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## CURRENT PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES [1]

**June 14–July 11, 1936**

*Poliomyelitis.*—During the 4 weeks ended July 11 there were 134 cases of poliomyelitis reported in Alabama. The outbreak involved about 10 counties in the northwestern part of the State and has spread into adjoining counties in Alabama as well as into 3 counties in Tennessee. For the 4 weeks Tennessee reported 13 cases.

For the country as a whole the current incidence (256 cases) was about 40 percent of that for the corresponding period in 1935 and about 20 percent of the incidence (1,309 cases) in 1934. In 1935 an epidemic that started in North Carolina was in progress at this time and in 1934 an epidemic beginning in California in May reached its peak during this period. In 1933, 1932, and 1931 the cases for this period totaled 188, 173, and 291, respectively.

An increase in poliomyelitis is usually expected at this season of the year, but no unusual prevalence was reported from any section of the country except the East South Central. The incidence in the New England and Middle Atlantic regions was somewhat below the expectancy, and in other regions it was about on a level with normal preceding years.

*Meningococcus meningitis.*—The number of cases of meningococcus meningitis reported for the current 4-week period was 362, which was about 10 percent lower than the figure for the corresponding period in 1935. For this period in the 3 preceding years, 134, 145, and 141 were reported, respectively. While the figure for the country as a whole did not reach that for the corresponding period in 1929, the South Atlantic (106 cases) and South Central regions (64 cases) reported the highest incidence in the 8 years for which these data are available. In all other regions the current incidence fell below that of last year but was considerably above that for the corresponding period in the 3 preceding years. The general tendency all over the country is toward the seasonal low level, which is usually reached during the late summer. A few States, however, in which the dis-

[1] From the Office of Statistical Investigations, U. S. Public Health Service. These summaries include only the 8 important communicable diseases for which the Public Health Service receives weekly telegraphic reports from the State health officers. The number of States included for the various diseases are as follows: Typhoid fever, 48; poliomyelitis, 48; meningococcus meningitis, 48; smallpox, 48; measles, 47; diphtheria, 48; scarlet fever, 48; influenza, 44 States and New York City. The District of Columbia is counted as a State in these reports.

ease has been most prevalent are still reporting a rather large number of cases. For the 4 weeks under review, New York reported 46 cases; Virginia, 29; North Carolina, 24; Maryland, 15; Kentucky, 25; and Tennessee, 13.

*Smallpox.*—For the 4 weeks ended July 11 the reported cases of smallpox totaled 534, as against 552, 204, and 424 for the corresponding period in the years 1935, 1934, and 1933, respectively. The high incidence was still confined to the North Central and Mountain regions. States reporting an unusually high incidence were Montana (99 cases), Illinois (69), Nebraska (46), Minnesota (45), Wisconsin (40), Missouri (28). Two cases were reported from New York (Middle Atlantic region), and in the South Atlantic and South Central regions the incidence remained somewhat below the seasonal expectancy.

*Scarlet fever.*—The number of cases of scarlet fever dropped from 18,493 for the 4 weeks ended June 13 to 9,638 for the current 4-week period. The current incidence fell slightly below the unusually high incidence of 1935, but it was about 40 percent above the average for the 6 preceding years. In the West North Central and Mountain and Pacific regions the incidence still remained the highest in recent years. The New England and Middle Atlantic States reported approximately the same incidence as last year, while in the East North Central, South Atlantic, and South Central regions the incidence was somewhat below the seasonal expectancy.

*Measles.*—The current incidence of measles (24,029 cases) compared very favorably with that for the corresponding periods in the normal measles years of 1929 to 1933, inclusive. For this period in 1935 and 1934 the numbers of cases totaled 41,474 and 34,925, respectively. In the Mountain and Pacific regions the incidence was somewhat above the average for recent years, but in all other regions it stood at about the normal seasonal level.

*Diphtheria.*—The number of cases of diphtheria reported for the 4 weeks ended July 11 was 1,232, about 80 percent of the number reported for the corresponding period in 1935. For the country as a whole as well as for each geographic region, except the South Atlantic, the current incidence was the lowest in the 8 years for which these data are available. The disease was less prevalent than last year in the South Atlantic region but stood at about the average for preceding years.

*Influenza.*—For the country as a whole the influenza incidence (2,691 cases) was considerably above the level of preceding years. The high incidence, however, has been mostly confined to the South Central and Mountain and Pacific regions. While the number of cases (1,641) in the Mountain and Pacific regions was not especially large, it was about 12 times the number reported for the correspond-

ing period in each of the 6 preceding years. In the North Central regions the incidence fell below that of last year, while in the South Atlantic region it stood at about last year's level. The New England and Middle Atlantic regions reported about the normal seasonal incidence.

*Typhoid fever.*—The expected seasonal increase of typhoid fever was apparent in practically all sections of the country, but the total number of cases (1,240) was considerably below the figures for the corresponding period in preceding years. The Pacific region reported 103 cases, as compared with 36 for this period in 1935, but in all other regions the current incidence was the lowest in recent years.

