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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 July 1, 1911, 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, antigenococcic serum, antistreptococcic serum, antitetanic serum, antitubercle serum, bacterial vaccines, erysipelas and prodigious toxins (Coley), tuberculins, and vaccine virus.
2	H. K. Mulford Co., Philadelphia, Pa. ...	Diphtheria antitoxin, antidyserteric serum, antigenococcic serum, antimeningococcic serum, antipneumonic serum, antistreptococcic serum, antitetanic serum, tuberculins, vaccine virus, bacterial vaccines, normal horse serum, and rabies virus.
3	Dr. H. M. Alexander & Co., Marietta, Pa.	Diphtheria antitoxin, antirabic virus, tuberculins, 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, antidyserteric 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.
14	Health department of the city of New York.	Diphtheria antitoxin, antitetanic serum, antirabic virus, vaccine virus, tuberculins, and antimeningococcic serum.
15	Dr. W. R. Hubbert Serum Laboratory, Detroit, Mich.	Diphtheria antitoxin.
16	National Vaccine and Antitoxin Institute, Washington, D. C. ■	Diphtheria antitoxin, antigenococcic vaccine, vaccine virus, normal horse serum, antistaphylococcic vaccine and antistreptococcic vaccine.

No. of license.	Establishments.	Products.
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, antidyenteric serum, anticolonbacillus serum, antistaphylococcic serum, antistreptococcic serum, antityphoid serum, tuberculin, and bacterial vaccines.
19	Memorial Institute for Infectious Diseases, Chicago, Ill.	Diphtheria antitoxin.
21	Swiss Serum and Vaccine Institute, Berne, Switzerland.	Diphtheria antitoxin, antidyenteric serum, antimeningococcic serum, antipneumonic serum, antiplague serum, antistreptococcic serum, tuberculin, anticholera vaccine, antiplague vaccine, antityphoid vaccine, and antitetanic serum.
22	Institut Bacteriologique Lyon, Lyons, France.	Antidiphtheric serum and normal goat serum.
23	Bacterio - Therapeutic Laboratory, Asheville, N. C.	Tuberculin.
24	Farbwerke, vormals Meister Lucius und Brüning, Hoechst-on-Main, Germany.	Diphtheria antitoxin, antidyenteric serum, antimeningococcic serum, antipneumonic serum, antistreptococcic serum, antitetanic serum, and tuberculin.
25	Tuberculin Society of St. Petersburg, St. Petersburg, Russia.	Tuberculinum purum.
27	Institut Pasteur de Lille, Lille, France.	Serum 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), and normal horse serum.
32	Kalle & Co., Biebrich, Germany.....	Tuberculin (Rosenbach).
33	American Biologic Co., Kansas City, Mo.	Antirabic virus.
34	The Beraneck Laboratory, Neuchatel, Switzerland.	Tuberculin (Beraneck).
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.]

COLUMBUS, GA.

FOODSTUFFS—SANITARY PROTECTION OF.

SECTION 1. That all persons, firms, or corporations, their agents or employees, in charge of or working at meat markets, fish markets, restaurants, bakeries, retail grocery stores, milk depots, where articles of food are kept or sold or offered for sale, shall thoroughly and securely screen all doors, windows, or other openings into such places so as to prevent the ingress of flies or other insects thereto.

SEC. 2. That no article of food, except live articles, such as chickens, ducks, etc., shall be kept on the outside of any retail store, market, restaurant, bakery, milk depot, or other place where food is sold or offered for sale, or upon the side walls in front of such places for purpose of display, or for purposes of advertisement, or for any other purpose except to receive and deliver same to and from such place.

SEC. 3. That it shall be unlawful for any person to run or operate any bakery or deal in bread, or any employee of such bakery or dealer in bread to carry or cause to be carried bread, cakes, or pies, or like articles of food through the streets unless transported in fly-proof or dust-proof receptacles.

SEC. 4. All wagons used for transporting bread, cakes, and pies and like articles of food shall be furnished with a fly-proof and dust-proof compartment that shall contain shelves on which the bread shall be placed, and such shelves shall be covered with clean paper and this paper shall be changed at least once every 24 hours. Furthermore, all breads, cakes, pies, and like articles of food offered for sale in grocery stores, bakeries, or other retail distributors of bread, etc., shall be kept in fly-proof and dust-proof show cases or like receptacles.

SEC. 5. That any person, firm, or corporation, their agents or employees, violating any of the provisions of this ordinance shall, on conviction thereof in the recorder's

court, be fined not exceeding \$100 for each offense, or sentenced to work on the public works of the city for not exceeding 30 days, either or both in the discretion of the recorder.

SEC. 6. The provisions of this ordinance as to screening articles of food and protecting them from flies shall be effective only during the months of April, May, June, July, August, September, and October. During the months of December, January, February, and March said ordinance shall not be effective nor a violation thereof subject the offender to punishment. That all ordinances and parts of ordinances in conflict with this ordinance be and the same are hereby repealed. [Ordinance adopted May 5, 1911.]

TAUNTON, MASS.

MILK—PRODUCTION, SALE, AND CARE.

REGULATION 13. SECTION 1. Every person, firm, or corporation having a license to sell, deliver, or distribute milk, skimmed milk, or cream in the city of Taunton shall keep the farm or dairy where the milk is produced in a sanitary condition, satisfactory to the board of health. The stock shall be kept clean and healthy; the stable shall be provided with suitable windows that the cows may have plenty of light and air; overcrowding of the cows in the stable or other building must be avoided; the stable and surroundings must be clean and properly drained and manure must not be allowed to accumulate about the stable.

SEC. 2. No milk shall be sold unless it has been strained and cooled immediately after being drawn from the cow. No milk, skimmed milk, or cream shall be strained, aerated, cooled, mixed, bottled, or stored in any portion of a building which is used for the stabling of horses, cows, or other animals, or for the storing of manure, unless such storage room for milk is separated from all other parts of such building to the satisfaction of the board of health; nor in any room used in whole or in part for domestic or sleeping purposes.

Every room in which milk is strained, aerated, cooled, bottled, or stored shall be provided with tight walls and floor and kept constantly clean. No urinal, water-closet, privy vault, or cesspool shall be located in such room; or in a room where the vessels, bottles, or utensils used in the handling of milk are washed, sterilized, or stored; nor shall such urinal, water-closet, privy vault, or cesspool be so situated as to pollute the atmosphere of such storage room for milk, or the well or other source of water supply from which the water is used in washing the milk bottles, cans, vessels, or other utensils.

SEC. 3. All bottles, cans, vessels, or other utensils used in the production, storage, sale, or distribution of milk, skimmed milk, or cream shall be cleaned and sterilized with boiling water or steam before they are again used.

No person shall use a milk bottle or vessel as a container for any other substance than milk, skimmed milk, or cream. Bottles shall not be filled, except at the dairy or creamery.

SEC. 4. No milk, skimmed milk, or cream shall be brought into or carried within the city of Taunton for purposes of sale, which has been carried upon any wagon or vehicle which is not clean and free from offensive odors, or upon which swill, refuse, garbage, or decaying, unwholesome, or filthy matter is carried.

SEC. 5. Every person engaged in the production, storage, transportation, sale, delivery, or distribution of milk, skimmed milk, or cream in this city shall notify the board of health immediately on the occurrence of any case or cases of typhoid fever, diphtheria, scarlet fever, or other infectious or contagious disease, either in himself or his family, or among his employees, or in their immediate associates, or within the building where milk, skimmed milk, or cream is stored, sold, or distributed, and, at the same time, shall suspend the sale or distribution of milk, skimmed milk, or cream until authorized to resume the same by the board of health.

SEC. 6. No bottles or other containers left with any family in which there exists a case of typhoid fever, scarlet fever, or diphtheria shall be removed therefrom, except with the consent of the board of health.

SEC. 7. Milk, skimmed milk, or cream, kept for sale in any store, shop, restaurant, market, bakery, or other establishment shall be stored in a covered cooler, box, or refrigerator, and shall at all times register, on test, a temperature not higher than 50° F. No vessel containing milk, skimmed milk, or cream shall be allowed to stand outside said cooler, box, or refrigerator, except while a sale is being made.

Every such cooler, box, or refrigerator shall be properly drained and cared for; shall be kept tightly closed, except at such intervals as are necessary for the introduction or removal of milk or ice; and shall be kept only in such location and under such conditions as shall be approved by the board of health. [Regulation board of health, adopted March 7, 1910.]

THE CHOLERA SITUATION.

Since June 13, 1911, there have arrived at the New York quarantine station 6 vessels among the passengers and members of the crews of which cholera cases occurred at sea, were present at arrival, or developed during detention. There have been in all 25 cases of cholera so reported. From 1 vessel, the *Molike*, 4 cholera bacillus carriers were found among 9 apparently healthy steerage passengers whose dejecta were examined bacteriologically. A full account of these cases and the treatment of the vessels and passengers will be found in tabular form on page 1105. One other case developed in a man who had been employed to guard apparently well passengers. This man left the quarantine station and went to Staten Island, where he developed cholera July 13. He was returned to Swinburne Island July 14 and died July 15.

A case of cholera developed in an immigrant at Auburn and another at Brooklyn, N. Y. These cases will be found referred to in the table.

VESSELS ARRIVING FROM ITALIAN PORTS.

The Italian steamship *Principe di Piemonte* arrived at New York July 20; the *San Giorgio* and *Berlin* are expected next week. The steamship *Canopic*, from Naples, is expected to arrive at Boston August 7.

