicle occupy an unreasonable length of time in loading or unloading, or in passing along any street or inhabited place. When not in use, all such vehicles, and all implements used in connection therewith, shall be stored and kept in some place where no needless offense shall be given the public. All such vehicles, and all receptacles therewith, shall be strong, tight, and covered, and the sides shall be so high above the load that no part thereof shall leak or spill. [Ordinance adopted Mar. 27, 1911.]

TRENTON, N. J.

GARBAGE—REMOVAL.

SEC. 81. That no person shall dump any garbage in any public highway, road, street, avenue, yard, lot, or alley within this city.

SEC. 82. That every person who shall convey any garbage or solid or liquid refuse through or along any street within this city shall use a cart, carriage, or other means of conveyance properly constructed, to be approved by the health officer, and furnished with a sufficient covering so as to prevent the escape of the contents thereof.

SEC. 83. That if in the process of removal any person shall slop or spill, or cause or allow to fall upon any footway, pavement, or carriageway within this city, any garbage, solid or liquid refuse, he shall forthwith remove the same from the place whereon the same may have been slopped or spilled, or may have fallen, and shall immediately thereafter thoroughly sweep or otherwise thoroughly cleanse such place. [Art. I, Sanitary Code, adopted Aug. 1, 1910.]

KINGSTON, N. Y.

BIRTH AND DEATH CERTIFICATES—BURIAL PERMITS.

SEC. 14. *Births.*—It shall be the duty of every physician or midwife attending at the birth of a child, and no physician or midwife being in attendance, the parent or custodian of a child born, to make a certificate of such birth and cause the same to be returned within 36 hours after such birth to the local board of health or person designated by it to receive the same; which said certificate shall be attested by the physician or midwife, if any in attendance, and no physician or midwife being in attendance, by the parent or custodian of a child born, and such certificate shall be made upon the form prescribed by the State department of health. The physician or midwife attending at the birth of a child shall, at the time of filing such certificate of birth, unless it contains the given name of such child, cause to be furnished to the parents or custodian of such child, a name card, which shall be filled in by such parent or custodian with the given name of such child when named, and immediately filed in the same office where certificates of birth are filed. Such blank name cards shall be furnished by the secretary of this board of health without expense, to any person requesting the same.

SEC. 15. *Burial and burial permits.*—Every undertaker, sexton, or other person having charge of any corpse shall procure a burial permit from the local registrar with whom the certificate of death has been filed, or the health officer of the town or municipality, and there shall be no burial or removal of a corpse until a certificate of death has been filed as required by law and the sanitary ordinances of this city, and a burial or transit permit issued; such burial or transit permit shall be obtained at least 6 hours before the time appointed for the funeral of such corpse.

SEC. 16. *Deaths.*—It shall be the duty of the physician last in attendance upon any person who may die to fill out a certificate of the death and the probable cause of the same upon the form prescribed by the State department of health, and duly certify to same and deliver the certificate to the local registrar of vital statistics within 24 hours after the death occurs. In case an inquest is required by law, the coroner or the coroner's physician shall fill out the said certificate, and if no inquest is required and no physician was in attendance at the time of death or immediately prior thereto, the health officer of the municipality or his medical assistant, if any, shall fill out and file the said certificate.

Punishment for violation of foregoing sections.—Any person violating any of the provisions of the foregoing sections of the sanitary ordinances of the city of Kingston, shall be deemed and is hereby declared guilty of a misdemeanor, and upon conviction thereof shall be punished in accordance with the provisions of section 1740 of the penal law of the State of New York. [Amendment of sanitary ordinances adopted by board of health Aug. 9, 1910.]

READING, PA.

BIRTHS, MARRIAGES, AND DEATHS—CERTIFIED COPY OF RECORD TO BE FURNISHED.

RULE 32. A certified copy of the record of the birth, marriage, or death of any person shall be furnished by the secretary upon payment of the sum of 50 cents by the party applying for said certificate, provided that children seeking employment, who must prove their age in order to obtain working certificates, shall be granted birth certificates free of charge. For any search of the records when no certified copy is made the secretary shall charge a fee of 10 cents except in cases of public officials requiring information from the records in the discharge of their duties. [Regulations. board of health, adopted May 15, 1911.]

DISINTERMENTS.

RULE 31. The remains of any body buried within the city of Reading shall not be disinterred without first obtaining a permit from the secretary of the board of health, for which the sum of 25 cents shall be paid. No disinterment permits shall be granted during the period from April 1 to October 15.

No disinterment of any body dead of anthrax, Asiatic cholera, relapsing fever, yellow fever, epidemic, cerebrospinal meningitis, or cerebrospinal fever, scarlet fever, diphtheria, or membraneous croup shall be made within 10 years from the date of the original burial of the same, and no disinterment of any body dead of smallpox shall be made at any time. All disinterments must be made within 72 hours from the date of the issue of the permit, between sunrise and sunset, and the remains of any disinterred body shall not be exposed to view. [Regulations, board of health, adopted May 15, 1911.]

SYRACUSE, N. Y.

BIRTH AND DEATH CERTIFICATES, BURIAL AND TRANSFER PERMITS.

SECTION 6, SUBDIVISION A. All births shall be duly reported to the commissioner within 36 hours after the event, and all deaths within 24 hours; the facts to be stated legibly and fully upon blanks furnished by the commissioner. Such report shall be made by the physician, midwife, nurse, or parent in case of birth, and by the physician, undertaker, sexton, coroner, or any other person with knowledge of the facts in case of death.

SUBD. C. *Undertaker.*—No dead body of any human being shall be buried or be removed for the purpose of burial, unless accompanied to its burial place by a burial or transit permit issued by the commissioner upon receipt of a full, complete, and legible death certificate of the deceased signed by the physician who last attended upon the deceased or by one of the coroners of the county. Bodies brought to the city from other places shall not be received for burial in any cemetery until the commissioner shall have issued and indorsed the burial permit. No physician shall issue any certificate of death under this ordinance or the laws of this State unless he was the medical attendant on the person named in said certificate during his or her last illness, provided said person died from natural causes. No person other than the said physician shall make such certificate. Under no circumstances shall an undertaker fill out in a death certificate the part required of him, except when the full name of the deceased has been written in ink thereon at the proper place by the attending physician or the coroner of this county. The keeper of every cemetery shall demand and receive from the undertaker said burial permit before the body is allowed to be buried. No dead body shall be kept unburied longer than four days without a permit from the commissioner. [Ordinance, adopted Mar. 27, 1911.]

TRENTON, N. J.

MARRIAGES, BIRTHS, AND DEATHS—NOTIFICATION OF.

SECTION 73. Every minister of the gospel, justice of the peace, or other person having authority to solemnize marriages, before whom, and the clerk or keeper of the minutes of every religious society before which any marriage shall be solemnized in this city, shall transmit to the registrar of vital statistics of this city the marriage license, together with the certificate of marriage, in writing, of every such marriage within five days after the same shall have been solemnized. Any minister, magistrate, or other person or clerk or keeper of the minutes of any religious society, institution, or organization who shall neglect or fail to transmit such certificate and license to the registrar of vital statistics within the time aforesaid shall be liable to a penalty not exceeding $50.

SEC. 74. That every physician or midwife, in case no physician or midwife be present then the parent of any such child born in this city, shall report in writing to said registrar of vital statistics within five days thereafter the following particulars, as far as known: The day of the month and the year of the birth, the precise place of residence, the name of both parents, the maiden name of the mother, the birthplace, residence, occupation, age, and color of the parents; the sex and color of the parents, the sex and color of the child and its name, if it be named, also the name of the attending physician or midwife. And every such physician, midwife, or parent who shall refuse or neglect to make such report within the time aforesaid shall forfeit and pay a penalty of $50 for every such offense.

SEC. 75. That the physician who may have attended during his or her last illness any person dying within the city shall, within 12 hours after the death of such person, furnish the undertaker or any member of the family applying therefor, a certificate in writing of the death of said person, which certificate shall show the name, age, sex, color, nativity, occupation, conjugal condition, last place of residence, the names and country of birth of each of the parents of the decedent, place of death and the cause of death, and length of sickness, to the best of his knowledge. And any such physician who fails to furnish the certificate required by this section shall forfeit and pay a penalty of $50 for every such offense.