*Mortality, all causes.*—The average mortality rate from all causes in large cities for the 4 weeks ended July 11, as reported by the Bureau of the Census, was 11.0 per 1,000 inhabitants (annual basis). The rates for the separate weeks were 10.8, 10.9, 10.5, and 11.9, respectively. An examination of the data for individual cities indicates that the high temperatures that prevailed, especially in the Middle West, were no doubt mostly responsible for the sharp rise in the death rate during the last week of the period. A number of cities reported death rates for this week that were considerably above the normal expectancy.

For the corresponding period in the years 1935, 1934, and 1933 the average rates were 10.6, 10.5, and 9.9, respectively.

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## THE HISTORY OF LEPROSY IN LOUISIANA[1]

By O. E. Denney, *Surgeon, United States Public Health Service, Medical Officer in Charge, National Leprosarium, Carville, La.*[2]

The title of this paper presupposes the presentation of historical facts in an orderly and chronological manner. Several factors operate to prevent such a procedure. First, and most regrettably, there is a paucity of available medical data concerning the sources and dates of the first cases of leprosy in this State; second, there has been, even in present times, some confusion regarding the diagnosis of any but typical cases; and third, there has been in Louisiana, as elsewhere throughout the world since Biblical times, an ever present and frequently successful attempt to hide individual cases from view and record.

The early history of leprosy in Louisiana is inextricably mingled with the early romance of the State; and it appears that the early inhabitants received leprosy from several sources, the chief channels of which were the early settlers on the shores of the Gulf of Mexico,

[1] Read before the Medical Section of the New Orleans Academy of Sciences, Mar. 15, 1935.

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the slaves imported from Africa in the slave ships of France, Spain, England, and of the American Colonies, and from the Acadian refugees from Canada.

Leprosy prevailed to a greater or lesser extent throughout Europe and was certainly not extinct in France, Spain, and Italy when the first French colony was founded in 1540, by Count de Roberval, near the port of St. Croix in Canada; and leprosy likewise was not extinct in the parent countries when, in 1699, Iberville landed on the shores of the Gulf of Mexico. No evidence has been introduced that leprosy existed in the new world before the time of Columbus, and the conclusion seems unavoidable that leprosy was brought to this continent from extraneous sources.

While it is possible that the mouth of the Mississippi River was discovered in 1519 by Alonzo Alvarez de Pineda and somewhat later by Panfilo de Narvaez, and that Hernando De Soto entered the borders of the present State of Louisiana, claims to the region were not made until Robert Cavelier, Sieur de la Salle, came down the river in 1682 from the French possessions to the north, and the vast drainage basin of the Mississippi was named in honor of Louis XIV. La Salle attempted to settle a colony in 1684 but missed the mouth of the Mississippi River and landed in Texas. However, in 1697, Pierre le Moyne d'Iberville, chosen to lead another colony, reached the Gulf coast early in 1699, and soon after building Fort Maurepas he erected a fort on the Mississippi River about 40 miles above the mouth, which was the earliest settlement in what is now the State of Louisiana.

Leprosy had already begun to establish itself in the Western Hemisphere, as Hans Sloane observed leprosy on the Island of Jamaica as early as 1687; but the first reference found to the existence of leprosy in what is now Louisiana was that by Dyer, who wrote that leprosy was present in 1758, 40 years after the founding of the city of New Orleans by Bienville. Ulloa, in 1766, was the first to take active preventive steps by isolating Louisiana lepers at the mouth of the river at Belize.

That the disease was present in the Province in sufficiently large numbers to attract more than passing attention is evidenced by the fact that one of the first measures of Miro's administration was the founding, in New Orleans, in 1778, of a hospital for lepers; the cabildo erected a structure for them in the rear of the city on a ridge of high land between it and the Bayou St. John, which is, perhaps, the ridge anciently separating the waters of the Mississippi from those of Lake Pontchartrain.[2] This colony, if such it might be called, was named "La Terre des Lepreaux", or Lepers' Land, and is recorded as having had but a brief existence, since in the course of a few years the number

[2] Believed to have been the section now bounded by North Johnson and North Galvez Streets and Ursuline and Orleans Streets.

of patients gradually diminished, either by death or removal, and the disease almost entirely disappeared. The neglected building then went to ruin, and "Lepers' Land" is described as remaining for many years a wild-looking spot covered with brambles and palmettoes, until, by the growth of New Orleans under the flag of the United States, it became a part of the suburb of Treme.

Hospitalization of Louisianians suffering from leprosy subsequent to the discontinuance of Miro's Hospital, was largely provided for by quarters set aside in the pesthouse, otherwise known as the "Hagan Avenue Home", which continued to care for the afflicted until the State of Louisiana established its more commodious institution at Carville in 1894.