The *Carpathia* left Naples July 12 for New York, and on the same date the *Citta di Palermo* cleared for New Orleans. On July 13 the *Oceania* cleared for New York, July 15 the *Verona* for New York and Philadelphia, and on July 19 the *Duca di Genova* for New York.

FURTHER ADDITION TO UNITED STATES QUARANTINE REGULATIONS.

Cholera bacillus carriers.

[1911. Department Circular No. 47, Bureau of P. H. & M. H. S.]

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, July 19, 1911.

To National, State, and local quarantine officers, collectors of customs, shipowners and agents, and others concerned:

In accordance with the act of Congress approved February 15, 1893, and to further prevent the entrance of cholera into the United States, the following regulation, in addition to those contained in Quarantine Regulations of the Treasury Department issued October 20, 1910, and in Department Circular No. 45, July 6, 1911, is hereby promulgated, and shall remain in force until otherwise ordered:

All steerage passengers arriving at ports in the United States from ports or places infected with cholera shall be subjected to bacteriological examination and shall not be admitted to entry until it has been determined by said examination that they are not cholera bacillus carriers.

FRANKLIN MACVEAGH,
Secretary.

Cholera-infected Vessels arriving at New York.

Names of vessels.	Place and date of arrival.	Where from.	Cases of cholera developing in passengers and members of crew en route.	Cases of cholera developing in passengers and members of crew at quarantine.	Cases of cholera developing in passengers and members of crew after release from quarantine.	Total cases found among passengers and members of crew.	Cholera carriers found among passengers and members of crew.	Treatment of vessel and cargo at quarantine.	Date of departure of vessel from quarantine.	Remarks.
Berlin.....	New York, June 13, 1911.	Genoa, June 1; Naples, June 2; Gibraltar, June 5.	1 case died at sea; bacteriological examination of dejecta made at quarantine showed case positive.	.....	.....	1 fatal case.	.....	Vessel inspected and disinfected; blankets and bedding disinfected by steaming; quarters disinfected by steam; crew washed down with carbolic solution.	1911, June 14.	836 steerage passengers referred to Hofmann Island; 829 passengers processed June 17, 1911; 21 members of crew admitted to quarantine June 14; were returned to the vessel June 17; all baggage was inspected for foodstuffs; soiled clothing was disinfected.
Europa.....	New York, June 14, 1911.	Genoa, May 30; Naples, June 1.	1 case.....	.....	.....	1 case.....	.....	Inspected and detained 1 day for disinfection; hospital bedding and furnishing disinfected by steam; patient's bed and those adjacent washed down with bichloride solution; hospital walls and beds white-washed; hospital toilets treated with	June 15.	356 steerage passengers referred to Hofmann Island for observation June 16; 4 steerage passengers removed to Swinburne Island and 19 members of crew to Hofmann Island same date; 19 members of crew discharged from quarantine

Cholera-infected Vessels arriving at New York—Continued.

Names of vessels.	Place and date of arrival.	Where from.	Cases of cholera developing in passengers and members of crew en route.	Cases of cholera developing in passengers and members of crew at quarantine.	Cases of cholera developing in passengers and members of crew after release from quarantine.	Total cases from vessel.	Cholera carriers found among passengers and members of crew.	Treatment of vessel and cargo at quarantine.	Date of departure of vessel from quarantine.	Remarks.
Europa— Contd.								chloride of lime and walls and floors white-washed; hospital also fumigated with sulphur (4 per cent) for 8 hours; in the living quarters of the steerage and crew below deck mattresses, bedding, and tableware, etc., were disinfected by steam; beds, floors, and walls white-washed, and latrines treated with chloride of lime; soiled linen and steerage baggage disinfected; foodstuffs destroyed.	1911. June 15.	June 19; all passengers discharged from quarantine June 20.
Duca degli Abruzzi.	New York, June 20, 1911.	Genoa, June 6; Naples, June 7; Fun- chal, June 12.	4 cases, of which 1 died at sea, 1 on arrival at quarantine, 1 in transit to Swinburne Island and 1 removed and dis-	1 steerage passenger developed during detention at Hoffmanns Island June 23; was removed to Swinburne Is-	1 male passenger immigrant 18 years old developed cholera at Auburn, N. Y. June 30; died July 1. 1 female immi-	7 cases.		Inspected, disinfected, and detained 5 days; treatment the same as that given steamship Europe; fresh vegetables were dis-	June 25	616 steerage passengers re-moved June 20 to Hoffmann Island for detention, and 19 removed to Swinburne Island for hos-

<p>Laura.....</p>	<p>New York, June 21, 1911.</p>	<p>charged from quarantine July 18.</p>	<p>le and same date.</p>	<p>grant devel- oped cholera in Brooklyn; she was taken ill June 30, re- ported as in- fectious July 2, removed to Swinburne Is- land July 3, and died July 4. These 2 immi- grants had been detained at quarantine from June 20 to 27.</p>	<p>2 cases.</p>	<p>Inspected and hospital disin- fected.</p>	<p>June 22</p>	<p>341 steerage pas- sengers were returned to quarantine June 23 before reaching Ellis Island; they were released June 27.</p>
<p>Moltke.....</p>	<p>New York, July 5.</p>	<p>1 case (member of crew).</p>	<p>11 cases among steerage pas- sengers; 4 died.</p>	<p>12 cases.</p>	<p>Up to July 18, 4 cholera car- riers had been found among 9 apparently healthy de- tained steer- age passengers at quarantine.</p>	<p>Inspected, disin- fected, and de- tained 2 days; disinfection same as for steamship Eu- ropa.</p>	<p>July 7</p>	<p>212 steerage pas- sengers re- moved to Hof- mann Island July 7, to- gether with 5 members of crew; 46 mem- bers of crew and 1 stowa- way were re- moved to Hof- mann Island July 11; 1 quarantineem- ployee who had been</p>

Cholera-infected Vessels arriving at New York—Continued.

Names of vessels.	Place and date of arrival.	Where from.	Cases of cholera developing in passengers and members of crew en route.	Cases of cholera developing in passengers and members of crew at quarantine.	Cases of cholera developing in passengers and members of crew after release from quarantine.	Total cases from vessel.	Cholera carriers found among passengers and members of crew.	Treatment of vessel and cargo at quarantine.	Date of departure of vessel from quarantine.	Remarks.
Moltke— Cont'd.									1911. July 7	guarding supposedly well passengers left the station and developed cholera on Staten Island June 13; he was removed to Swinburne Island July 14 and died the following day.
Perugia....	New York, July 15.	Leghorn, June 25; Naples, June 29; Palermo, June 30.	2 cases of diarrhea on voyage were bacteriologically shown to be cholera at quarantine; 1 patient was a fireman, the other an immigrant.			2 cases		Inspected, disinfected, and detained in quarantine; treatment of vessel same as for steamship Europe; passengers and crew held aboard in detention; all eating and drinking utensils boiled each time before using.	(1)	The 2 cases of cholera were apparently arrived on arrival, but were bacteriologically positive.

1 Still in quarantine July 18.

IMPORTANCE OF CHOLERA-BACILLUS CARRIERS.

Cholera-bacillus carriers are persons who carry the vibrio of cholera within their bodies, although they themselves show few or none of the symptoms of the disease. They may be individuals who have recovered from an attack of the disease or who simply have come into direct or indirect contact with cholera cases or with other carriers.

Cases of cholera arriving on vessels at quarantine are easily detected and isolated; but the detection of carriers, who are as capable of introducing the disease, is a far more difficult problem and requires a bacteriological examination.

Studies of recent cholera epidemics have shown that in places where cholera is prevalent a certain number of persons will be found who do not develop the disease, although they carry the vibrio of cholera in their intestinal tracts and discharge it in their dejecta in considerable numbers and that these individuals may continue to be carriers for days or weeks. Passed Asst. Surg. McLaughlin found 6 to 7 per cent of healthy individuals living in the infected neighborhoods in Manila to be cholera carriers.

OBSERVATIONS AT FUNCHAL, MADEIRA.

In an analysis of 326 cases of cholera cared for at the Funchal Isolation Hospital during the recent cholera epidemic in Madeira the following observations were made regarding cholera carriers and contacts:¹

Of the 326 cases 120 ended fatally. Of the 206 convalescents 20 carried the vibrio of cholera in their feces for more than two weeks after the disappearance of all active symptoms. Of about 350 contacts under observation only 6 actually developed the disease, but many who never showed symptoms were found to carry the vibrio of cholera in their feces for more than three weeks after being in contact with a patient.

Out of 71 persons employed in various capacities at the hospital in no instance was it possible to show the presence of the vibrio in the feces.

The opportunities for observing the incubation period of the disease were especially favorable. The period of incubation seemed to be from a few hours to eight or nine days.

OBSERVATIONS AT ST. PETERSBURG, RUSSIA.

In a study of cholera in St. Petersburg S. J. Zlatogoroff² made observations on the length of time vibrios may be found in the dejecta of convalescents, on the factors causing the disappearance of the vibrios, on the length of time vibrios may remain viable in excreta, and on the changes in the type of the vibrios which may occur in the alimentary tract. The following has been taken from the report of his work:

It has been shown by many writers that the cholera vibrio may be found in the excreta of patients many days and even weeks after

¹ Henry Stevens, M. R. C. S., L. R. C. P., *British Med. Jour.*, Mar. 25, 1911, p. 681.