SEC. 76. That every undertaker who shall have received any such certificate mentioned in the next preceding section, and who shall superintend the burial of the person named therein within this city shall, within five days after the burial of the person named therein, present such certificate to the said registrar of vital statistics. And any such undertaker who fails to present such certificate within the time aforesaid shall forfeit and pay a penalty of $50 for every such offense.

SEC. 77. That on the receipt of any information respecting the neglect or failure to make return of any birth, death or marriage, by any physician, midwife, clergyman, magistrate, or other person professionally officiating at such death, birth, or marriage, within this city, the health officer, or other persons acting under and by authority of this board, shall make inquiry respecting such neglect or failure, and report thereon to this board at the meeting which shall be held next after the receipt of such information. [Art. I, sanitary code, adopted Aug. 1, 1910.]

BERKELEY, CAL.

INTERMENT OF BODIES—PROHIBITED WITHIN THE CITY.

SECTION. 1. It shall be unlawful for any person, association, or corporation to bury or inter, or cause to be buried or interred, the dead body of any person in any place in the city of Berkeley, or to maintain a cemetery or graveyard, within the limits of the city of Berkeley.

SEC. 2. Any person, association, or corporation violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be punished by a fine not to exceed $300 or by imprisonment not exceeding 3 months, or by both such fine and imprisonment. Any judgment imposing a fine may provide for its satisfaction by imprisonment in the county jail for the time, at the rate and in the manner provided by law.

SEC. 3. This ordinance shall take effect and be in force 30 days from and after its final passage. [Ordinance in effect Aug. 30, 1910.]

LOS ANGELES, CAL.

MORGUES AND UNDERTAKING ESTABLISHMENTS.

SECTION 1. It shall be unlawful for any person, firm, or corporation to establish, conduct, maintain, or use, or to cause or permit to be established, conducted, maintained, or used, any morgue or undertaking establishment in the city of Los Angeles without first obtaining a permit in writing so to do from the board of health of said city. No such permit shall be granted by said board except upon the written application of the person, firm, or corporation desiring the same, filed with said board, stating the place where such morgue or undertaking establishment is to be located; and no such permit shall be granted to any person, firm, or corporation to conduct, establish, or maintain a morgue or undertaking establishment unless there shall be first filed with the said board the written consent to the granting of such permit of the owners and tenants of the frontage of the property on the side of the street within 100 feet on each side of the lot or parcel of land on which such morgue or undertaking establishment is proposed to be established, conducted, or maintained.

In the event that such morgue or undertaking establishment is proposed to be located on a corner lot, the person, firm, or corporation desiring to establish, conduct, or maintain such morgue or undertaking establishment shall first file with said board, before obtaining such permit, the written consent to the granting of such permit of the owners and tenants of the frontage of the property fronting on the side of each street, and within 100 feet on each side of such lot, upon which such morgue or undertaking establishment is proposed to be established, conducted, or maintained.

SEC. 2. The board of health is hereby authorized and empowered to revoke the permit of any person, firm, or corporation issued under the provisions of this ordinance whenever it shall appear to said board that the person, firm, or corporation to whom such permit is granted is maintaining, conducting, or using said morgue or undertaking establishment in an unsanitary or unlawful manner.

SEC. 3. Nothing contained in section 1 of this ordinance shall be deemed to apply to any morgue or undertaking establishment which shall have been established and is being conducted or maintained at the time this ordinance becomes effective which when so established was located at a distance of more than 100 feet of any church, schoolhouse, residence or dwelling house.

SEC. 4. That ordinance No. 8076 (new series), entitled "An ordinance concerning morgues and undertaking establishments," approved February 19, 1903, be, and the same is hereby, repealed; provided that such repeal shall not affect or prevent the prosecution and punishment of any person, firm, or corporation for any act done or permitted in violation of any provision of said ordinance which is repealed by this ordinance, and shall not affect any prosecution or action which may be pending in any court for the violation of the ordinance repealed by this ordinance.

SEC. 5. That any person, firm, or corporation violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punishable by a fine of not less than $5 nor more than $500, or by imprisonment in the city jail for a period of not less than five days nor more than six months, or by both such fine and imprisonment. [Ordinance adopted Jan. 24, 1911.]

PLAGUE-PREVENTION WORK.

DISTRIBUTION OF POISON.

In connection with the making and maintenance of a squirrel-free zone around the cities of California on San Francisco Bay, 4,310 acres of land in Alameda County were covered with poison during the week ended December 23, 1911.

During the same period 11,880 acres of land in San Joaquin County and 14,240 acres in Stanislaus County were covered with poison for the purpose of eradicating plague foci.

RECORD OF PLAGUE INFECTION.

Places.	Date of last case of human plague.	Date of last case of rat plague.	Date of last case of squirrel plague.	Total number of rodents found infected since May, 1907.
California:				
Cities—				
San Francisco	Jan. 30, 1908	Oct. 23, 1908	None	398 rats.
Oakland	Aug. 9, 1911	Dec. 1, 1908	do	126 rats.
Berkeley	Aug. 27, 1907	None	do	None.
Los Angeles	Aug. 11, 1908	do	Aug. 21, 1908	1 squirrel.
Counties—				
Alameda (exclusive of Oakland and Berkeley).	Sept. 26, 1909	Wood rat, Oct. 17, 1909.	Oct. 9, 1911	114 squirrels and 1 wood rat.
Contra Costa	July 21, 1911	None	Sept. 23, 1911	364 squirrels.
Fresno	None	do	Oct. 27, 1911	1 squirrel.
Merced	do	do	July 13, 1911	5 squirrels.
Monterey	do	do	Aug. 6, 1911	Do.
San Benito	June 5, 1910	do	June 8, 1911	22 squirrels.
San Joaquin	Sept. 18, 1911	do	Aug. 26, 1911	18 squirrels.
San Luis Obispo	None	do	Jan. 29, 1910	1 squirrel.
Santa Clara	Aug. 23, 1910	do	Oct. 5, 1910	23 squirrels.
Santa Cruz	None	do	May 17, 1910	3 squirrels.
Stanislaus	do	do	June 2, 1911	13 squirrels.
Washington:				
City—				
Seattle	Oct. 30, 1907	Sept. 21, 1911	None	25 rats.

RATS COLLECTED AND EXAMINED FOR PLAGUE INFECTION.

Places.	Week ended—	Found dead.	Total collected.	Examined.	Found infected.
California:					
Cities—					
Berkeley	Dec. 23, 1911	1	[1] 139	76	.....
Fresno	do	.....	[2] 81	81	.....
Oakland	do	13	[3] 507	410	.....
San Francisco	do	12	[4] 1,520	1,095	.....
Counties—					
San Joaquin	do	.....	[5] 102	102	.....
Santa Clara	do	.....	[6] 108	108	.....
Washington:					
City—					
Seattle	do	.....	1,041	892	.....

[1] Identified: Mus norvegicus, 77; Mus rattus, 0; Mus musculus, 62.
[2] Identified: Mus alexandrinus, 69; Mus musculus, 1; unidentified, 11.
[3] Identified: Mus norvegicus, 422; Mus musculus, 85.
[4] Identified: Mus norvegicus, 703; Mus rattus, 203; Mus musculus, 423; Mus alexandrinus, 191.
[5] Identified: Mus norvegicus, 102.
[6] Identified: Mus norvegicus, 108.

SQUIRRELS COLLECTED AND EXAMINED FOR PLAGUE INFECTION.

Places.	Week ended—	Shot or trapped.	Found dead.	Examined.	Found infected.
California:					
Counties—					
Alameda	Dec. 23, 1911		56		
Stanislaus	do	20		20	
Total		20	56	20	

OTHER ANIMALS COLLECTED AND EXAMINED.

Place.	Week ended—	Animals collected.	Examined.	Found infected.
California:				
County—				
Stanislaus	Dec. 23, 1911	2 rabbits	2	
Total			2	

SMALLPOX IN THE UNITED STATES.

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

REPORTS RECEIVED DURING WEEK ENDED JAN. 12, 1912.