It seems to be the consensus of opinion among students of the subject that leprosy was brought to Louisiana by the Acadian refugees. In 1880 the president of the Board of Health of the State of Louisiana, after considerable research, regarded the existence of leprosy in New Brunswick, Canada, of great interest in connection with the existence of the disease in Louisiana, particularly since refugees from Canada established themselves in hospitable Louisiana, and he stated that, without doubt, at least a portion of the leprosy existing in the State at that time could be traced to the early French settlers in Canada. It must be noted, however, that, according to Dr. A. C. Smith, in his report to the International Dermatological Congress, leprosy developed in Cape Breton Province of Nova Scotia, among the immediate descendents of Scotch emigrants from the Hebrides, who arrived in Canada about 1810; and, according to Dr. Pagé, leprosy was first discovered in New Brunswick in 1815, and it established itself to such an extent that a lazaretto was built at Tracadie in 1844.

The newly arrived Acadians were greeted in Louisiana with tenderness and hospitality, and Kerlerec and Auberville allowed a tract of land to each family. They settled above the German coast on both sides of the Mississippi, and in the course of time their plantations connected the latter settlement with that of Baton Rouge and Pointe Coupe, a district that is still sometimes called the Acadian coast.

Some of the cases of leprosy which arose among the descendents of the Acadians without doubt derived their origin from the French settlers of the barren and rocky coast of Nova Scotia; and racial predilection seems the only explanation for the continued infection in direct descendants from these French Acadians.

That leprosy was introduced into Louisiana partly from slaves imported from Africa is commonly accepted. A few years after the French established their colony at Biloxi, it was noted that the African slaves suffered from a number of peculiar diseases, some of

which were apparently yaws and leprosy. To what extent these slaves suffering from leprosy more than 175 years ago were responsible for the transfer of the disease from the sick to the well is difficult to determine. It seems logical, however, to accept without reservation the importance of this infected group of newcomers. It would seem, from an epidemiological standpoint, that the Negro slaves moving from endemic centers of leprosy, where the rates of natural infection are believed to have been high, into a more salubrious climate, with unquestionably improved hygienic and sanitary surroundings, comparing the former primitive habits with those forced upon them by slavery, lost considerable susceptibility to leprous infection, as evidenced by the fact that at the present time the rate of infection among Negroes in this State is considerably lower than the rate among the whites.

The progress of leprosy in the State, once it had become firmly implanted, has followed, as one would anticipate, lines of communication and further colonization, and the disease has spread into towns and cities in a radial manner from New Orleans as the center.

Interest in leprosy in the State was considerably revived about 1880 by investigations already referred to by Dr. Jones, then president of the State board of health. His attention, from an epidemiological viewpoint, was drawn to the apparent increase in the disease within the State limits by newspaper and other publicity which had aroused public interest almost to the point of hysteria.

Several epidemiological surveys were made, which included a study of the alleged alarming increase in leprosy in certain parts of the State, and especially on the banks of the lower La Fourche; and Dr. Jones noted that the number of cases appeared to be much less than had been represented, but that a sufficient number of cases occurred to excite earnest attention of the authorities charged with educational, sanitary, and legislative affairs of the people of the State. He felt, further, that those afflicted with leprosy should be isolated, such seclusion or isolation to be accomplished by the erection of a leper house, ward, or hospital in those districts in which the disease existed, and that they should be placed under the direction and control of one or more local practitioners of medicine. He felt that it was manifestly the duty of the State to provide for the maintenance of the victims of leprosy, that the practice of introducing patients suffering from leprosy into the already crowded wards of Charity Hospital should be discontinued, and that public authorities of the city or State should provide suitable buildings or wards where the lepers might be properly isolated and secluded.

In 1892, Dr. H. W. Blanc reported his conclusions from the observations made upon 84 cases of leprosy seen in his 5 years of dermatological practice in New Orleans.

The insistence of the State board of health and the almost unanimous concerted action of the city and State medical societies resulted in legislation and adequate plans for the future segregation of the lepers of Louisiana. After several unsuccessful attempts to obtain a suitable site for the location of a leper home, in 1894 the institution was finally established at Carville, on the Indian Camp Plantation. In August 1894 the State legislature passed the act to provide for the appointment of a board of control for the leper home and to provide for the care and treatment of persons afflicted with leprosy. The early vicissitudes of the new leper home can be well pictured from the first report of the board of control to the Governor and members of the State legislature, from which the following abstract was taken:

> On the last day of November, the first contingent of lepers were transported from New Orleans, by night, to their present home.
>
> This was accomplished with the greatest difficulty, on a coal barge, towed by a tug. The details of this trip, in all their awfulness, have been depicted in the daily press.
>
> For a time the existence of the home was threatened by the inhabitants of Iberville Parish.
>
> A rational judgment, however, supplanted an early and misguided prejudice, and the poor sufferers were only pitied the more because they wished for themselves an isolation which the law compelled.