² *Centralbl. f. Bakt. etc.*, I Abt. Originale Bd. 58, Heft 1, s. 14.

recovery. Kollé found vibrios in excreta 48 days after the falling ill of the patient, Jakóweff found them 56 days after, and Zeidler as much as 93 days after. Although such cases of long-continued persistence of the vibrios in the intestines are rare, they show that man may be regarded as a source of cholera infection long after recovery and that it is important to systematically examine the excreta of patients after recovery. The fact of the continued ejection of vibrios from the intestinal canal is established, but the question of the alterations which the vibrios undergo in the organism has received so far little attention; also under what circumstances the destruction of the vibrios in the intestinal canal is accomplished. The investigation of the latter question appears to be of not less importance from a practical standpoint to the timely discovery of the vibrio. Certain investigators (Kollé) observe that the virulence of the vibrios, ejected 33 days after illness, may be as high as at the beginning of the attack. Others describe varieties of the vibrios which are ejected from the intestinal canal, and these varieties are considered (Wlajeff) as the product of the degeneration of the cholera vibrio from its original character as the result of unfavorable conditions.

The following work was begun in September, 1908, at the time of the first appearance of the cholera epidemic at St. Petersburg. The material used was obtained from patients in the Maria-Magdalen and Peter and Paul Hospitals and from cured patients. The examination of the excreta was begun if possible on the day of entrance to the hospital and carried out to the complete disappearance of the cholera vibrio from the excreta. In the case of those who had left the hospital the material was taken at the house. In the hospital the excreta of each patient was examined many times daily; at the house every 2 or 3 days. The culture was with peptone solution and nutrient agar in the usual way. The vibrios obtained were examined from the morphologic and biologic points of view. In all 324 cholera patients were examined, of whom 69 died in the course of from 24 hours to 10 days. In the case of 255 men the observations lasted from the first day of the disease to the complete disappearance of the vibrio. The investigation was concluded when a negative result was obtained.

The duration of the vibrio was in one person 56 days, in 132 persons it was from 14 to 17 days. The vibrio disappeared in half the patients after from 14 to 17 days. It is to be noted that the long duration (37 to 56 days) was in the persons who had formed stools. How is the difference in duration to be explained?

Doubtless we have to deal here with individuality and inherent nonreceptivity, which naturally are not subject to control. Also we have to deal with the conditions in the intestinal canal under which the vibrio lives and with the organs in which it finds favorable conditions. The investigations of Kulescha, Bruloff, and Tschiknaveroff show that the cholera vibrio may live long in the gall bladder, and in this manner the gall bladder may become the source of infection of the intestinal canal. Our observations in this direction with the cholera bacillus were suggestive. We inoculated very young rabbits per os with a cholera culture which, for that animal, was strongly virulent. Of 13 so inoculated 6 lived. These were killed after 7, 14, 20, 21, and 28 days. In the case of two (after the lapse of from 14-21 days) cholera vibrios were found in the gall bladder and the liver while none

were present in the intestines. We have also to take into account the flora of the intestinal canal.

Metchnikoff in 1894 expressed the opinion that to contract cholera the intestines of the human subject must contain microbes favorable to infection. Where the man did not contract cholera it was because his intestines contained microbes antagonistic to cholera. In order to make clear the rôle of the opposing microbes and the disappearance of the cholera vibrios from the intestinal canal we gave special attention in our observations of excrement to the flora and in one case we were able to ascertain how the *Bac. pyocyaneus* and in others the *Bac. coli* destroyed the vibrios gradually until at last they completely disappeared.

We made a number of experiments with the vibrios from cholera excreta. The cholera-containing excreta (large bacterial content) was allowed to stand in a room normally lighted in vessels with glass stoppers at a temperature of from 16–18 C. Another portion of the excreta was kept at from 3–8 C. At different periods the vessels were opened and the contents examined for cholera vibrios. In all, 28 excreta were examined. Some of the vessels were opened for the first time after the lapse of many months. In the excreta, which were repeatedly examined, the viability of the vibrios could be determined after 47 days at a temperature of 16–18 C., and after 78 days at a temperature of 3–8 C.

The long persistence of the vibrios in excreta was shown during the St. Petersburg epidemic in the city laboratory, and by Filoff demonstrated after 101 days and by Kulescha after the lapse of nine months.

The death of the vibrios in the excreta is not made clear as being caused either by the wearing out of the nutrient medium or alterations in the alkalinity. When we consider the flora of the intestines, we observe that the cause of the disappearance of the cholera vibrio is to be sought here and that the cholera vibrio by long standing alters more and more biologically and morphologically. The concurrent microbes change very little, increase freely, and finally entirely overcome the vibrios. To these belong *B. proteus*, *B. pyocyaneus*, some species of *B. coli*, and perhaps still other varieties.

Conclusions.—(1) The cholera vibrio may be found for a long time after recovery in the excreta of patients. (For a period of 55 days according to some observations; for 93 days according to observations of Ziedler.)

(2) The cholera vibrio undergoes in the human body biologic and morphologic alterations which cause it to differ from the usual type of the cholera bacillus. It may entirely lose its power of agglutination.

(3) The cholera vibrio undergoes the same alterations in animals as is demonstrated by animal experiment and by experiment with excreta outside of the body.

(4) The disappearance of the cholera vibrio from the intestinal canal and the alterations which it undergoes depend in great measure on the surrounding flora.

(5) These alterations are such that frequently the comma bacillus can not be obtained from undoubted cholera cases.

(6) With the greater number of the altered vibrios it is possible by laboratory methods to obtain microorganisms which approach the basic type.

(7) None of the methods for restoring the agglutinating property of the vibrio is absolutely certain.

(8) The vibrios may retain their vitality in excreta outside the organism for a very long time (for 7 months in some cases, for 9 months as observed by Dr. Kulescha) when air is excluded. Under opposite conditions they soon disappear.

(9) Every vibrio obtained from excreta during an epidemic or at the beginning of an epidemic, even if it does not agglutinate, must cause suspicion of cholera. It is not to be forgotten that the agglutinating property of the cholera vibrio is very subject to alteration.

TYPHUS FEVER AT EL PASO, TEX.

Acting Asst. Surg. Tappan reports July 5:

Four cases of typhus fever with 2 deaths have been reported at El Paso. The first case was in the person of a physician who had been in charge of a hospital at Juarez, Mexico, where typhus fever was present among federal soldiers. The second case was in the person of a nurse from the hospital at Jaurez. The third case was in a Mexican woman who had washed for the soldiers at the hospital at Juarez. The case terminated fatally. The fourth case, which also ended fatally, was in a boy who is stated to have visited the hospital at Juarez and to have brought back discarded uniforms. There has been no spread of typhus fever at El Paso and the disease is not now present at Jaurez.

SMALLPOX IN THE UNITED STATES.

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

Reports Received During Week Ended July 21, 1911.

Places.	Date.	Cases.	Deaths.	Remarks.
Colorado:				
Counties—				
Boulder.....	June 1-30.....	1		
Chaffee.....	.....do.....	3		
Clear Creek.....	.....do.....	5		
Conejos.....	.....do.....	4		
Costilla.....	.....do.....	1		
Delta.....	.....do.....	7		
Denver.....	.....do.....	20		
El Paso.....	.....do.....	2		
Huerfano.....	.....do.....	3		
Lake.....	.....do.....	6		
La Plata.....	.....do.....	4		
Larimer.....	.....do.....	8		
Lincoln.....	.....do.....	2		
Mesa.....	.....do.....	1		
Phillips.....	.....do.....	1		
Pueblo.....	.....do.....	5		
San Miguel.....	.....do.....	1		
Washington.....	.....do.....	6		
Total for State.....		80		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received During Week Ended July 21, 1911.

Place.	Date.	Cases.	Deaths.	Remarks.
District of Columbia.....	July 2-8.....	5		
Florida:				
Counties—				
Columbia.....	June 25-July 8.....	1		
De Soto.....	do.....	2		
Duval.....	do.....	8		
Jackson.....	do.....	31		
Leon.....	do.....	5		
Manatee.....	do.....	2		
Polk.....	do.....	2		
Total for State.....		51		
Maryland:				
Counties—				
Frederick.....	June 1-30.....	2		
Washington.....	do.....	1		
Total for State.....		3		
Ohio:				
Counties—				
Ashtabula.....	June 1-30.....	2		
Brown.....	do.....	4		
Clark.....	do.....	15		
Clermont.....	do.....	3		
Defiance.....	do.....	1		
Franklin.....	do.....	36		
Geauga.....	do.....	2		
Hamilton.....	do.....	7		
Licking.....	do.....	1		
Pickaway.....	do.....	3		
Sandusky.....	do.....	1		
Total for State.....		75		
New Jersey.....	June 1-30.....			No cases.
North Dakota:				
Counties—				
Billings.....	June 1-30.....	3		
Morton.....	do.....	1		
Montraille.....	do.....	6		
Ward.....	do.....	1		
Total for State.....		11		
South Dakota:				
Counties—				
Beadle.....	May 1-31.....	13		
Brule.....	do.....	2		
Davison.....	do.....	2		
Fall River.....	do.....	10		
Grant.....	do.....	1		
Hanson.....	do.....	1		
Hutchinson.....	do.....	2		
Jerauld.....	do.....	1		
Kingsbury.....	do.....	8		
Lawrence.....	do.....	1		
Lyman.....	do.....	3		
McCook.....	do.....	1		
Miner.....	do.....	2		
Minnehaha.....	do.....	3		
Pennington.....	do.....	7		
Sanborn.....	do.....	3		
Spink.....	do.....	2		
Total for State.....		62		
Virginia:				
Counties—				
Brunswick.....	Mar. 1-31.....	24		
Fairfax.....	do.....	3		
Hanover.....	do.....	1		
Henrico.....	do.....	2		
Henry.....	do.....	30		
Lee.....	do.....	18		
Loudoun.....	do.....	1		
Mecklenburg.....	do.....	4		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received During Week Ended July 21, 1911.