Places.	Date.	Cases.	Deaths.	Remarks.
California:				
Counties—				
Los Angeles	Nov. 1–30	6	3	
Riverside	do	2		
Sacramento	do	1		
San Diego	do	1		
San Francisco	do	1		
Santa Clara	do	3		
Santa Cruz	do	1		
Total for State		15	3	
Kansas:				
Counties—				
Bourbon	Oct. 1–31	1		
Cloud	do	2		
Cowley	do	24		
Greely	do	4		
Kearny	do	1		
Leavenworth	do	1		
Marshall	do	3		
Riley	do	4		
Shawnee	do	6	1	
Wyandotte	do	2		
Total for State		48	1	
Massachusetts:				
Counties—				
Hampden	Dec. 1–31	2		
Middlesex	do		1	
Suffolk	do		1	
Total for State		2	2	

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received during week ended Jan. 12, 1912.

Places.	Date.	Cases.	Deaths.	Remarks.
Montana:				
Counties—				
Cascade	Sept. 1-30	5		
Deerlodge	do	11		
Missoula	do	1		
Silverbow	do	1		
Total for State		18		
Cascade	Oct. 1-31	5		
Missoula	do	1		
Total for State		6		
Cascade	Nov. 1-30	7		
Flathead	do	1		
Missoula	do	4	1	
Sanders	do	3		
Silverbow	do	1		
Total for State		16	1	
*Tennessee:				
Knoxville	Dec.17-30	7		
Washington:				
Counties—				
Benton	Oct. 1-31	1		
King	do	2		
Pend Oreille	do	3		
Pierce	do	14		
Skagit	do	1		
Spokane	do	26		
Stevens	do	1		
Walla Walla	do	1		
Yakima	do	1		
Total for State		50		

For reports received from July 1 to December 29, see Public Health Reports for December 29, 1911. The cumulative table of reported cases of smallpox, heretofore published each week, has been discontinued, and in its place summaries will be published periodically.

MORBIDITY AND MORTALITY.

MORBIDITY AND MORTALITY TABLE, CITIES OF THE UNITED STATES, FOR WEEK ENDED DEC. 23, 1911.

Cities.	Population United States census 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Smallpox.		Tuberculosis.		Typhoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cities having over 500,000 inhabitants.														
Baltimore, Md	558,485	168	30	2	6	....	24	1	....	....	31	19	10	4
Boston, Mass	670,585	189	59	4	82	....	28	2	....	....	61	17	7	1
Chicago, Ill	2,185,283	623	166	15	72	1	116	5	....	....	143	70	31	7
Cleveland, Ohio	560,663	145	35	4	40	....	25	3	....	....	17	7	4	....
New York, N. Y	4,766,883	1,310	275	23	477	5	177	8	....	....	458	171	67	14
Philadelphia, Pa	1,549,008	465	81	13	8	....	25	1	....	....	61	54	21	3
Pittsburgh, Pa	533,905	142	45	6	7	....	24	....	....	....	25	13	15	2
St. Louis, Mo	687,029	215	34	1	11	....	19	....	....	....	40	28	2	1
Cities having from 300,000 to 500,000 inhabitants.														
Buffalo, N. Y	423,715	131	47	1	19	....	14	....	....	....	19	12	12	1
Cincinnati, Ohio	364,463	98	14	3	....	....	18	....	2	....	32	12	....	....
Detroit, Mich	465,766	137	30	3	....	....	22	....	3	....	....	....	....	....
Los Angeles, Cal	319,198	111	8	....	2	....	10	....	4	....	22	18	4	2
Milwaukee, Wis	373,857	....	15	1	12	1	24	3	....	....	15	3	20	2
Newark, N. J	347,469	91	35	1	....	....	13	....	....	....	22	13	....	1
New Orleans, La	339,075	124	4	1	1	....	10	....	2	....	15	14	2	4
San Francisco, Cal	416,912	165	2	....	77	1	5	....	....	....	9	11	2	1
Cities having from 200,000 to 300,000 inhabitants.														
Denver, Colo	213,381	49	14	1	2	....	9	....	1	....	....	....	....	6
Jersey City, N. J	267,779	83	7	1	....	....	3	....	1	....	9	10	1	....
Kansas City, Mo	248,381	....	2	....	1	....	....	....	1	....	5	13	....	2
Providence, R. I	224,326	65	21	....	7	1	9	....	1	....	....	7	4	1
Cities having from 100,000 to 200,000 inhabitants.														
Bridgeport, Conn	102,054	28	3	....	....	....	1	....	....	....	4	....	1	....
Cambridge, Mass	104,839	38	7	....	1	....	6	....	....	....	5	3	1	....
Columbus, Ohio	181,548	63	10	1	9	....	10	....	....	....	4	6	1	1
Dayton, Ohio	116,577	36	4	....	....	....	....	....	....	....	....	1	2	....
Fall River, Mass	119,295	28	9	1	1	....	....	....	....	....	2	6	5	....
Grand Rapids, Mich	112,571	33	....	1	....	....	2	....	....	....	2	3	1	....
Lowell, Mass	106,294	33	1	1	13	2	12	....	....	....	2	....	1	....
Nashville, Tenn	110,364	35	1	....	....	....	1	....	....	....	3	2	1	....
Oakland, Cal	150,174	38	1	....	1	....	2	....	....	....	2	3	1	....
Omaha, Nebr	124,096	26	1	....	1	....	1	....	....	....	1	....	....	....
Spokane, Wash	104,402	....	1	....	5	....	2	....	10	....	....	1	....	....
Toledo, Ohio	168,497	51	13	2	3	....	8	....	....	....	1	6	3	2
Worcester, Mass	145,986	36	7	2	....	....	10	....	....	....	4	1	....	....
Cities having from 50,000 to 100,000 inhabitants.														
Altoona, Pa	52,127	....	2	....	....	....	....	....	....	....	1	....	1	....
Bayonne, N. J	55,545	....	2	....	2	....	7	3	....	....	1	2	....	....
Brockton, Mass	56,878	8	....	....	20	....	1	....	....	....	6	....	1	....
Camden, N. J	94,538	....	4	....	....	....	2	....	....	....	....	1	....	....
Duluth, Minn	78,466	15	1	....	....	....	3	....	5	....	2	2	1	....
Elizabeth, N. J	73,409	20	3	....	3	1	3	....	....	....	2	1	2	....
Evansville, Ind	69,647	16	1	....	1	....	....	....	....	....	....	3	6	....
Harrisburg, Pa	64,186	23	7	1	....	....	1	....	....	....	....	2	....	....
Hartford, Conn	98,915	36	7	1	....	....	9	....	....	....	....	2	....	....
Hoboken, N. J	70,324	....	2	1	....	....	....	....	....	....	1	....	....	....
Johnstown, Pa	55,482	20	3	1	3	....	1	....	....	....	1	3	3	1
Kansas City, Kans	82,331	4	....	....	....	....	....	....	2	....	1	....	2	....
Lawrence, Mass	85,892	25	....	....	1	....	3	....	....	....	1	4	1	....
Lynn, Mass	89,336	13	1	....	1	....	2	....	....	....	3	1	....	....
Manchester, N. H	70,063	24	7	....	6	....	3	....	....	....	4	4	....	....
New Bedford, Mass	96,652	25	1	....	12	....	3	....	....	....	4	1	4	2
Oklahoma City, Okla	64,205	9	2	....	1	....	2	....	....	....	....	1	....	....
Passaic, N. J	54,773	15	4	....	....	....	2	....	....	....	1	1	....	....

MORBIDITY AND MORTALITY—Continued.

Morbidity and mortality table, cities of the United States, for week ended Dec. 23, 1911—Continued.