The Louisiana Leper Home continued to serve as a haven for afflicted Louisianians until January 3, 1921, when the Federal Government, by purchase, assumed custody of the institution and the obligation of its future operation as a Federal institution, a unit of the Public Health Service hospital system for the hospitalization of all persons suffering from leprosy within the continental limits of the United States.

From its inception as a Louisiana leper home and over a period of 41 years, 519 Louisianians have been hospitalized, an average of approximately 12 new patients per annum; and it is interesting to note that for the last 10 years this average of 12 has rarely been exceeded.

In 1904, Isadore Dyer reported to the International Dermatological Congress that, while formerly, New Orleans, La Fourche, and St. Martinsville were the only known centers of leprosy infection, in 1897 there were 20 parishes, situated mainly in the southern half of Louisiana, which had developed cases. Subsequently, 12 additional parishes have been added, making a total of 32 parishes which have developed cases.

It is regretted that this brief summary cannot be closed with a statement that the leprosy problem in Louisiana has been solved. However, since there are now living in the National Leprosarium at Carville 94 Louisiana patients and there has been no diminution in

the number of new patients admitted yearly for a decade, and accepting that, on the average, during his lifetime, one person suffering from leprosy transmits the disease to one nonleprous person, it seems logical to conclude that the incidence of the disease has reached a level and that continued segregation, particularly of early cases before they have infected others, is a solution almost within grasp.

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## OXIDATION OF SEWAGE BY ACTIVATED SLUDGE

By P. D. McNamee, *Assistant Chemist, United States Public Health Service*

It is quite natural that the rate of biochemical oxidation of dilute sewage mixtures, which has been carefully studied (*1*) (*2*), should be assumed to hold for the biological oxidation devices, such as the activated sludge process. The lack of experimental evidence to the contrary and the fact that the oxygen demand of the sludge itself, excepting the first day, conforms fairly well with the established rates for sewage mixtures have doubtless contributed to this view. The general conception of the activated sludge process is that there is a rapid adsorption of organic matter by the sludge and that the adsorbed material is then oxidized biochemically at a rate approximating that observed for a polluted water or sewage mixture.

The conditions under which the organic matter is oxidized in the activated sludge treatment plant and in a bottle are quite different. Under the conditions of the biochemical oxygen demand test, the bacteria are relatively few at the start and multiply until a limiting number is reached. In the activated sludge process, the sewage is added to a material in which many bacteria are concentrated in the zoogleal masses (*3*), so that the number of bacteria present per unit volume far exceeds that which is ordinarily reached. The activated sludge floc can be considered a bacterial colony in liquid media. Thus a solution containing enough of the dispersed zoogleal bacteria to give it a milky appearance will produce only a small amount of

floc, so that with a solution containing 1,000 p. p. m. of floc, there are so many bacteria concentrated in the floc that the actual number present far exceeds that ever observed in the dispersed condition.

Under these conditions it is reasonable to suppose that the organic matter might be oxidized at an accelerated rate. Likewise, it might be inferred that slow-growing bacterial species, such as nitrifying organisms, would require more time to accomplish a given amount of work than the more active species utilizing carbonaceous materials under the conditions imposed by the biochemical oxygen demand test, where two definite stages of oxidation are observed. With activated sludge, it may take 3 weeks to build up an actively nitrifying variety. Once the organisms are present in sufficient numbers, they should oxidize ammonia from the start and the two stages observed under the former condition might proceed simultaneously in the activated sludge plant, it being understood that the ammonia formed from the decomposition of nitrogenous substances must necessarily be released before it can be utilized. A study of the oxidation of sewage in the presence of activated sludge would furnish valuable information on these possibilities.

The work done along these lines has dealt with the oxygen demand of the sludge-sewage mixtures. Grant, Hurwitz, and Mohlman (*4*) computed a value for the oxygen demand of sewage in the presence of activated sludge by treating sewage with varying amounts of activated sludge, determining the oxygen demand, and deducting the average oxygen demand value of the sludge from the observed values for sludge plus sewage. They obtained a negative oxygen demand for sewage in the presence of 4,740 p. p. m. of sludge, the difference being within the limits of experimental error. With decreasing amounts of sludge, they observed increasing oxygen demands for the sewage; the maximum oxygen demand was 10 p. p. m. in 2 hours in the presence of 920 p. p. m. of sludge. Recently Kessler and Nichols (*5*) have shown that the rate of utilization of oxygen by activated sludge dosed with sewage drops rapidly the first few hours. They found that, on treating activated sludge with sewage, the mixture used up oxygen at the rate of 54 p. p. m. of oxygen per hour during the first hour (computed from 6-minute tests), and that this figure dropped rapidly so that after 3 hours of aeration the mixture was using oxygen at the rate of 20 p. p. m. per hour. Unless this sewage contained unusual amounts of substances capable of reacting directly with dissolved oxygen, this would indicate a very rapid biological oxidation of the sewage.