Place.	Date.	Cases.	Deaths.	Remarks.
Virginia—Continued.				
Counties—Continued.				
Nansemond.....	Mar. 1-31.....	2		
Pittsylvania.....	do.....	11		
Prince William.....	do.....	1		
Princess Anne.....	do.....	1		
Southampton.....	do.....	8		
Surry.....	do.....	2		
Sussex.....	do.....	2		
Wise.....	do.....	5		
Total for State.....		115		
Apr. 1-30.				
Brunswick.....	Apr. 1-30.....	21		
Dinwiddie.....	do.....	9		
Fairfax.....	do.....	1		
Fauquier.....	do.....	1		
Hanover.....	do.....	1		
Henrico.....	do.....	3		
Henry.....	do.....	2		
Lee.....	do.....	35		
Mecklenburg.....	do.....	4		
Nansemond.....	do.....	1		
Norfolk.....	do.....	19		
Pittsylvania.....	do.....	19		
Southampton.....	do.....	1		
Sussex.....	do.....	4		
Wise.....	do.....	10		
Total for State.....		131		
May 1-31.				
Brunswick.....	May 1-31.....	3		
Campbell.....	do.....	1		
Dinwiddie.....	do.....	10		
Fauquier.....	do.....	5		
Henrico.....	do.....	4		
Henry.....	do.....	41		
Isle of Wight.....	do.....	1		
Lancaster.....	do.....	1		
Lee.....	do.....	22		
Mecklenburg.....	do.....	3		
Nansemond.....	do.....	18		
Norfolk.....	do.....	7		
Northampton.....	do.....	1		
Page.....	do.....	8		
Pittsylvania.....	do.....	12		
Roanoke.....	do.....	1		
Total for State.....		138		
Wisconsin:				
Counties—				
Ashland.....	June 1-30.....	1		
Barron.....	do.....	3		
Douglas.....	do.....	2		
Iowa.....	do.....	8		
Milwaukee.....	do.....	1		
Vilas.....	do.....	1		
Wood.....	do.....	2		
Total for State.....		18		

Reports Received from July 1 to July 14, 1911.

[For reports received from Dec. 31, 1910, to June 30, 1911, see Public Health Reports for June 30, 1911.* In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.]

Places.	Date.	Cases.	Deaths.	Remarks.
*Alabama:				
Mobile.....	June 18-24.....	3		
Montgomery.....	June 25-July 1.....	2		
Total for State.....		5		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from July 1 to July 14, 1911.

Place.	Date.	Cases.	Deaths.	Remarks.
California:				
Counties—				
Santa Cruz.....	May 1-31.....	1		
San Diego.....	do.....	1		
San Francisco.....	do.....	1		
Los Angeles.....	do.....	5		
Total for State.....		8		
Florida:				
Counties—				
De Soto.....	June 16-24.....	1		
Duval.....	do.....	9		
Escambia.....	do.....	1		
Hillsboro.....	do.....	1		
Leon.....	do.....	6		
Manatee.....	do.....	6		
Orange.....	do.....	1		
Polk.....	do.....	2		
Total for State.....		27		
*Kentucky:				
Covington.....	July 2-8.....	7		
Louisville.....	May 1-31.....	4		
Total for State.....		11		
Louisiana:				
Parishes—				
Ascension.....	Mar. 1-31.....	21		
Morehouse.....	Apr. 1-30.....	4		
Orleans—				
New Orleans.....	June 25-July 1.....	1		
St. Tammany.....	Mar. 1-31.....	3		
Tangipahoa.....	Mar. 1-Apr. 30.....	21		
Total for State.....		50		
Maine:				
Counties—				
Somerset.....	June 1-30.....	3		
Minnesota:				
Counties—				
Ramsey.....	Mar. 1-31.....		1	Cases in March, reported on p. 683, vol. 1.
*Missouri:				
St. Louis.....	June 18-24.....	1		
*Nebraska:				
Omaha.....	June 19-24.....	2		
Pennsylvania:				
Entire State.....	May 1-31.....	37		
*Tennessee:				
Counties—				
Knox.....	June 18-24.....	5		
Texas:				
Counties—				
Denton—				
Denton.....	Apr. 1-30.....	4		
Cameron.....	May 1-31.....	21		
Collin.....	do.....	5		
Dallas.....	do.....	13		
Denton.....	do.....	1		
El Paso.....	do.....	10		
Floyd.....	do.....	3		
Galveston.....	do.....	2		
Hall.....	do.....	3		
Harris.....	do.....	2		
Hidalgo.....	do.....	3		
Marion.....	do.....	1		
McLennan.....	do.....	1		
Navarro.....	do.....	32		
Nueces.....	do.....	5		
Tarrant.....	do.....	3		
				Omitted on p. 813, vol. 1.

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from July 1 to July 14, 1911.

Places.	Date.	Cases.	Deaths.	Remarks.
Texas—Continued.				
Counties—Continued.				
Titus.....	do.....	5		
Wichita.....	do.....	6		
Total for State.....		120		
Utah:				
Counties—				
Beaver.....	May 1-31.....	16		
Boxelder.....	do.....	18		
Cache.....	do.....	12		
Carbon.....	do.....	9	1	
Emery.....	do.....	4		
Garfield.....	do.....	1		
Piute.....	do.....	9		
Salt Lake.....	do.....	13		
Sanpete.....	do.....	16		
Sevier.....	do.....	18		
Tooele.....	do.....	27		
Uinta.....	do.....	1		
Utah.....	do.....	2	1	
Washington.....	do.....	1		
Weber.....	do.....	7		
Total for State.....		154	2	
Grand total for the United States.....		423	3	

MORBIDITY AND MORTALITY.

MORBIDITY AND MORTALITY TABLE, CITIES OF THE UNITED STATES, FOR WEEK ENDED JULY 1, 1911.

Cities.	Popula- tion, United States census, 1910.	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Small- pox.		Tuber- culosis.		Ty- phoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
<i>Cities having over 500,000 inhabitants.</i>														
Baltimore, Md.....	558,485	184	4		34		21	2			38	30	9	2
Boston, Mass.....	670,585	171	20	1	85	4	17				65	19	3	
Chicago, Ill.....	2,185,283	542	113	9	9	1	130	13			116	76	40	6
Cleveland, Ohio.....	560,663	151	16	3	12		67	5			30	14	7	2
New York, N. Y.....	4,766,883	273	18		663	21	211	10			410	133	52	11
Philadelphia, Pa.....	1,549,008	440	70	4	28	4	26	4			83	55	15	
Pittsburg, Pa.....	533,905	145	3	2	52	5	9				37	14	11	2
St. Louis, Mo.....	687,029	218	11		23		20	3			30	16	11	5
<i>Cities having from 300,000 to 500,000 inhabitants.</i>														
Buffalo, N. Y.....	423,715	97	18	2	13		14	3			22	8	10	
Cincinnati, Ohio.....	364,463	122	6		3		48	1	1		23	22	12	1
Detroit, Mich.....	465,766	116	14				6							
Los Angeles, Cal.....	319,198	94	7		16		8		1		8	23	12	
Milwaukee, Wis.....	373,857	89	9		33	1	17	2	1		12	7	7	
Newark, N. J.....	347,469	82	21	1	1		11				19	9	5	
New Orleans, La.....	339,075	25	2		24	1	2		1		45	15	21	7
Washington, D. C.....	331,069	97	7		55		2				21	11	7	
<i>Cities having from 200,000 to 300,000 inhabitants.</i>														
Denver, Colo.....	213,381	62	3		4		2		2			10	5	1
Jersey City, N. J.....	267,779	71		1	4							7		
Kansas City, Mo.....	248,381	86	5	1	4		1		4			8		1
Providence, R. I.....	224,326	68	5		1		4				3	8	1	1
Seattle, Wash.....	237,194	37			14		5				2	4	3	1

MORBIDITY AND MORTALITY—Continued.

Morbidity and mortality table, cities of the United States, for week ended July 1, 1911—Continued.