Cities.	Population United States Census 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Smallpox.		Tuberculosis.		Typhoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cities having from 50,000 to 100,000 inhabitants—Con.														
Pawtucket, R. I.	51,622	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Reading, Pa.	96,071	22	7	1	1	.....	4	.....	.....	.....	.....	.....	3	.....
San Antonio, Tex.	96,614	29	2	.....	1	.....	2	.....	.....	.....	.....	5	1	.....
Schenectady, N. Y.	72,826	20	2	.....	1	.....	.....	.....	.....	.....	3	.....	.....	.....
South Bend, Ind.	53,684	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	2	2	.....
Springfield, Ill.	51,678	22	4	1	1	.....	1	.....	1	.....	.....	1	1	1
Springfield, Mass.	88,926	37	2	1	19	1	4	.....	.....	.....	3	5	2	.....
Terre Haute, Ind.	58,157	15	4	1	1	.....	1	.....	.....	.....	5	2	1	.....
Trenton, N. J.	96,815	37	6	1	.....	.....	1	.....	.....	.....	10	4	6	4
Wilkes-Barre, Pa.	67,105	21	7	.....	165	1	2	.....	.....	.....	4	.....	1	.....
Wilmington, Del.	87,411	37	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	2
Yonkers, N. Y.	79,803	23	6	1	2	.....	10	.....	.....	.....	6	2	1	.....
Cities having from 25,000 to 50,000 inhabitants.														
Atlantic City, N. J.	46,150	.....	3	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	34,668	14	1	1	.....	.....	.....	.....	.....	.....	1	2	.....	.....
Aurora, Ill.	29,807	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Berkeley, Cal.	40,434	9	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	48,443	15	1	1	1	.....	.....	.....	.....	.....	.....	.....	1	.....
Brookline, Mass.	27,792	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butte, Mont.	39,165	17	2	.....	.....	.....	3	.....	.....	.....	.....	2	.....	1
Chattanooga, Tenn.	44,604	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Chelsea, Mass.	32,452	17	1	1	2	.....	3	.....	.....	.....	1	1	.....	.....
Chicopee, Mass.	25,401	6	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Danville, Ill.	27,871	8	3	.....	.....	.....	1	.....	.....	.....	.....	2	.....	.....
Dubuque, Iowa	38,494	10	5	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Orange, N. J.	34,371	5	2	.....	.....	.....	1	.....	.....	.....	.....	1	1	.....
Elmira, N. Y.	37,176	11	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
El Paso, Tex.	39,279	26	.....	.....	.....	.....	4	1	3	1	1	9	.....	.....
Everett, Mass.	33,484	4	3	.....	.....	.....	4	.....	.....	.....	2	.....	.....	.....
Haverhill, Mass.	44,115	15	.....	.....	17	.....	.....	.....	.....	.....	2	.....	1	.....
La Crosse, Wis.	30,417	.....	6	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Lancaster, Pa.	47,227	.....	6	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Lexington, Ky.	35,099	11	3	.....	3	.....	1	.....	.....	.....	.....	1	.....	.....
Lima, Ohio	30,508	4	3	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Lynchburg, Va.	29,494	18	1	.....	.....	.....	8	.....	.....	.....	.....	.....	2	.....
Malden, Mass.	44,404	6	2	.....	1	.....	2	.....	.....	.....	3	1	.....	.....
McKeesport, Pa.	42,694	12	1	1	.....	1	.....	.....	.....	.....	1	.....	3	2
Montgomery, Ala.	38,136	15	1	.....	.....	.....	.....	.....	2	.....	.....	.....	1	1
Mount Vernon, N. Y.	30,919	.....	.....	.....	20	.....	1	.....	.....	.....	2	.....	1	.....
Newcastle Pa.	36,280	.....	15	.....	2	.....	.....	.....	.....	.....	.....	.....	17	.....
Newport, Ky.	30,309	10	1	.....	.....	.....	1	.....	1	.....	3	3	1	1
Newton, Mass.	39,806	6	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Niagara Falls, N. Y.	30,445	9	3	.....	.....	.....	1	.....	.....	.....	.....	1	2	1
Norristown, Pa.	27,875	2	.....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Orange, N. J.	29,630	8	3	1	.....	.....	5	.....	.....	.....	1	.....	2	.....
Pasadena, Cal.	30,291	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Pittsfield, Mass.	32,121	7	4	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Portsmouth, Va.	33,190	10	1	.....	.....	.....	2	.....	1	.....	.....	.....	.....	.....
Racine, Wis.	38,002	8	4	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Roanoke, Va.	34,874	7	4	.....	10	.....	2	.....	.....	.....	7	1	2	.....
Rockford, Ill.	45,401	10	.....	.....	.....	.....	1	.....	.....	.....	.....	1	7	.....
Salem, Mass.	43,697	11	1	.....	.....	.....	2	.....	.....	.....	.....	.....	1	.....
San Diego, Cal.	39,578	3	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
South Omaha, Nebr.	26,259	6	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Superior, Wis.	40,384	5	4	.....	.....	.....	.....	.....	7	.....	.....	.....	.....	1
Taunton, Mass.	34,259	13	.....	.....	.....	.....	1	.....	.....	.....	.....	2	.....	.....
Waltham, Mass.	27,834	9	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....
West Hoboken, N. J.	35,403	.....	1	.....	1	.....	1	.....	.....	.....	.....	.....	2	.....
Wheeling, W. Va.	41,641	14	7	.....	.....	.....	.....	.....	.....	.....	3	1	3	.....
Williamsport, Pa.	31,860	11	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wilmington, N. C.	25,748	11	.....	.....	.....	.....	1	.....	2	.....	.....	2	3	.....
York, Pa.	44,750	.....	3	2	.....	.....	.....	.....	.....	.....	2	.....	3	1
Zanesville, Ohio	28,026	8	7	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....

MORBIDITY AND MORTALITY—Continued.

Morbidity and mortality table, cities of the United States, for week ended Dec. 23, 1911—Continued.

Cities.	Population United States Census 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Smallpox.		Tuberculosis.		Typhoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cities having less than 25,000 inhabitants.														
Ann Arbor, Mich	14,817	4									3			
Beaver Falls, Pa	12,191	3	7	2			1						7	1
Bennington, Vt		2	1											
Braddock, Pa	19,957	6	2				2							
Butler, Pa	20,782	6	2											
Cambridge, Ohio	11,327	4										2	1	
Camden, S. C		3												
Carbondale, Pa	17,040	1	2											
Clinton, Mass	13,075	2												
Coffeyville, Kans	12,687						2						1	
Columbus, Ga	20,554	5												
Concord, N. H	21,497	8										1		
Cumberland, Md	21,839	9	1								2		7	
Dunkirk, N. Y		0					1						3	
Galesburg, Ill	22,089	2							1					
Harrison, N. J	14,498	4	1						1					
Hyde Park, Mass	15,507	2					2							
Kearny, N. J	18,659	3	1		2						2		1	
Kokomo, Ind	17,012	12							4			3		
La Fayette, Ind	20,081	5			1							2		
Lebanon, Pa	19,240		4								1			
Manistee, Mich	12,381		2	1			14							
Marinette, Wis	14,610	2			9							1	2	
Marlboro, Mass	14,579	3												
Massillon, Ohio	13,879	0	2				1							
Medford, Mass	23,150	5	3	1								1		
Melrose, Mass	15,715	8			1							1		
Moline, Ill	24,199	9	5									1	1	
Mont Clair, N. J	21,150	3	1								2			
Morristown, N. J	12,507	3	1		1		1				1		2	
Nanticoke, Pa	18,857	5			24									
Newburyport, Mass	19,240	4												1
North Adams, Mass	22,012	5												
Northampton, Mass	19,431	3									2	1	1	
Ottumwa, Iowa	22,012	5	1	1			1				1			
Peekskill, N. Y		3									1	1		
Plainfield, N. J	22,550	4			1		1				2			
Pottstown, Pa		13					1					2		
Saratoga Springs, N. Y		5												
South Bethlehem, Pa	19,973	7			1							1		
Steelton, Pa	14,246	1	10	1					1		2			
Wilkinsburg, Pa	18,924	4	1				3					1		
Woburn, Mass	15,308	3					2							

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

FLORIDA.—Week ended December 23, 1911. Reports to the State board of health show diphtheria present in 5 localities with 9 cases, malaria in 3 localities with 8 cases, smallpox in 1 county (Sumter) with 2 cases, tuberculosis in 7 localities with 9 cases, typhoid fever in 7 localities with 10 cases.

NEW JERSEY.—Month ended December 10, 1911. Population, 2,537,167. Total number of deaths from all causes 2,791, including diphtheria 51, measles 1, scarlet fever 1, tuberculosis 318, typhoid fever 34.