At the London School of Hygiene, experiments under the direction of Prof. W. W. C. Topley (*8*) indicated that "the rate of oxidation of a mixture of crude sewage and activated sludge is much greater than

the sum of the rates for the constituents treated separately." The oxygen adsorption was measured by a modified Barcroft respirometer. "The respirometer consists of two glass flasks of about the same volume (35 to 40 ml) connected one on each side of a differential manometer." The apparatus is calibrated so that the manometer readings serve as a measure of oxygen removal and the carbon dioxide is adsorbed in a small inner tube which contains a 10-percent aqueous solution of potassium hydroxide. The results of a group of experiments are given in table 7 of the "Report of the Water Pollution Research Board for the year ended 30th June, 1935", and are presented here as table 1.

TABLE 1.[1]—*Absorption of oxygen from air at 22° C. by crude sewage, activated sludge, and mixtures of sewage and sludge*

Oxygen in cubic millimeters at 0° C. and 760 mm.

[W=water; C. S.=crude sewage; S. L.=activated sludge]

| Contents of Barcroft flasks | | Period in hours | | | | | |
|---|---|---|---|---|---|---|---|
| Left-hand flask | Right-hand flask | 1 | 2 | 3 | 4 | 5 | 6 |
| A. 3 ml W | 2 ml C. S.+1 ml W | 16 | 32 | 46 | 49 | 55 | 60 |
| B. 3 ml W | 1 ml S. L.+2 ml W | 51 | 97 | 137 | 175 | 204 | 227 |
| C. 3 ml W | 1 ml S. L.+2 ml C. S | 116 | 229 | 336 | 446 | 532 | 605 |
| D. 1 ml S. L.+2 ml W | 1 ml S. L.+2 ml C. S | 81 | 148 | 210 | 279 | 325 | 391 |
| E. 2 ml C. S+1 ml W | 2 ml C. S+1 ml S. L | 102 | 211 | 305 | 408 | 484 | 555 |
| A+B | | 67 | 129 | 183 | 224 | 259 | 287 |
| C−(A+B) | | 49 | 100 | 153 | 222 | 273 | 318 |
| E−B | | 51 | 114 | 168 | 233 | 280 | 328 |
| D−A | | 65 | 116 | 164 | 230 | 270 | 331 |

[1] Table 7 of "Report of the Water Pollution Research Board for the year ended 30th June, 1935."

These workers concluded "that by mixing crude sewage and activated sludge the rates of oxidation of the sewage or sludge or both by air are greatly accelerated." In similar experiments they found that effluents likewise used oxygen more rapidly in the presence of sludge than in its absence.

## METHOD FOR THE DETERMINATION OF THE OXYGEN DEMAND OF SEWAGE IN THE PRESENCE OF ACTIVATED SLUDGE

The apparatus described by Theriault and McNamee (*6*) was used for the study of the oxidation of sewage in the presence of activated sludge. In this apparatus a measured volume of the sludge-sewage mixture is placed in a bottle, where the air above the liquid is recirculated through the liquid in a closed system. Ten-milliliter samples of the air are removed for analysis at definite time intervals. By using a modified Winkler procedure for determining the oxygen, the oxygen content of a milliliter of air, expressed in milligrams, can

be measured accurately to the fourth decimal place. For the present study, two bottles were used. One bottle contained a liter of sludge with its supernatant liquid; the other contained a liter of sludge, which was allowed to settle, and then the supernatant liquid was replaced by sewage. The oxygen demand of the sludge-sewage mixture plus the oxygen demand of the removed supernatant liquid represents the sum of the oxygen demands of a liter of the sludge and of the sewage. The value for the oxygen demand of a liter of sludge is subtracted from the above value to obtain the oxygen demand of the added sewage. The oxygen demand of the supernatant liquid is