Cities.	Popula- tion, United States census, 1910.	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Small- pox.		Tuber- culosis.		Ty- phoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
<i>Cities having from 100,000 to 200,000 inhabitants.</i>														
Bridgeport, Conn.	102,054	28	3	10	1	1				2	1	3	1	
Cambridge, Mass.	104,839		16	2	15	2				6	5	1	4	
Columbus, Ohio.	181,548	47	2		1	3				5	1	3	4	
Dayton, Ohio.	116,577	24		16		2				1	4	3	2	
Fall River, Mass.	119,295	38	1	3						4	1	4	1	
Grand Rapids, Mich.	112,571	25		8		1				1	4	3	10	1
Lowell, Mass.	106,294	29	2	7						4	3	4	3	
Nashville, Tenn.	110,364	50								8	5	2	32	5
Oakland, Cal.	150,174	41	1	1	2	1				1	2	2	1	1
Omaha, Nebr.	124,096	6								2	2	1	1	1
Richmond, Va.	127,628	57		8	1	3		3		3	4	1	9	
Toledo, Ohio.	168,497	63	2	1	2					12	5	1	1	
Worcester, Mass.	145,986	49	9	18		13	1			6	12			
<i>Cities having from 50,000 to 100,000 inhabitants.</i>														
Altoona, Pa.	52,127	8				1					2			
Bayonne, N. J.	55,545	12	2	10	1									
Brocton, Mass.	56,878	9		5		2				2			2	
Camden, N. J.	94,538		3			1							2	
Covington, Ky.	53,270	17									5	2		2
Duluth, Minn.	78,466	20	11	3	8	2				2	3	1	1	
Elizabeth, N. J.	73,409	16	5	1		7					1	1		1
Erie, Pa.	66,525	22	2	1	1	1				6	1	1		
Evansville, Ind.	69,647	21		4						7	1	1		
Fort Wayne, Ind.	63,933	18	67	1	4	1				2	2			
Harrisburg, Pa.	64,186	20	6	1	4	2				16	2	1		
Hoboken, N. J.	70,324	3				2				1				
Houston, Tex.	78,800	25									1			1
Jacksonville, Fla.	57,699	28						6		7	7	13	4	
Johnstown, Pa.	55,482	14		14						3	1			
Kansas City, Kans.	82,331	41	1			2							2	1
Lawrence, Mass.	85,892	28	2	10						2	5	1	1	1
Lynn, Mass.	89,336	18	3	1	2	1				2	3	1		
Manchester, N. H.	70,063	20		4		1				2	2			
Mobile, Ala.	51,521	15	2					1		1	2	11		3
New Bedford, Mass.	96,652		1	6		1				5	7	6		
Passaic, N. J.	54,773	20	1	5	2					2	1	1		
Portland, Me.	58,571	23	3			1					2	2		
Reading, Pa.	96,071	28	2	2		5		1			3	1		
San Antonio, Tex.	96,614	30									6	5		
Schenectady, N. Y.	72,826	20	1			3				3	2	3		
South Bend, Ind.	53,684	21	2	2		1				1	1	3		
Springfield, Ill.	51,678	15			1									
Springfield, Mass.	88,926	22	1	11		1				5	1	2		
Terre Haute, Ind.	58,157	13		1		4								
Trenton, N. J.	96,815	27	5	1		9				4	1	1	1	1
Utica, N. Y.	74,419	27	1	1	6	1				2	5	1		
Wichita, Kans.	52,450	15		1										1
Wilkes-Barre, Pa.	67,105	21	5	18						6		1		
Wilmington, Del.	87,411	17					1							
Yonkers, N. Y.	79,803	24	5	1	17	14				11	1			
<i>Cities having from 25,000 to 50,000 inhabitants.</i>														
Aurora, Ill.	29,807	1	2	1		1								
Berkeley, Cal.	40,434	10	1		2						1	2		
Binghamton, N. Y.	48,443	21		1						1	2			
Brookline, Mass.	27,792	8		13						1				
Chattanooga, Tenn.	44,604					2						4		
Chelsea, Mass.	32,452	11		14						3	3			
Chicopee, Mass.	25,401	6		4										
Danville, Ill.	27,871	7						2		1	1			
East Orange, N. J.	34,371	7			1					4	1			

MORBIDITY AND MORTALITY—Continued.

Morbidity and mortality table, cities of the United States, for week ended July 1, 1911—Continued.

Cities.	Popula- tion, United States census, 1910.	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Small- pox.		Tuber- culosis.		Ty- phoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
<i>Cities having less than 25,000 inhabitants—Con.</i>														
Moline, Ill.	24,199	7	1		1								2	
Montclair, N. J.	21,150	6												
Morristown, N. J.	12,507	2			1		1							
Nanticoke, Pa.	18,877	3	1											
Newburyport, Mass.	19,949	5											1	
North Adams, Mass.	22,019	7												
Northampton, Mass.	19,431	5		3			2				1			
Palmer, Mass.		1												
Palo Alto, Cal.	4,486	0			1									
Peekskill, N. Y.		6	1		10						1		1	
Plainfield, N. J.	20,550	5					2				2			
Portsmouth, N. H.	11,209		2											
Pottstown, Pa.		5					2				1		1	
Sandusky, Ohio.		6												
Saratoga Springs, N. Y.		4			3						4		1	
South Bethlehem, Pa.	19,973	1	2								4		2	1
Steelton, Pa.	14,246	4	3	2			1				2			
Warren, Ohio.		0	1											
Wilksburg, Pa.	11,080	2									1			
Woburn, Mass.	15,308	4									1			

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

FLORIDA.—Week ended July 8, 1911. Reports from the State board of health show diphtheria present in one locality (Tampa) with 1 case, malaria in 7 localities with 30 cases, smallpox in 7 counties with 51 cases, tuberculosis in 9 localities with 19 cases, typhoid fever in 10 localities with 33 cases.

ILLINOIS—*Alton*.—Two months ended June 30, 1911. Population, 20,446. Total number of deaths from all causes 37; tuberculosis 1. Cases reported: Diphtheria 3.

MARYLAND.—Month of April, 1911. Population, 1,295,346. Total number of deaths from all causes 832, including diphtheria 8, measles 21, scarlet fever 1, tuberculosis 106, typhoid fever 11. Cases reported: Diphtheria 38, measles 275, scarlet fever 59, smallpox 5, typhoid fever 39. The typhoid fever cases were distributed as follows: Potomac River watershed 14, Patapsco River watershed 3, Patuxent River watershed 1, Susquehanna River watershed 1, Baltimore city water system 5 cases.

MASSACHUSETTS.—Week ended February 4, 1911. Population of reporting towns, 2,581,344. Total number of deaths from all causes 831, including diphtheria 8, measles 5, scarlet fever 10, tuberculosis 74.

Week ended February 11, 1911. Total number of deaths from all causes 900, including diphtheria 12, measles 3, scarlet fever 4, tuberculosis 85, typhoid fever 2.

Week ended February 18, 1911. Population of reporting towns 2,565,623. Total number of deaths from all causes 902, including diphtheria 12, measles 3, scarlet fever 1, tuberculosis 99, typhoid fever 2.

Week ended February 25, 1911. Population of reporting towns, 2,554,219. Total number of deaths from all causes 885, including diphtheria 12, measles 6, scarlet fever 4, tuberculosis 80, typhoid fever 6.

Morbidity.—During the four weeks ended February 25, 1911, cases of communicable diseases were reported as follows: Diphtheria 863, measles 1,328, scarlet fever 697, typhoid fever 88, tuberculosis, pulmonary, 554, tuberculosis other than pulmonary 7, cerebrospinal meningitis 17, meningitis other than cerebrospinal 2, whooping cough 403, varicella 261, ophthalmia neonatorum 118, poliomyelitis 3, mumps (not notifiable) 45, erysipelas (not notifiable) 7, trachoma 1, tetanus 1, glanders 1. (Population, 3,336,416.)

MINNESOTA.—Month of April, 1911. Population, 2,075,708. Total number of deaths from all causes 1,894, including diphtheria 37, measles 21, scarlet fever 15, tuberculosis 183, typhoid fever 22.

SOUTH CAROLINA—*Charleston.*—Month of June, 1911. Population, 58,833. Total number of deaths from all causes 153, including diphtheria 1, tuberculosis 23, typhoid fever 2. Cases reported: Diphtheria 4, scarlet fever 2, typhoid fever 14.

UTAH.—Month of May, 1911. Population, 373,531. Total number of deaths from all causes 280, including diphtheria 8, measles 2, scarlet fever 3, smallpox 2, tuberculosis 17, typhoid fever 4. Cases reported: Diphtheria 51, measles 974, scarlet fever 127, smallpox 154, tuberculosis 16 (incomplete), typhoid fever 16.

FOREIGN AND INSULAR.

AUSTRIA.

TRIESTE—Cholera.

Information of the occurrence of a case of cholera at Trieste was received July 19 from the American vice consul.

BRAZIL.

PERNAMBUCO—Plague and Yellow Fever.

The American consul reports July 19 that plague and yellow fever are present at Pernambuco.

CHINA.

Typhus Fever.

Consul Gilbert at Nanking reports, June 3, the prevalence of typhus fever in Nanking and vicinity and the presence of the disease in epidemic form at Siakwan and Pukow.

Consul McNally at Tsingtau reported, June 10, the presence of numerous cases of typhus fever at Litsun, a Chinese market town in the vicinity of Tsingtau.

AMOY—Cholera and Plague—Antiplague Inoculation.

Acting Asst. Surg. Bonthius reports, June 5 and 12:

During the week ended June 2 there were reported at the international settlement of Kulangsu 3 deaths from plague, of which 1 was of the pneumonic form. In Amoy city 2 deaths from cholera and 6 from plague were reported during the week ended June 2, and 29 cases with 1 death during the week ended June 10.

During the period from January 1 to June 5 I personally inoculated 685 persons with antiplague serum. Of this number, 11 were foreigners. The remainder were Chinese. No ill results from inoculation were observed. Six of the persons inoculated contracted bubonic plague within a month after inoculation and made a complete recovery.

HONGKONG—Plague—Plague Rats Found.

Surg. Brown reports May 31 and June 7:

During the week ended May 20, 21 cases of plague with 20 deaths were reported, and during the week ended June 3, 16 cases with 14 deaths. During the two weeks ended June 3, 26 plague-infected rats were found.

Medical examination and quarantine were declared June 2 against arrivals from Hoihow on account of cholera.

CUBA.

Transmissible Diseases.

The following statement of transmissible diseases in the island was issued by the national department of sanitation.