PENNSYLVANIA.—Mortality. Reports from the State department of health show as follows: Month of August, 1911. Total number of deaths reported 9,388, including typhoid fever 170, scarlet fever 28, diphtheria 73, measles 19, whooping cough 92, influenza 15, malaria 1, tuberculosis of the lungs 682, tuberculosis of other organs 136, cancer 444, diabetes 60, meningitis 52, acute anterior poliomyelitis 10, pneumonia 345, diarrhea and enteritis (under 2 years) 1,814, diarrhea and enteritis (over 2 years) 179, Bright's disease 469, early infancy 736, suicide 85, accidents in mines 89, railway injuries 96, other forms of violence 477, all other diseases 3,316.

Month of September, 1911. Total number of deaths 8,666, including typhoid fever 201, scarlet fever 26, diphtheria 147, measles 17, whooping cough 57, influenza 12, malaria 5, tuberculosis of the lungs 607, tuberculosis of other organs 128, cancer 439, diabetes 75, pellagra 1, meningitis 39, acute anterior poliomyelitis 9, pneumonia 437, diarrhea and enteritis (under 2 years) 1,266, diarrhea and enteritis (over 2 years) 129, Bright's disease 442, early infancy 681, suicide 85, accidents in mines 96, railway injuries 114, other forms of violence 382, all other diseases 3,271.

FOREIGN AND INSULAR.

AUSTRIA-HUNGARY.

Status of Cholera.

According to information received from Ambassador Kerens at Vienna, 11 new cases of cholera were reported in Hungary during the period from November 12 to 18, 1911. The cases occurred at five localities.

BULGARIA.

Quarantine Restrictions against Cholera Removed.

Consul General Harvey at Bucharest reports: According to information received from the Bulgarian foreign office the restrictions that have been in force against travelers and products arriving from Turkey, Roumania, Italy, and Austria-Hungary on account of cholera were removed November 22, 1911.

CHINA.

Measures to Protect the Railway Zone against Plague.

Counsel Maynard at Harbin reports November 6: In order to safeguard the railway zone, the manager of the Chinese Eastern Railway has issued orders that thermometrical examinations shall be made at Manchuria station of all third and fourth class passengers eastbound from the Transbaikal Province.

Dr. Morieff, chairman of the branch sanitary executive committee at Manchuria Station, has telegraphed that patrols have been stationed on all roads which lead to villages, and two examination stations have been established for persons traveling on foot or in carts, and in addition to this six horse patrols have been organized. Beyond the railway zone the roads are patrolled by Chinese who transfer all travelers to the Russian horse patrols, who in turn conduct them to the examination stations.

The branch sanitary executive committee at Hailar have requested permission to establish at Manchuria Station a detention camp, in order to conduct a five-days' observation for travelers from points between Karimskaya and Manchuria Station, and to provide 10 fenced-in heated cars for observation and isolation at Hailar Station to facilitate the inspection of freight and passenger trains arriving at Hailar at night. In addition to this they request that the medical staff at Hailar Station be augmented by the addition of 8 assistant physicians, this number being required for the inspection of the population in the neighboring villages.

ECUADOR.

Plague and Yellow Fever.

The following statement with regard to plague and yellow fever in Ecuador was received from the director of public health for the period, November 15–30, 1911:

Plague.—At Guayaquil, 46 cases with 19 deaths.

Yellow fever.—At Bucay, 2 cases; at Guayaquil, 8 cases with 4 deaths; at Milagro, 1 case.

And for the period, December 1–30, 1911:

Plague.—At Guayaquil, 56 cases with 23 deaths.

Yellow fever.—At Bucay, 1 death; at Duran, 3 cases with 2 deaths; at Milagro, 7 cases with 1 death.

GIBRALTAR.

Restrictions Against Palermo on Account of Cholera Removed.

The following notice was issued December 6, 1911, by the secretary of the board of health:

With reference to the board of health notice of July 3 last, it has been decided by the board that arrivals from Palermo shall be admitted to free pratique.

HAWAII.

Record of Plague Infection.

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

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

A case of human plague was reported at Kapulena, Hawaii, October 28, 1911.

At Hilo the last case of human plague occurred March 23, 1910. At Honokaa, 60 miles from Hilo, a fatal case occurred April 20, 1911.

The last plague-infected rat was found at Honokaa December 18, 1911. A plague-infected rat was found at Hilo during the week ended June 10, 1911.

Honolulu—Plague-Prevention Work.

Chief Quarantine Officer Ramus reports, December 18:

Week ended Dec. 16, 1911.

Total rats and mongoose taken	470
Rats trapped	463
Mongoose trapped	7
Rats examined bacteriologically	404
Classification of rats trapped:	
Mus alexandrianus	63
Mus musculus	71
Mus norvegicus	27
Mus rattus	302
Average number of traps set daily	1,720

INDIA.

Madras—Cholera.

Consul Olivares reports November 28: During the week ended November 25, 1911, 82 cases of cholera with 65 deaths were reported in the city of Madras, as compared with 100 cases with 74 deaths

reported during the previous week. The disease continues to be prevalent throughout the city and to be present among all classes of the population. Of the 82 cases reported 69 were Hindus. A continued decrease in the epidemic is reported from the district of Madura, 15 cases with 12 deaths having been reported for the week, as compared with 61 cases with 36 deaths reported during the previous week.

ITALY.

Status of Cholera.

During the period from November 26 to December 2, 1911, 51 cases of cholera with 34 deaths were officially reported in Italy. These figures show a decrease of 26 cases with 5 deaths from the number reported for the previous week. All the cases reported occurred in the island of Sicily. The rest of the Kingdom of Italy is considered free from cholera.

Naples—Examination of Emigrants.

Surg. Geddings reports:
Vessels inspected during the week ended December 16, 1911:

NAPLES.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of baggage inspected and passed.	Pieces of baggage disinfected.
Dec. 10	San Guglielmo	New York	429	110	730
12	Caronia	do			
12	Duca di Genova	do	645	120	850
13	San Giovanni	do	66	5	80
15	Venezia	do	210	55	280
	Total		1,350	290	1,940

PALERMO.

Dec. 13	San Giovanni	New York	343	150	200
16	Venezia	do	160	150	225
	Total		503	300	425

JAPAN.

Infectious Diseases in Kanagawa Ken.

Surg. Irwin at Yokohama reports December 4: In Kanagawa Ken 378 cases of diphtheria, 240 of dysentery, 79 of scarlet fever, 2 of smallpox, and 555 of typhoid fever were reported present November 29, 1911.

MONTENEGRO.

Cholera.

The following information was received from the royal ministry of foreign affairs at Cettinge: During the period from November 1 to 10, 1911, 9 cases of cholera with 5 deaths were reported in Montenegro. The cases occurred in 5 localities.

ROUMANIA.

Constanta Declared Free from Cholera.

Consul General Harvey reports: According to information received from the Roumanian foreign office the town and district of Constanta were declared free from cholera December 12, 1911, no new case having been reported since November 6. The last remaining case was discharged November 23, 1911.

TUNIS.

Status of Cholera.

According to information received from the ministry of foreign affairs at Paris, 371 deaths from cholera were reported in the regency of Tunis during the period from November 16 to 24, 1911, and from November 25 to December 7, 1911, 210 deaths.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.

REPORTS RECEIVED DURING WEEK ENDED JAN. 12, 1912.

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

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Croatia and Slavonia				Total Oct. 22–Dec. 3: Cases, 31.
Sriem	Oct. 22–Dec. 3	31		
Hungary				Total Nov. 19–Dec. 9: Cases 16.
Torontal	Nov. 19–Dec. 9	16	2	
Italy				Dec. 3–9: Cases, 27; deaths, 14.
Provinces—				
Caltanisetta	Dec. 3–9	3	3	
Girgenti	do	24	11	
Malta	Dec. 3–10	2	2	
Montenegro	Nov. 4–11	9	5	
Tunis Regency				Total Nov. 25–Dec. 7: Cases 169; deaths, 210.
Beja district	Nov. 25–Dec. 7	30	35	
Bizerta district	Nov. 25–Dec. 5	9	15	
Turkey in Asia:				
Kharput	Nov. 19–Dec. 9	29	22	
Mersine	Dec. 1–7	1	1	
Turkey in Europe:				
Constantinople	Oct. 24–30	5	1	
Saloniki vilayet	Nov. 6–19	4	3	In Serres.

YELLOW FEVER.

Brazil:				
Para	Dec. 9–16	1	1	
Ecuador:				
Duran	Dec. 1–15	3	2	
Guayaquil	do	12	7	
Milagroro	do	7	1	
Venezuela:				
Sabana Grande	Dec. 12			Epidemic.