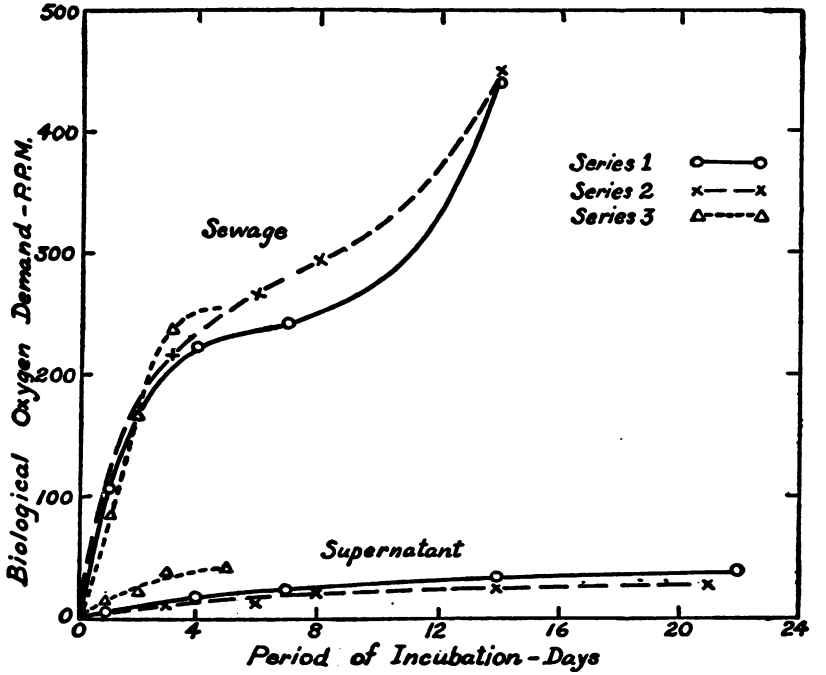


FIGURE 1.—Biological oxygen demand of sewage and supernatant obtained by the dilution method.

relatively small and could be neglected without doing serious damage to the results. This method was used in order to have the same amount of sludge present in each liter of solution.

## OXIDATION OF SEWAGE BY "GOOD" ACTIVATED SLUDGE

The sludge used in series 1 had all the characteristics of "good" activated sludge. The sludge was from the north sewage treatment plant of Lancaster, Pa. In other experiments it was found that this sludge removed from 75 to 90 percent (based on the first-stage biochemical oxygen demand) of the oxidizable matter from sewage in a period of 30 minutes. The sludge was actively nitrifying and settled

readily, leaving a clear supernatant. Prior to the start of the experiment, the sludge was treated with sewage and aerated for 18 hours. The suspended matter content was 4,396 p.p.m. Two 1-liter portions of this sludge were used in the experiment. One portion was placed in an aeration bottle without further treatment. The other liter was placed in a cylinder and allowed to settle; then 700 ml of the supernatant liquid was siphoned off and the volume of the settled sludge was made up to one liter by the addition of 700 ml of sewage, which had been filtered through cotton. At the start of the experiment, the pH of the sludge was 7.35 and that of the sludge-sewage mixture, 8.40. The biological oxygen demands of the supernatant liquid and the filtered sewage were determined by the dilution method, and the values are presented in table 2 and figure 1, where the time is plotted in days.

TABLE 2.—*Oxygen demand (dilution method) of sewage and supernatant*

| Days incubated | Series 1 | | Series 2 | | Series 3 | |
|---|---|---|---|---|---|---|
| | Sewage | Supernatant | Sewage | Supernatant | Sewage | Supernatant |
| | Oxygen demand—Parts per million | | | | | |
| 1 | 107 | 5.6 | | | 87.5 | 16.8 |
| 2 | | | | | 166.5 | 23.2 |
| 3 | | | 216 | 12.8 | 240 | 40.2 |
| 4 | 224 | 19.0 | | | | |
| 5 | | | | | 257.5 | 44.0 |
| 6 | | | 267 | 14.2 | | |
| 7 | 244 | 23.0 | | | | |
| 8 | | | 297 | 21.6 | | |
| 14 | 442 | 34.0 | 451 | 27.6 | | |

The temperature of the sludge and sewage was adjusted to 20° C. and the experiment was conducted in a 20° C. incubator. The data of series 1, 2, and 3 are given in table 3. The results of series 1 are presented in figure 2. This series was discontinued after 24 hours. The sludges from the two bottles were composited and 50 ml of phosphate buffer (pH 7.2) added. The sludge was again divided into equal parts and used in a similar experiment designated series 2. The pH of the sludge used in series 2 was 7.22 and that of the sludge-sewage mixture, 7.25. Owing to the poorer settling quality of the sludge, only 600 ml of supernatant liquid was replaced by sewage in series 2. The biological oxygen demand values obtained in series 2 are given in figure 3.