JUNE 1-10, 1911.

Diseases.	New cases.	Deaths.	Remain- ing under treat- ment.
Tuberculosis.....	53	76	2,364
Leprosy.....	2	2	354
Malaria.....	28	5	110
Typhoid fever.....	26	7	81
Diphtheria.....	13	1	14
Scarlet fever.....	8	.....	14
Measles.....	129	5	225
Varicella.....	7	.....	38
Tetanus in the new born.....	10	9	1
Filariasis.....	.....	.....	2

No quarantinable diseases were reported in the Republic during the week ended July 8.

FRANCE.

Marseille—Cholera.

The American consul reports July 19 the occurrence of 4 cases of cholera with 2 deaths. One case originated in Italy.

GERMAN EMPIRE.

Measures at German Ports Against Cholera.

By order of the imperial chancellor dated June 24, vessels arriving at German ports from Naples are declared to be subject, with their passengers and crews, to sanitary inspection on account of cholera before being admitted to free pratique.

GREAT BRITAIN.

Rat Plague in London.

The following statement relative to rat plague in London was received from Consul General Griffiths:

Plague has again made its appearance among the rats of the port of London. The infection was discovered at a wharf on the Thames at Wapping, one of the districts in the east of London.

In the London Times of June 17, 1911, an article is published in reference to the rat plague in London, extracts from which article appear below:

There can be no indiscretion in making the discovery public, for the recurring presence of plague among rats in the lower reaches of the Thames is already common knowledge. In the report recently issued by Dr. Williams, medical officer of health for the port of London, the fact is proclaimed, as a warning, in all the emphasis of capital letters. Dr. Williams says in large type that plague has "occurred amongst the rats in the district for three years in succession." The danger, if there is a danger, lies not in publicity, but in unwise attempts to suppress the facts. There has never yet been an outbreak of plague in any country when the authorities have not tried at first to preserve secrecy. There has never been an occasion when they have not afterwards had cause to rue their ill-advised reticence.

It is scarcely necessary to say that the present existence of infection, which is believed to be extremely limited, presents no cause for public alarm, though it indicates the necessity for caution. In October and November of last year, three rats which had died of plague were found near the Seamen's Hospital in the Royal Albert dock. So far as is known, the outbreak did not spread. In 1909 rats died of plague in the Southwest India Dock, and in 1908 at the West India Dock. In each case the

infection seemed to have been isolated. The new and possibly somewhat ominous fact is that, so far as can be ascertained, the infection has been found nearly 2 miles farther up the river than it has ever reached before. If previous experience is repeated and the outbreak is successfully isolated there need be no apprehension. On the other hand, the discovery may indicate a steadily increasing radius of infection. Was the infection brought in a ship, or has it passed along the area which separates Wapping from the lower docks? That is the point toward which the investigations of the authorities are no doubt being directed.

It must be remembered that plague among rats, as well as among men, is essentially a seasonal disease. In England, as past records show, the plague season is likely to be the late summer and autumn, when rat fleas are most prevalent. The long spell of hot, dry weather through which we have been passing favors the increasing prevalence of rat fleas, and therefore may assist the spread of plague when an infection has been established.

The wharf where the plague rats were discovered has a timber landing stage, with a couple of tall warehouses attached. It is frequented by vessels from foreign ports, though not, it is believed, by ships from plague-stricken localities. On Friday week six dead rats were found at the wharf, and on Tuesday six more dead rats were found. Some of these rats were sent to the Local Government Board for examination. The tests are not yet complete, but it is known that four of them have been found to have died of plague.

The statement that one of the rats died of bubonic plague and the other from the pneumonic variety of the disease is of little practical importance. Many plague rats show on examination that their lungs have been affected, and very often they betray no signs of buboes. So long as the intermediary host of infection remains the rat flea it does not matter very much whether the rats have died from the pneumonic or the bubonic form. The only essential point is the possibility of the transmission of infection to human beings, and the character of the complaint in the rat does not affect this possibility, for the bacillus is in all cases the same. The statement about pneumonic plague therefore need carry no unnecessary alarm.

The existence of plague in wharves and warehouses, which are not inhabited at night, may be regarded with comparative equanimity, so long as it does not spread to the rats in the plexus of mean streets which lie behind. Nevertheless, the Stepney authorities, guided by the local government board, are taking careful precautions. The sanitary staff of the Stepney borough council has commenced a house-to-house visitation in the neighborhood, and the inhabitants are being warned not to handle dead rats if any are found. All the managers of riverside wharves near the infected area have been duly notified and the medical men of the district have been requested to watch for any suspicious cases of illness among their patients. Little anxiety exists about the chance of possible transmission to human beings. The public health organization is so complete and alert that human cases could probably be very quickly isolated if they occurred. The real cause for anxiety is of another kind. If human cases occur they must be notified to the foreign powers who are signatory to the Venice and Paris Conventions concerning plague. In that event London would be declared an infected port for a prescribed number of days after the cases were noted, and the resulting interruption to the shipping trade would be grave.

While the recurrence in the port of London of an infection which has been already noted in three successive years can be regarded without excitement it has its serious aspects. It can not be too strongly urged that the mere presence of plague in England among rats, in however limited a form, may become a matter of sinister importance. If the Wapping outbreak marks a slowly widening circle of infection it would be in exact accord with Indian experience, for plague has sometimes taken months, or even years, to pass through the rats of a single village. So long as the rats are infected there must always be some danger to mankind.

In East Anglia, according to the statement made by the medical officer of the East Suffolk County council, no plague rat has been found since January. We have yet to learn what organized attempt has been made to discover the presence of plague in East Anglia since the brief period of careful examination early in the year.

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.

At Hilo the last case of human plague occurred March 23, 1910.

A fatal case occurred at Honokaa, 60 miles from Hilo, December 17, 1910; 2 fatal cases were reported January 31, 1911, and 1 fatal case was reported April 19.

The last plague-infected rat was found at Honokaa February 2, 1911. A plague-infected rat was found at Hilo during the week ended June 10, 1911.

Chief Quarantine Officer Ramus reports, June 26:

HONOLULU.

Week ended June 24, 1911.

Total rats and mongoose taken.....	577
Rats trapped.....	540
Mongoose trapped.....	22
Rats killed by sulphur dioxide.....	15
Examined bacteriologically.....	487
Classification of rats trapped:	
<i>Mus alexandrinus</i>	59
<i>Mus musculus</i>	201
<i>Mus norvegicus</i>	34
<i>Mus rattus</i>	246
Classification of rats killed by sulphur dioxide:	
<i>Mus alexandrinus</i>	6
<i>Mus rattus</i>	9
Average number of traps set daily.....	1, 720

ITALY.

Status of Cholera.

Surgeon Geddings at Naples reports July 20:

From July 7 to 11, 76 cases of cholera with 24 deaths were reported in the city of Naples; in the rest of continental Italy 66 cases with 24 deaths; in the city of Palermo 84 cases with 27 deaths, and in the province of Palermo 6 cases with 3 deaths.

MEXICO.

Typhus Fever.

Acting Asst. Surg. Tappan at El Paso reports that during an investigation made by him May 14 of conditions existing at Juarez, Mexico, he found 19 cases of typhus fever among wounded soldiers in hospital.

At Mexico City Consul General Shanklin reports the occurrence of 58 cases of typhus fever with 20 deaths during the week ended June 10.

PERU.

Status of Plague.

The following statements of plague in Peru were received from the director of public health:

MAY 21-JUNE 3, 1911.

Localities.	Cases remaining May 20.	New cases.	Recovered.	Died.	Remaining June 3.
Lima.....	11	17	2	7	19
Callao.....	2	1		1	2
Trujillo.....	12	1	12		1
Islay.....	1	2	1		2
Chiclayo.....	7		4	1	2
Lambayeque.....	3		1	1	1
Pacasmayo.....		1			1
Santa.....		1			1

JUNE 4-17, 1911.

Localities.	Cases re- maining June 3.	New cases.	Recov- ered.	Died.	Remain- ing June 17.
Lima.....	19	1	13	1	6
Callao.....	2	2	1		3
Trujillo.....	1	6		2	2
Islay.....	2	5	1(?)	1(?)	4
Chiclayo.....	2	1	1		2
Lambayeque.....	1				1
Pacasmayo.....	1				1
Santa.....	1	2	2	1	
Yungay.....		4			4

RUSSIA.**Cholera and Plague.**

Acting Asst. Surg. De Forest at Libau reports, June 26:

During the week ended June 24, 1 case of cholera was reported at Disna on the Duna River.

During the same period plague was reported as follows: At Odessa, 2 cases; in the Government of Astrakhan, 3 cases, 3 deaths; plague infection present in Naryma, part of the Kirghis plain.

OMSK, SIBERIA—Cholera.

The American consul reports the occurrence of 2 cases of cholera during the week ended June 26.

TURKEY IN ASIA.**SMYRNA—Cholera.**

Vice Consul General Memminger reports, June 19:

During the period from June 6 to 18, 79 cases of cholera, with 39 deaths were reported.

VENEZUELA.**CARACAS—Plague.**

Acting Asst. Surg. Stewart, at La Guaira, reports, June 19, the occurrence of a case of plague at Caracas during the two weeks ended June 10.

ZANZIBAR.**ZANZIBAR—Smallpox—Examination of Rats.**

Consul Weddell reports:

During the two weeks ended June 4, 2 cases of smallpox with 1 death were reported. From June 8, 1910, the date of the smallpox outbreak, to June 4, 1911, a total of 274 cases was reported. During the same period 43,569 persons were vaccinated.