PLAGUE.

Brazil:				
Rio de Janeiro	Nov. 26–Dec. 2	1	1	
Ecuador:				
Guayaquil	Dec. 1–15	56	23	
Russian Empire:				
Astrakhan, government	Nov. 28–Dec. 20	87	84	

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

Reports Received during week ended Jan. 12, 1912.

SMALLPOX.

Places.	Date.	Cases.	Deaths.	Remarks.
Argentina:				
Buenos Aires	Oct. 1-31		6	
Rosario	do		25	
Austria-Hungary:				
Trieste	Dec. 3-9	1		
Brazil:				
Bahia	July 1-31		1	
Pernambuco	Oct. 16-Nov. 15		179	Report for Oct. 1-15 not received.
Rio de Janeiro	Nov. 26-Dec. 2	1	1	
Canada:				
British Columbia—				
Nelson	Dec. 24-30	1		
Ontario—				
Sarnia	Oct. 17-23	1		
Chile:				
Talcahuano	Nov. 26-Dec. 9	7	2	
Valparaiso	Dec. 3-9	43		
China:				
Chungking	Nov. 18			Present.
Hongkong	Nov. 19-25	7	4	
Cuba:				
Habana	Dec. 19	1		From German s. s. Frankenwald from Spain and Canary Islands.
Italy:				
Naples	Dec. 9-16	8		
Palermo	do	371	103	
Mexico:				
Aguascalientes	Dec. 18-24		1	
Coahuila, State	Oct. 1-30		16	
Mexico	Nov. 26-Dec. 9	4	2	
Russia:				
Moscow	do	2	2	
Odessa	Dec. 3-16	3		
St. Petersburg	Nov. 26-Dec. 9	13	5	
Spain:				
Valencia	Dec. 9-16	10	1	
Switzerland:				
Zurich, Canton	Dec. 3-9	1		From the Orient.
Teneriffe:				
Santa Cruz	Dec. 9-16		4	
Turkey in Asia:				
Beirut	do	10	3	
Constantinople	Dec. 18-24		4	
Uruguay:				
Montevideo	Sept. 1-30	6	2	
Do	Oct. 1-31	13	1	

REPORTS RECEIVED FROM DEC. 30, 1911, TO JAN. 5, 1912.

[For reports received from July 1, 1911, to Dec. 29, 1911, see PUBLIC HEALTH REPORTS for Dec. 29, 1911. In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.]

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
Bulgaria:				
Varna	Nov. 4-6	2	2	On s. s. Boris from Asia Minor.
Dutch East Indies				Total Sept. 24-Oct. 9, 1911: Cases, 322; deaths, 256.
Batavia	Nov. 12-18	6	2	
India:				
Calcutta	Nov. 5-11		39	
Italy				Total Nov. 26-Dec. 2: Cases, 51; deaths, 34.
Provinces—				
Caltanisetta	Nov. 26-Dec. 2	2	2	
Girgenti	do	45	29	
Messina	do	3	2	
Syracuse	do	1	1	
Malta	Nov. 19-Dec. 2	4	4	Dec. 23 declared free from cholera.
Philippine Islands:				
Province—				
Union	Oct. 29-Dec. 4	5	5	
Straits Settlements:				
Singapore	Nov. 5-18	3	3	

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

Reports Received from Dec. 30, 1911, to Jan. 5, 1912.

YELLOW FEVER.

Places.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Manaos	Nov. 19–Dec. 2	.....	4	
Ecuador:				
Bucay	Nov. 16–30	2	.....	
Guayaquil	....do	8	4	
Milagro	....do	1	.....	
Mexico:				
Merida	Dec. 12–23	4	5	Total Aug. 1–Nov. 23: Cases, 49; deaths, 25.
Venezuela:				
Caracas	Nov. 16–Dec. 7	11	.....	

PLAGUE.

Algeria:				
Philippeville	Oct. 19–Nov. 11	8	2	Including 5 cases, p. 2096. Vol. XXVI.
Brazil:				
Rio de Janeiro	Nov. 12–18	2	.....	
Chile:				
Iquique	Nov. 12–25	1	2	
Dutch East Indies:				
Java—				
Pasoeroean Residency, Malang District.	Nov. 12–18	6	4	
Soerobaya	Oct. 17–27	2	.....	
Ecuador:				
Guayaquil	Nov. 16–30	46	19	
Egypt:				
Provinces—				
Assiout	Oct. 14–Dec. 13	16	14	
Kena	Nov. 20–Dec. 13	3	3	
Minieh	Dec. 13	1	.....	
India:				
Bombay	Nov. 19–Dec. 2	17	16	
Calcutta	Nov. 11	.....	6	
Karachi	Nov. 26–Dec. 2	.....	3	
Indo-China:				
Saigon	Nov. 13–19	3	.....	
Mauritius	Nov. 3–9	4	4	
Philippine Islands:				
Cebu quarantine station	Dec. 4	1	.....	On s. s. Montrose from Shanghai.
Straits Settlements:				
Singapore	Nov. 5–18	3	3	

SMALLPOX.

Algeria:				
Algiers	Nov. 1–30	.....	1	
Canada:				
Ontario—				
Kingston	Dec. 19–23	1	.....	
Ottawa	Dec. 10–23	12	.....	
Quebec—				
Montreal	Dec. 17–23	2	.....	
Ontario	....do	20	.....	
Ceylon:				
Colombo	Nov. 12–18	1	.....	
China:				
Canton	Nov. 11–25	15	3	
Hongkong	Nov. 12–18	9	6	
France:				
Marseille	Nov. 1–30	.....	1	
Paris	Dec. 3–9	15	.....	
India:				
Bombay	Nov. 19–Dec. 2	19	8	
Indo-China:				
Saigon	Nov. 13–19	2	.....	
Italy:				
Genoa	Dec. 1–15	6	1	
Leghorn	Dec. 16	5	1	
Naples	Dec. 3–9	8	.....	
Palermo	Nov. 26–Dec. 9	579	219	

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

Reports Received from Dec. 30, 1911, to Jan. 5, 1912.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Japan:				
Arima-Mura	Nov. 12-18	6	1	11 miles east from Kobe.
Java:				
Batavia	do		1	
Mexico:				
Chihuahua	Nov. 20-Dec. 26	30	6	
Juarez	Dec. 19-23	1		
Magdalena	Dec. 23	45	13	
Mazatlan	Dec. 11-26		3	
Monterey	Dec. 11-24		2	
Porfirio	Dec. 3-9	3	3	
San Duval	Dec. 16			Present.
Tampico	Dec. 1-20	4	4	
Tapachula	Nov. 1-22		13	
Russia:				
Moscow	Nov. 19-25	5		
Odessa	Nov. 26-Dec. 2	2	1	
St. Petersburg	Nov. 19-25	10	1	
Spain:				
Valencia	Dec. 3-9	6	1	
Teneriffe:				
Santa Cruz	do		6	
Turkey in Asia:				
Beirut	do	8	3	
Turkey in Europe:				
Constantinople	Dec. 4-17		12	
Zanzibar:				
Zanzibar	Oct. 28-Nov. 17	1	1	

MORTALITY.