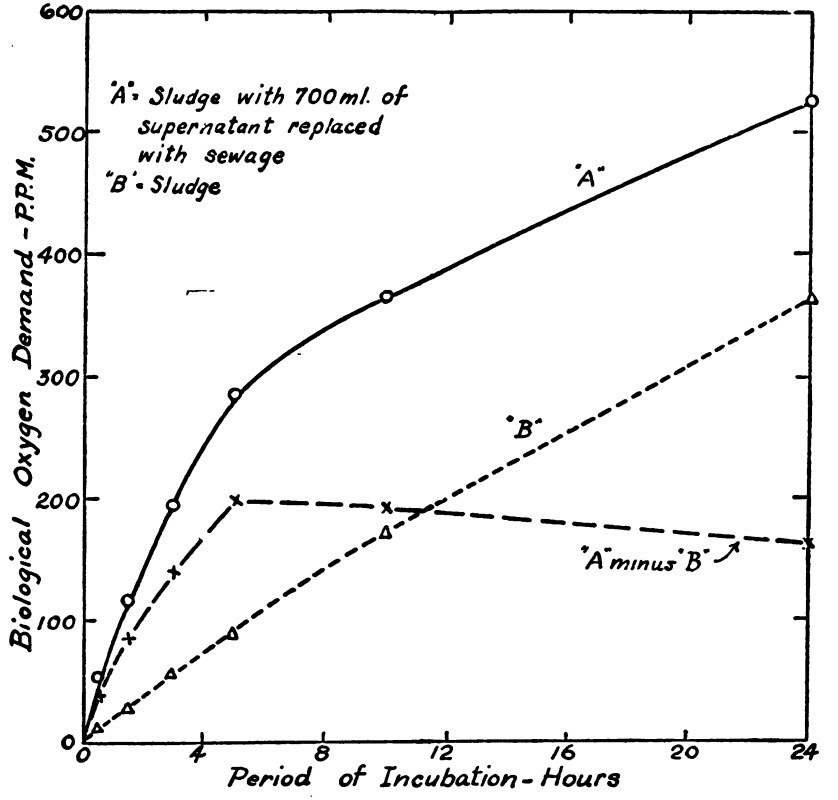


FIGURE 2.—Series 1. Biological oxygen demand of sludge and sludge-sewage mixture obtained by the aeration method.

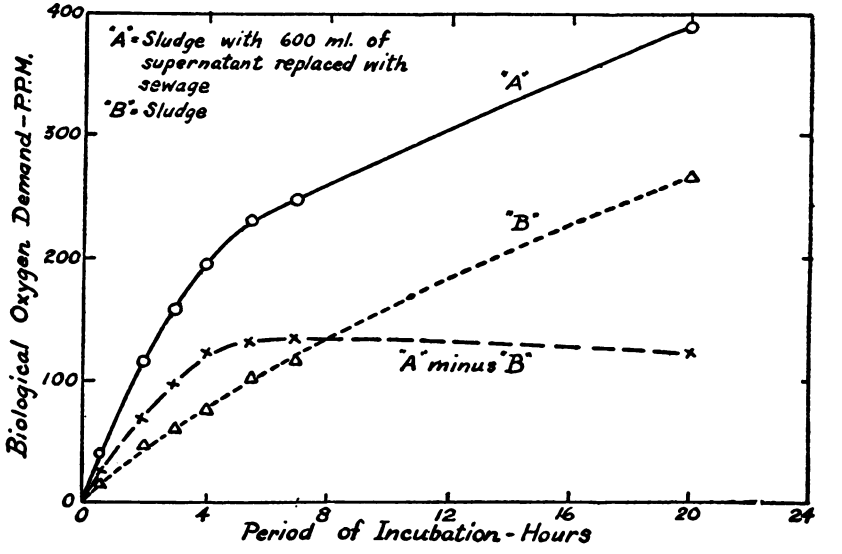


FIGURE 3.—Series 2. Biological oxygen demand of sludge and sludge-sewage mixture obtained by the aeration method.

TABLE 3.—*Observed oxygen demands of sludge and sludge-sewage mixtures*

| Time in hours | Series 1 | | | Series 2 | | | Series 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Sludge with 700 ml supernatant replaced by sewage=A | Sludge=B | A−B | Sludge with 600 ml supernatant replaced by sewage=A | Sludge=B | A−B | Sludge with 700 ml supernatant replaced by sewage=A | Sludge=B | A−B |
| | Oxygen demand—Parts per million | | | | | | | | |
| 0.5 | 55.0 | 14.5 | 40.5 | 42.2 | 15.7 | 26.5 | 31.3 | 5.5 | 25.8 |
| 1.5 | 116.9 | 28.6 | 88.3 | | | | | | |
| 2.0 | | | | 116.3 | 49.4 | 66.9 | 87.8 | 24.3 | 63.5 |
| 3.0 | 196.0 | 56.5 | 139.5 | 161.0 | 61.6 | 99.4 | 112.8 | 32.1 | 80.7 |
| 4.0 | | | | 197.6 | 75.7 | 121.9 | | | |
| 4.5 | | | | | | | 151.9 | 50.6 | 101.3 |
| 5.0 | 287.0 | 87.6 | 199.4 | | | | | | |
| 5.5 | | | | 234.2 | 102.9 | 131.3 | | | |
| 7.0 | | | | 250.7 | 117.6 | 133.1 | | | |
| 10.0 | 367.0 | 172.9 | 194.1 | | | | 245.0 | 104.9 | 140.1 |
| 20.0 | | | | 390.7 | 269.7 | 121.0 | | | |
| 24.0 | 529.4 | 367.4 | 162.0 | | | | 384.2 | 230.3 | 153.9 |