During the two weeks ended June 4, 1911, 3,158 rats were examined for plague infection. No plague-infected rats were found.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.

Reports Received During Week Ended July 21, 1911.

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

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Trieste	July 19	1		
Ceylon:				
Colombo	May 28-June 3	6	6	
France:				
Marseille	July 19	4	2	
India:				
Calcutta	May 21-27		55	
Madras	June 4-10		1	
Italy.....				Total for continental Italy outside of Naples July 7-11: Cases 66, deaths 24.
Naples	July 7-11	76	24	
Palmero, province	July 7-11	6	3	
Palmero, city	July 7-11	87	24	
Java:				
Batavia	May 21-June 3	170	97	
Surabaya	Apr. 30-May 6	15	10	
Russia:				
Siberia—				
Omsk	June 20-26	2		
Straits Settlements:				
Singapore	May 21-27	8	6	
Turkey in Asia:				
Alatsham	June 19	2		
Basra	do	2		
Samsun	June 11-24		22	
Smyrna	June 5-18	79	39	

YELLOW FEVER.

Brazil:				
Manaos	July 13			Present.
Pernambuco	July 19			Do.

PLAGUE.

Brazil:				
Pernambuco	July 19			Present.
China:				
Hongkong	May 28-June 3	16	14	Apr. 23-June 3, 82 cases, including cases previously reported.
Egypt:				
Alexandria	June 10-22	7	2	
Cairo	Feb. 12-May 31	1	1	
Port Said	June 14-29	4	2	
India:				
Calcutta	May 21-27		59	
Kurrachee	June 4-10	40	40	
Java:				
Paseroean Residency	May 21-June 3	125	62	
Persia:				
Lingah	May 18-28	4		
Peru:				
Departments—				
Ancachs	May 21-June 17	7	1	
Arequipa	do	7	1	
Callao	do	3	1	
Chiclayo	do	1	1	
Lambayeque	May 21-June 3		1	
Libertad	May 21-June 17	4	2	
Lima	do	18	8	
Pacasmayo	May 21-June 3	1		
Russia:				
Odessa	June 18-24	2		
Astrakhan government—				
Saraltschin	do	3	3	
Kirghis Steppe—				
Naryma	June 24			Present.
Straits Settlements:				
Singapore	May 21-27	1	1	
Turkey in Asia:				
Basra	May 28-31	3	1	

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

Reports Received During Week Ended July 21, 1911.

SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Bohemia.....	June 11-17.....	3		
Galicia.....	do.....	1		
Canada:				
Ottawa.....	June 25-July 8.....	8		
Quebec.....	July 2-8.....	2		
China:				
Hongkong.....	May 28-June 3.....	1	1	
Egypt:				
Cairo.....	June 4-10.....	4	2	
Port Said.....	do.....	2	1	
France:				
Paris.....	June 18-24.....	2		
Germany.....				Total June 18-24: One case.
Great Britain:				
London.....	June 18-24.....	4		
India:				
Calcutta.....	May 21-27.....		2	
Madras.....	June 4-10.....		2	
Italy:				
Catania.....	June 18-24.....		5	
Naples.....	do.....	10		
Palermo.....	June 19-25.....	7	6	
Japan:				
Yokohama.....	June 13-19.....	1		
Mexico:				
San Luis Potosi.....	June 4-10.....	16		
Tampico.....	June 21-30.....		1	
Portugal:				
Lisbon.....	June 18-24.....	12		
Portuguese East Africa:				
Lourenço Marquez.....	Apr. 1-30.....		1	
Russia:				
Batoum.....	May 1-31.....	1		
Liban.....	May 12-18.....	7		
Moscow.....	June 11-17.....	19	10	
Reval.....	May 1-31.....	3		
St. Petersburg.....	May 21-June 4.....	35	10	
Spain:				
Barcelona.....	June 8-14.....		1	
Valencia.....	June 18-July 1.....	20	2	
Straits Settlements:				
Singapore.....	May 21-27.....	7	2	
Turkey in Asia:				
Beirut.....	May 11-24.....	9	2	
Kharpout.....	May 11-June 10.....	25	1	
Zanzibar:				
Zanzibar.....	May 22-June 4.....	3	1	

Reports Received from July 1 to July 14, 1911.

[For reports received from December 31, 1910, to June 30, 1911, see PUBLIC HEALTH REPORTS for June 30, 1911. In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.]

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Trieste.....	July 3.....	1		From s. s. Oceania.
Waltendorf.....	May 31.....	1		Near Gratz.
Ceylon:				
Colombo.....	May 21-27.....	1		
China:				
Amoy.....	May 28-June 3.....		2	
Greece:				
Laurium.....	July 8.....			Present.
India:				
Bassein.....	May 7-13.....	1	1	
Calcutta.....	May 7-20.....		95	
Moulmine.....	May 7-20.....	2	2	
Indo-China:				
Saigon.....	May 15-28.....	20	12	

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

Reports Received from July 1 to July 14, 1911.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Italy.....				Total for continental Italy outside of Naples June 8 to July 6: Cases, 374; deaths 116.
Naples.....	June 11-July 6....	216	68	
Sicily.....				Outside of Palermo to July 6, 27 cases, 11 deaths.
Palermo.....	June 15-July 6....	282	75	
Java:				
Batavia.....	May 14-20.....	98	60	
Siam:				
Bangkok.....	Apr. 16-May 13....	442	442	
Straits Settlements:				
Penang.....	May 7-13.....		1	
Singapore.....	May 7-20.....	7	8	
Turkey:				
Constantinople.....	June 12-18.....		1	
Turkey in Asia:				
Kamaron.....	May 28-June 4....	2	1	Among troops.
Samsun.....	May 29-June 10....	166	156	
Unieh.....	June 4-10.....	1	1	
Smyrna.....	May 29-June 4....	11	5	

YELLOW FEVER.

Brazil:				
Manaos.....	June 4-10.....		1	
British Gold Coast:				
Accra.....	May 23-27.....	3		Among natives.
Bissagos Islands:				
Bulama.....	May 27.....			Present.
Ecuador:				
Guayaquil.....	June 1-15.....	8	5	
Milagro.....	do.....	4	3	
Gambia:				
Bathurst.....	May 23-27.....	5	2	Among Europeans.

PLAGUE.

Arabia:				
Maskat.....	May 21-27.....	3	2	
British East Africa:				
Port Florence.....	Apr. 26.....	1	1	
Chile:				
Arica.....	June 12.....			Present.
Iquique.....	May 14-June 10....	10	5	
China:				
Amoy.....	May 21-June 3....		16	To May 28: Cases 61.
Hongkong.....	May 14-27.....	26	25	
Shanghai.....	do.....	3		In vicinity.
Swatow.....	May 21-June 3....			Still present. Epidemic in Chao-chow-fu, Hwellai, Kit-yang, and in Chao-Yang Jan. 1-May 23, 2,000 deaths.
Ecuador:				
Guayaquil.....	June 1-15.....	2		
Egypt:				
Alexandria.....	May 31-June 9....	13	5	
Cairo.....	Feb. 12-May 31....	1	1	
Port Said.....	May 27-June 13....	1		On s. s. Yeddo, bound for Calcutta from New York, via Naples and Torreveja, Spain.
Provinces—				
Assiout.....	May 31-June 14....	4	2	
Dakahlieh.....	May 29-June 11....	2		
Fayoum.....	May 28-June 11....	2		
Girgeh.....	Apr. 19-June 14....	1		
Kena.....	May 30-June 12....	5	5	
Minieh.....	June 1-14.....	14	4	
India:				
Bombay.....	May 21-June 3....	245	218	
Calcutta.....	May 7-20.....		159	
Kurrachee.....	May 28-June 3....	80	81	
Bombay Presidency and Sind.....	May 7-June 3.....	3,531	2,816	

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

Reports Received from July 1 to July 14, 1911.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India—Continued.				
Madras Presidency.....	May 7-June 3.....	91	75	
Bengal.....	do.....	1,901	1,707	
United Provinces.....	do.....	17,274	16,645	
Punjab.....	do.....	45,981	39,968	
Burma.....	do.....	520	494	
Central Provinces.....	do.....	57	58	
Mysore State.....	do.....	285	196	
Hyderabad State.....	do.....	5	9	
Central India.....	do.....	80	63	
Rajputana and Ajmere	do.....	1,325	1,181	
Merwara.....				
Kashmir.....	do.....	506	335	
North West Province.....	do.....	103	73	
Grand total.....		71,659	63,620	
Indo-China:				
Saigon.....	May 15-28.....	53	19	
Japan:				
Formosa.....	May 21-June 3.....	76	74	In Kagf Province from Jan. 1-June 15: Cases 355, including report p. 1047, vol. 1.
Java:				
Paseroean Residency.....	May 14-20.....	62	30	
Surabaya.....	May 1-3.....	3	1	
Mauritius.....	Mar. 1-Apr. 27.....	8	4	
New Zealand:				
Auckland.....	May 1-8.....	4		
Persia:				
Buchir.....	May 14-30.....	41	39	
Lingah.....	May 18.....	3		From the opposite Arabian coast.
Peru:				
Departments—				
Ancachs.....	Apr. 30-May 20.....	2	1	
Arequipa.....	do.....	8	2	Mollendo, June 1-13: Cases 4, deaths 1.
Callao.....	do.....	1		
Chiclayo.....	do.....	11	3	
Lambayque.....	do.....	1	1	
Libertad.....	do.....	6	3	
Lima.....	do.....	12	3	
Pacasmayo.....	do.....	2	2	
Siam:				
Bangkok.....	Apr. 16-May 13.....	14	14	
Turkey in Asia:				
Basra.....	May 21-27.....	1	1	
Venezuela:				
Caracas.....	May 29-June 10.....	1		

SMALLPOX.