WEEKLY MORTALITY TABLE, FOREIGN AND INSULAR CITIES.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—										
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Typhoid fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Aberdeen	Dec. 9	163,084	60	....	....	....	....	....	....	....	1	1	1	....
Aguascalientes	Dec. 24	40,000	48	....	....	....	....	1	4	....	....	....	....	....
Aix-la-Chapelle	Dec. 2	156,437	45	4	....	....	....	....	....	....	....	....	3	....
Amoy	Nov. 25	200,000	....	....	....	....	....	....	....	1	....	....	....	....
Amsterdam	Dec. 16	579,705	135	15	....	....	....	....	....	....	....	....	1	2
Antwerp	Dec. 9	327,668	72	6	....	....	....	....	....	....	1	....	....	....
Batavia	Nov. 25	217,630	10	....	....	2	....	1	....	....	....	1	....	....
Beirut	Dec. 16	80,000	18	2	....	....	....	3	....	5	....	....	....	....
Belfast	do	385,492	152	28	....	....	....	....	....	....	2	1	3	....
Belgrade	Dec. 9	90,050	37	....	....	....	....	....	....	....	2	2	....	....
Do	Dec. 16	....	37	....	....	....	....	....	....	1	....	....	....	....
Berlin	Dec. 9	2,082,228	559	70	....	....	....	....	....	1	9	23	4	2
Bristol	Dec. 23	357,509	94	9	....	....	....	....	....	1	....	....	1	....
Budapest	Nov. 26	1,000,000	....	....	....	....	....	....	....	4	3	4	4	....
Do	Dec. 2	....	....	....	....	....	....	....	....	5	1	1	10	....
Cairo	Nov. 25	689,439	387	27	....	....	....	....	3	3	....	15	....	....
Do	Dec. 2	....	393	27	....	....	....	....	1	5	1	10	1	....
Catania	Dec. 22	207,000	61	2	....	....	....	....	2	....	2	....	....	....
Chemnitz	Dec. 9	298,000	87	10	....	....	....	....	....	....	1	1	2	....
Christiania	Dec. 16	245,000	59	5	....	....	....	....	....	....	....	4	4	....
Cologne	Dec. 9	522,694	134	10	....	....	....	....	....	....	1	1	2	1
Colombo	Nov. 25	213,974	151	17	....	....	....	....	....	6	....	....	....	....
Constantinople	Dec. 24	1,000,000	243	28	....	....	....	4	....	5	....	1	3	....
Dresden	Dec. 9	555,500	115	11	....	....	....	....	....	....	....	1	....	1
Dublin	Dec. 16	403,732	180	21	....	....	....	....	....	3	1	4	5	3
Do	Dec. 23	....	168	25	....	....	....	....	....	....	3	5	4	5

MORTALITY—Continued.

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.	Typhoid fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Edinburgh	Dec. 16	320,829	93	5	....	....	....	....	....	....	....	....	....	1
Erfurt	Dec. 2	125,430	30	2	....	....	....	....	....	....	1	7	....	....
Ghent	Dec. 16	165,965	42	3	....	....	....	....	....	....	....	1	....	....
Gibraltar	Dec. 17	25,367	7	....	....	....	....	....	....	....	....	....	2	....
Glasgow	Dec. 22	784,655	276	....	....	....	....	....	....	1	1	4	18	2
Gothenburg	Dec. 16	168,000	37	6	....	....	....	....	....	1	....	....	....	....
Hamburg	...do....	931,035	273	33	....	....	....	....	....	1	3	12	....	4
Hongkong	Nov. 25	336,488	....	....	....	....	....	4	....	....	....	....	....	....
Hull	Dec. 16	278,968	81	....	....	....	....	....	....	1	....	....	....	....
Kharput	Dec. 9	21,000	14	....	....	13	....	....	1	....	....	....	....	....
Do	Nov. 25	....	9	....	....	9	....	....	....	....	....	....	....	....
Konigsberg	Dec. 9	247,300	105	7	....	....	....	....	....	....	1	3	1	1
Leipzig	...do....	595,703	145	22	....	....	....	....	....	....	1	1	....	....
Leith	Dec. 16	80,674	28	4	....	....	....	....	....	....	....	....	1	....
Libau	Dec. 17	90,000	....	....	....	....	....	....	....	1	9	1	....	....
Liverpool	Dec. 16	747,627	316	21	....	....	....	....	....	1	3	3	3	1
London	Dec. 9	7,269,752	1,814	....	....	....	....	....	....	3	4	20	9	13
Do	Dec. 16	....	2,007	....	....	....	....	....	....	8	6	31	15	12
Lubeck	...do....	100,000	38	2	....	....	....	....	....	....	....	....	2	1
Lyon	Dec. 9	523,796	167	28	....	....	....	....	....	....	....	3	1	....
Magdeburg	Nov. 25	284,296	85	3	....	....	....	....	....	....	2	3	....	....
Do	Dec. 2	....	110	6	....	....	....	....	....	....	2	6	....	....
Manchester	...do....	631,533	241	20	....	....	....	....	....	....	3	4	4	3
Do	Dec. 9	....	211	19	....	....	....	....	....	....	....	1	....	1
Do	Dec. 16	....	245	28	....	....	....	....	....	1	....	2	3	3
Mannheim	Nov. 25	198,000	51	8	....	....	....	....	....	....	2	....	....	....
Do	Dec. 2	....	41	7	....	....	....	....	....	1	1	2	....	....
Mazatlan	Dec. 19	22,000	20	2	....	....	....	1	....	....	....	....	....	....
Do	Dec. 26	....	23	....	....	....	....	2	....	....	....	....	....	....
Mersine	Dec. 7	20,000	6	1	....	1	....	....	....	....	....	....	....	....
Mexico	Dec. 2	719,052	392	....	....	....	....	1	9	....	2	2	2	6
Do	Dec. 9	....	402	....	....	....	....	1	1	....	....	....	....	2
Moncton	Dec. 23	11,329	3	....	....	....	....	....	....	....	....	1	....	....
Monterey	Dec. 17	100,000	57	4	....	....	....	1	....	....	....	....	....	....
Do	Dec. 24	....	64	3	....	....	....	1	....	1	....	....	....	....
Montreal	Dec. 23	466,197	135	21	....	....	....	....	....	3	....	3	2	....
Do	Dec. 30	....	145	17	....	....	....	....	....	5	1	4	....	1
Moscow	Nov. 18	1,509,000	634	64	....	....	....	....	....	6	11	10	22	6
Do	Nov. 25	....	663	89	....	....	....	....	1	5	14	16	20	4
Do	Dec. 2	....	715	90	....	....	....	1	1	5	9	12	31	7
Do	Dec. 9	....	706	78	....	....	....	1	....	2	16	14	33	5
Munich	...do....	597,000	161	13	....	....	....	....	....	....	1	1	....	....
Nagasaki	Dec. 3	178,074	38	7	....	....	....	....	....	1	....	....	....	....
Nagoya	Nov. 25	418,627	111	....	....	....	....	....	....	4	....	1	....	....
Nottingham	Dec. 2	259,942	76	....	....	....	....	....	....	....	....	....	7	....
Do	Dec. 9	....	97	....	....	....	....	....	....	....	1	1	4	1
Nuevo Laredo	Dec. 30	9,000	7	....	....	....	....	....	....	1	....	....	....	....
Odessa	Nov. 25	546,000	173	29	....	....	....	....	....	3	3	5	3	2
Do	Dec. 2	....	159	18	....	....	....	1	1	1	2	....	1	....
Do	Dec. 9	....	194	27	....	....	....	....	....	2	3	4	3	3
Do	Dec. 16	....	170	30	....	....	....	....	....	2	4	7	4	1
Ottawa	Dec. 16	90,000	28	2	....	....	....	....	....	....	....	1	....	....
Do	Dec. 23	....	21	....	....	....	....	....	....	....	....	2	....	....
Palermo	Dec. 2	340,000	266	8	....	....	....	129	....	1	1	....	....	....
Do	Dec. 9	....	228	10	....	....	....	90	....	2	1	....	....	....
Do	Dec. 16	....	235	7	....	....	....	103	....	....	....	....	....	....
Para	...do....	185,000	61	9	....	....	1	....	....	....	....	....	....	....
Paris	Dec. 9	2,846,986	847	192	....	....	....	....	....	4	2	....	10	....
Patras	Dec. 17	40,000	10	1	....	....	....	....	....	....	1	....	....	....
Porfirio	Dec. 9	16,000	10	1	....	....	....	3	....	....	....	....	....	....
Port Elizabeth	Dec. 2	30,692	24	4	....	....	....	....	....	1	....	....	....	....
Port Said	Nov. 25	52,811	18	2	....	....	....	....	....	....	....	1	....	....
Do	Dec. 2	....	23	1	....	....	....	....	....	....	....	1	....	....
Prague	Nov. 25	225,204	73	18	....	....	....	....	....	....	1	....	....	1
Do	Dec. 2	....	62	12	....	....	....	....	....	2	1	2	2	....
Do	Dec. 9	....	90	15	....	....	....	....	....	1	3	1	....	1
Progreso	Dec. 16	6,959	9	2	....	....	....	....	....	....	....	....	1	....
Rio de Janeiro	Nov. 18	912,169	310	63	6	....	....	....	....	1	....	1	4	5
Do	Nov. 25	....	309	68	....	....	....	....	....	1	....	1	4	6

MORTALITY—Continued.