Argentina:				
Buenos Aires.....	Apr. 1-30.....		21	
Austria-Hungary:				
Bohemia.....	May 28-June 3.....	2		
Galicja.....	May 28-June 3.....	1		
Brazil:				
Para.....	July 6.....			Present.
Rio de Janeiro.....	May 28-June 3.....		1	
Canada:				
British Columbia—				
Victoria.....	May 1-31.....	10		
Ontario—				
Ottawa.....	June 11-24.....	3		
Prince Edward Island—				
Charlottetown.....	June 14-20.....	1		
Quebec—				
Quebec.....	June 18-24.....	3		
Yukon—				
Dawson.....	June 4-10.....	7		
Ceylon:				
Colombo.....	May 21-27.....	1		
China:				
Hongkong.....	May 21-27.....	5	2	
Nanking.....	May 28-June 10.....			Do.
Shanghai.....	May 24-June 4.....		4	
Swatow.....	May 28-June 3.....			Present in the district.

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

Reports Received from July 1 to July 14, 1911.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Egypt:				
Alexandria.....	Apr. 1-May 31....	44	27	
Cairo.....	May 22-June 3....	2	1	
Port Said.....	May 22-June 3....	3	3	
Germany.....				Total for Germany, June 4-10, cases, 4.
Gibraltar.....	June 4-11.....	1		
Great Britain:				
Dundee.....	June 11-17.....	1		
Liverpool.....	June 18-24.....	1		
London.....	June 4-17.....	9		
India:				
Bombay.....	May 21-June 3....	39	26	
Calcutta.....	May 7-20.....		2	
Madras.....	May 21-June 3....	16	10	
Indo-China:				
Saigon.....	May 15-28.....	30	1	
Italy:				
Naples.....	June 11-17.....	9	1	
Palermo.....	June 4-10.....	18	10	
Mexico:				
Guadalajara.....	June 18-24.....		1	
Mexico.....	May 21-June 3....		34	
San Juan Bautista.....	June 17.....			Decreasing.
San Luis Potosi.....	June 4-10.....	2	2	
Tampico.....	June 11-20.....		2	
Portugal:				
Lisbon.....	June 4-17.....	24		May 7-13, deaths 2.
Russia:				
Libau.....	June 5-11.....		1	
Moscow.....	May 28-June 10...	49	20	
Odessa.....	May 27-June 3....	2		
Riga.....	May 27-June 10...	6		
St. Petersburg.....	May 21-June 3....	40	7	
Siam:				
Bangkok.....	Apr. 16-May 13...	22	16	
Siberia:				
Omsk.....	May 29-June 3....	2		
Vladivostok.....	June 10.....			Epidemic among natives and a few cases among foreigners.
South Africa:				
Port Elizabeth.....	May 21-27.....	1		
South Australia:				
Adelaide.....	Apr. 15.....			1 case from Colombo on s. s. Mooltan.
Spain:				
Barcelona.....	May 6-12.....		2	
Valencia.....	June 4-17.....	8		
Straits Settlements:				
Penang.....	Apr. 30-May 6....	1		
Singapore.....	May 7-20.....	12	2	
Switzerland:				
Ticino, canton.....	May 28-June 3....	1		
Turkey:				
Constantinople.....	June 4-11.....		1	
Turkey in Asia:				
Beirut.....	May 27-June 3....	3		
Kharput.....	May 21-27.....	9	2	
Uruguay:				
Montevideo.....	Apr. 1-30.....	21	3	
Zanzibar:				
Zanzibar.....	May 15-21.....		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.						
Aix-la-Chapelle.....	June 17	156,394	74	6																
Amsterdam.....	July 1	577,025	105	15							1			2						3
Antwerp.....	June 24	327,668	69	4															2	1
Asuncion.....	June 3	75,000	15	2																
Barcelona.....	June 22	591,272	360	33				1			6			1		3				1
Batavia.....	May 27	217,630	90			55														
Do.....	June 3		60			42														
Beirut.....	June 17	80,000	22					2												
Do.....	June 24		20	2																
Belgrade.....	do.....	90,050	35								2		1							
Berlin.....	June 17	2,088,123	504	92							3		9		11				8	1
Bradford.....	June 24	288,723	66	4									2		2					2
Do.....	July 1		69	7																
Bremen.....	June 24	246,850	47	11									1							
Bristol.....	July 1	357,509	63	3									2		2					
Brussels.....	June 24	523,461	114	8								1								1
Budapest.....	do.....	950,610										6		1		8				1
Cairo.....	June 10	689,439	766	29	1			2	15		2	15	15	12						
Calcutta.....	May 27	890,493	424	30	59	55		2												
Catania.....	June 24	220,000	77	6				5				4		1		1				
Cardiff.....	Apr. 16	203,107	58	6							1									1
Do.....	Apr. 22		56	7									1		1					1
Do.....	Apr. 29		41	3									1		1					1
Do.....	May 6		39	10								1								
Do.....	May 13		36	5								1								1
Do.....	May 20		37	2							1									
Do.....	May 27		37	4									1							1
Do.....	June 10	182,729	25										1							2
Do.....	June 17		35	6									3							
Do.....	June 24		41	8																1
Chemnitz.....	do.....	294,360	87	4											1					2
Chihuahua.....	June 25	39,000	38	6						1										
Christiania.....	June 18	245,000	9	8												5				4
Do.....	July 1		59	8										2						2
Coburg.....	June 24	23,909									1									
Cologne.....	do.....	520,701	155	24								1	1	1	4					2
Colombo.....	June 3	211,287	8		6															
Constantinople.....	June 25	1,000,000	210	36		1					7		3	1	3					
Copenhagen.....	June 17	462,000	112	22							3		2							2
Edinburgh.....	June 24	320,829	71	5																3
Georgetown.....	do.....	56,000	35	3																3
Erfurt.....	June 17	124,310	43	7							1									
Do.....	June 24		41	1																
Frankfort on the Main.....	June 17	414,800	104										1		2					
Do.....	June 24		87										2							
Glasgow.....	June 30	784,655	205								1			1						14
Gothenburg.....	June 24	168,000	43	10										2	1					
Hamburg.....	do.....	932,166	224	30								3	12	1						2
Hongkong.....	June 3	336,488			14			1												
Harput.....	do.....	21,000		1				1												3
Do.....	June 10		1																	2
Do.....	June 17																			
Kingston.....	June 24	59,584									2									
Kurrachi.....	June 10	148,000	98		40															
London.....	June 24	7,269,752	1,333									4	7	8	30					17
Madras.....	June 10	550,000	321			1		2			2									
Mannheim.....	do.....	195,450	42	7																
Do.....	June 17		47	6																
Moscow.....	do.....	1,500,000	1,028	89				10	1	2	14	10	12							4
Odessa.....	June 24	546,000	200	22							3	1			2					2
Ottawa.....	July 1	86,000	35	3										2						
Do.....	July 8		48	1							1		1							
Palermo.....	June 25	340,000	467	9		37		6			8	1								
Paris.....	June 24	2,846,986	798	186							4	2	4	19						8
Patras.....	June 12	40,000	19	1							1									
St. Petersburg.....	June 10	1,907,708	807	110				2	1	12	10	9	39							7
Do.....	June 17		732	88				8		8	8	12	38							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.
San Luis Potosi.....	June 24	83,946	99	3				4		2			1	1
Samsun.....	June 11 June 24	30,000				22								
Santa Cruz de Tenerife.	June 17	46,000	11	3						1				
Singapore.....	May 27	303,328	359	42	1	6		2		2				
Smyrna.....	do.....	400,000	79	19		6								
Do.....	June 3		82	10										
Trieste.....	June 24	229,499	107			1				1		1		
Tampico.....	June 30	24,352	46					1					3	
Valencia.....	June 24	240,000	89	10				1					2	
Do.....	July 1		85	8				1						

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

CANADA—*Hamilton*.—Month of June, 1911. Population 73,500. Total number of deaths from all causes 90, including diphtheria 1, tuberculosis 5, typhoid fever 2.

FRANCE—*Calais*.—Month of June, 1911. Population 80,000. Total number of deaths from all causes 93, including diphtheria 1, tuberculosis 17.

GREAT BRITAIN.—Week ended June 24, 1911.

England and Wales.—The deaths registered in 77 great towns correspond to an annual rate of 11.3 per 1,000 of the population, which is estimated at 16,157,797.

Scotland.—The deaths registered in 8 principal towns correspond to an annual rate of 13.3 per 1,000 of the population, which is estimated at 1,710,291. The lowest rate was recorded at Aberdeen, viz, 8.3, and the highest at Greenock, viz, 22.2. The total number of deaths from all causes was 435 including diphtheria 1, measles 16, scarlet fever 2, enteric fever 1.

PORTUGUESE EAST AFRICA—*Lourenco Marquez*.—Month of April, 1911. Population 10,000. Total number of deaths from all causes 27, including smallpox, 1; tuberculosis 9.

By authority of the Secretary of the Treasury:

WALTER WYMAN,

Surgeon General,

United States Public Health and Marine-Hospital Service.