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.	Typhoid fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Rio de Janeiro	Dec. 2		363	85	1	....	....	....	....	2	....	1	3	5
Do	Dec. 9		103	92	....	....	....	....	....	1	....	1	1	4
Rotterdam	...do....	434,405	81	....	....	....	....	....	....	1	1	3	....	....
St. Petersburg	Nov. 25	1,907,708	625	115	....	....	....	1	....	21	7	5	24	11
Do	Dec. 2		662	113	....	....	....	3	1	20	17	7	19	5
Do	Dec. 9		670	124	....	....	....	1	....	12	15	12	38	10
Salina Cruz	Dec. 17	6,138	4	....	....	....	....	....	....	1	....	....	1	....
Santa Cruz de Teneriffe	Dec. 9	46,000	14	....	....	....	....	6	....	....	....	....	....	....
Do	Dec. 16		21	1	....	....	....	4	3	....	....	1	....	....
Santiago de Cuba	...do....	53,614	23	1	....	....	....	....	....	1	....	....	....	....
Do	Dec. 23		29	2	....	....	....	....	....	2	....	....	....	....
Sarnia	...do....	99,936	4	....	....	....	....	....	....	2	....	....	....	....
Do	Dec. 30		9	....	....	....	....	....	....	3	....	....	....	....
Shanghai	Nov. 19	492,000	112	14	....	....	....	....	....	....	....	....	....	....
Do	Nov. 26		112	14	....	....	....	....	....	....	1	1	....	....
Do	Dec. 3		117	19	....	....	....	....	....	....	7	1	....	....
Singapore	Nov. 11	303,828	231	29	1	3	....	....	....	2	....	....	....	....
Do	Nov. 18		208	26	1	....	....	....	....	3	....	....	....	....
Southampton	Dec. 16	119,394	29	3	....	....	....	....	....	....	....	1	....	....
Do	Dec. 23		39	3	....	....	....	....	....	....	....	1	....	....
Stettin	Dec. 2	239,000	71	1	....	....	....	....	....	....	1	2	....	....
Do	Dec. 9		91	5	....	....	....	....	....	....	....	2	....	....
Stockholm	Dec. 2	343,832	76	14	....	....	....	....	....	....	1	1	....	1
Do	Dec. 9		92	16	....	....	....	....	....	....	....	1	1	....
Swansea	Dec. 16	115,100	40	....	....	....	....	....	....	....	....	2	....	2
Stoke on Trent	...do....	235,049	79	3	....	....	....	....	....	....	....	1	1	....
Do	Dec. 23		101	6	....	....	....	....	....	....	....	....	3	2
Talcahuano	Dec. 2	28,000	.....	3	....	....	....	1	....	....	....	....	1	2
Do	Dec. 9		.....	2	....	....	....	1	....	....	....	....	1	1
Tampico	Dec. 10	23,452	54	9	....	....	....	1	....	....	....	....	....	....
Do	Dec. 20		42	8	....	....	....	3	....	....	....	....	1	....
Tapachula	Nov. 7	25,000	44	1	....	....	....	1	....	....	....	....	....	....
Do	Nov. 15		37	4	....	....	....	1	....	....	....	....	....	1
Do	Nov. 22		32	1	....	....	....	11	....	....	....	....	....	....
Do	Nov. 30		36	....	....	....	....	....	1	....	....	1	....	3
Toronto	Dec. 23	392,000	96	6	....	....	....	....	....	....	2	2	....	....
Trinidad	Dec. 2	60,000	27	4	....	....	....	....	....	1	....	....	....	....
Do	Dec. 9		26	2	....	....	....	....	....	1	....	....	....	....
Turin	Nov. 5	401,555	120	16	....	....	....	....	....	2	....	....	....	1
Do	Nov. 12		115	14	....	....	....	....	....	3	....	1	....	....
Do	Nov. 19		130	12	....	....	....	....	....	1	....	1	....	....
Do	Nov. 26		124	6	....	....	....	....	....	....	....	1	....	....
Do	Dec. 3		115	9	....	....	....	....	....	2	....	1	....	....
Valencia	Dec. 9	240,000	109	11	....	....	....	1	....	1	....	1	....	....
Do	Dec. 16		104	6	....	....	....	1	....	2	2	2	....	....
Vancouver	Dec. 9	100,333	19	....	....	....	....	....	....	1	....	1	....	....
Do	Dec. 16		20	....	....	....	....	....	....	1	....	1	....	....
Venice	{Aug. 19–Nov. 25}	184,325	814	106	....	1	....	....	....	3	1	5	1	8
Vienna	Dec. 2	2,064,583	568	74	....	....	....	....	....	3	2	4	5	3
Yokahama	Dec. 11	419,630	.....	....	....	....	....	....	....	2	....	....	....	....

MORTALITY—FOREIGN AND INSULAR—COUNTRIES AND CITIES (Untabulated).

ALGERIA — *Algiers.*—Month of November, 1911. Population, 172,397. Total number of deaths from all causes 322, including diphtheria 1, smallpox 1, tuberculosis 39, typhoid fever 20.

BRAZIL—*Pernambuco.*—Two weeks ended October 31, 1911. Population, 225,000. Total number of deaths from all causes 421, including measles 1, plague 2, smallpox 90, tuberculosis 55, typhoid fever 1.

Two weeks ended November 15, 1911. Total number of deaths from all causes 435, including measles 1, plague 1, smallpox 89, tuberculosis 51, typhoid fever 2.

FORMOSA.—Three weeks ended November 25, 1911. Population, 3,290,186. Total number of deaths from all causes not reported. The deaths include diphtheria 1, typhoid fever 16.

FRANCE—*Marseille.*—Month of November, 1911. Population, 550,619. Total number of deaths from all causes 704, including diphtheria 5, smallpox 1, tuberculosis 102, typhoid fever 13.

Roubaix.—Month of November, 1911. Population, 122,154. Total number of deaths from all causes 132, including scarlet fever 1, tuberculosis 20, typhoid fever 1.

GREAT BRITAIN.—Week ended December 9, 1911.

England and Wales.—The deaths registered in 77 great towns correspond to an annual rate of 15.2 per 1,000 of the population, which is estimated at 16,157,797.

Ireland.—The deaths registered in 21 principal town districts correspond to an annual rate of 17.7 per 1,000 of the population, which estimated at 1,149,495. The lowest rate was recorded at Sligo, viz, 4.7, and the highest at Cork, viz, 26.5 per 1,000.

Scotland.—The deaths registered in 8 principal towns correspond to an annual rate of 16.8 per 1,000 of the population, which is estimated at 1,710,291. The lowest rate was recorded at Edinburgh, viz, 14.1, and the highest at Greenock, viz, 24.3 per 1,000. The total number of deaths from all causes was 550, including diphtheria 8, measles 23, scarlet fever 3, typhoid fever 5.

ITALY—*Genoa.*—Two weeks ended December 15, 1911. Population, 272,077. Total number of deaths from all causes 110, including diphtheria 4, smallpox 1, tuberculosis 26.

Florence.—Month of October, 1911. Population, 232,860. Total number of deaths from all causes 351, including diphtheria 4, tuberculosis 48, typhoid fever 15.

JAMAICA—*Kingston.*—Month of November, 1911. Population, 50,000. Total number of deaths from all causes 106, including tuberculosis 10, typhoid fever 9.

MALTA.—Three weeks ended December 9, 1911. Population, 213,395. Total number of deaths from all casues 338, including measles 1, tuberculosis 8, typhoid fever 11.

NEW ZEALAND.—Month of September, 1911.

Auckland.—Estimated population, 102,676. Total number of deaths 81, including tuberculosis 6.

Christchurch.—Estimated population, 80,193. Total number of deaths 47, including tuberculosis 4.

Dunedin.—Estimated population, 64,237. Total number of deaths 59, including diphtheria 1, scarlet fever 1, tuberculosis 5.

Wellington.—Estimated population, 70,729. Total number of deaths 75, including diphtheria 1, tuberculosis 9.

By authority of the Secretary of the Treasury:

A. H. GLENNAN,
Acting Surgeon General.
United States Public Health and Marine-Hospital Service.