In order to obtain the oxygen demand of the sewage, a correction is applied for the oxygen demand of the supernatant liquid which was removed from the one portion. The 1-day oxygen demand of the supernatant removed from series 1 was found, by the dilution method, to be 5.6 p. p. m. This would give a correction of 0.16 p. p. m, $\left(5.6\times\frac{700}{1000\times 24}\right)$ per hour. Since the supernatant liquid had been in contact with the sludge for 18 hours, and since the sludge curve does not break sharply, this correction is distributed evenly over the 24-hour period. The negative slope of part of the curve A—B in series 1 and 2 indicates a much higher demand of the supernatant. In view of the fact that the sewage was oxidized much more rapidly in the presence of sludge, it appears that the supernatant also is oxidized more rapidly when sludge is present. This conclusion was also reached by the workers at the London School of Hygiene. The corrections for the oxygen demand of the supernatants were, therefore, based on the 14-day oxygen demand rather than the 1-day value. This amounts to a correction of approximately 1.0 p. p. m. per hour. This correction raised the 20-hour oxygen demand value of the sewage enough to remove the negative slope from the graph of the values observed in series 2. It did not, however, raise the 24-hour oxygen demand value of the sewage in series 1 enough to bring it in line. The difference in pH of the sludges in series 1 may account for this discrepancy. The oxygen demand values of the sewages in the presence of activated sludge, plotted in figure 4, were obtained from the corrected A—B curves and represent the milligrams of oxygen utilized by 1 liter of the sewage.

The oxidation of the sewage in the presence of activated sludge is much more rapid than the oxidation which takes place under the conditions of the biological oxygen-demand test. It is to be remem-

bered that the sewage used in these experiments was freed from large suspended particles by filtration through cotton, and so the rates observed are for the oxidizable matter in solution or in a colloidal state. In the presence of "good" activated sludge, series 1 and 2, the oxidation of the sewage by the activated sludge was practically completed in 5 hours. That is, after 5 hours the curve for the oxidation of sewage in the presence of activated sludge ceased to rise. In series 1, the 5-hour oxygen demand of the sewage in the presence of activated sludge has the same value as the 240-hour oxygen demand of the same sewage as determined by the dilution method and is

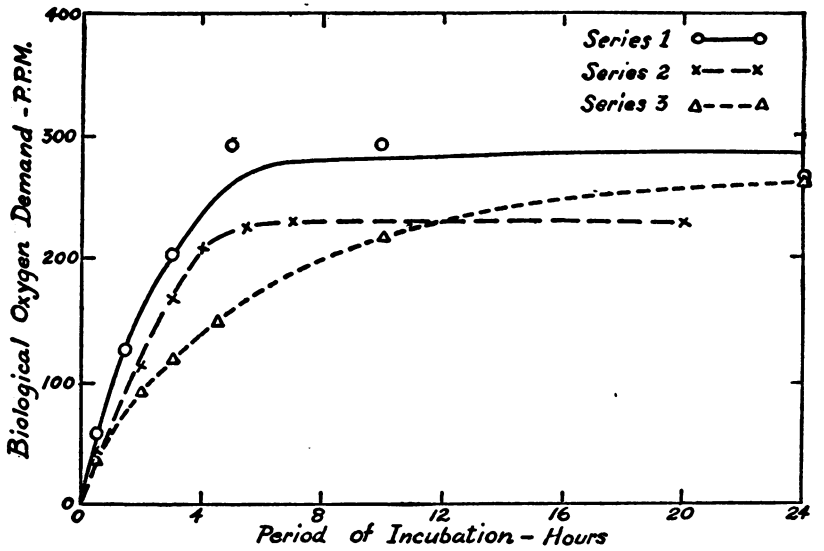


FIGURE 4.—Oxidation of sewage in the presence of activated sludge.

more than the total first-stage demand. In the presence of activated sludge, 24 percent of the 7-day biological oxygen demand was satisfied in 30 minutes, 54 percent in 1.5 hours, 83 percent in 3 hours, and 119 percent in 5 hours. Compared with the 14-day oxygen demand obtained by the dilution method, the sewage in series 1 was 63 percent oxidized and that of series 2 about 50 percent oxidized. This probably indicates that the end products of the dilution method are different from those produced by the activated sludge, and the higher state of oxidation would be reached only with the decomposition of the activated sludge floc.

## OXIDATION OF SEWAGE BY "POOR" ACTIVATED SLUDGE

The oxidation of sewage in the presence of "poor" activated sludge is shown in the graphs marked series 3 (fig. 5).

The sludge used in this series was taken from the aeration tank of a small experimental activated sludge plant which had been in opera-

tion only a few weeks. The temperature in the aeration tank was 6° C., and the suspended matter content of the tank was below 1,000 p. p. m. The sludge settled very poorly, and the supernatant liquid was loaded with finely dispersed particles, which gave it a marked turbidity. The sludge was concentrated by settling and the suspended matter content of the mixtures in series 3 was 2,720 p. p. m. Seven hundred milliliters of sewage were used in this experiment. This sludge was not nitrifying. The nitrite content of the mixture increased from 0.4 to 0.5 p. p. m. in the 24 hours during which the mixture was aerated. The nitrate content remained constant at 0.5 p. p. m. The sewage and supernatant in the dilution bottles started to nitrify on the fifth day. For this reason the cor-

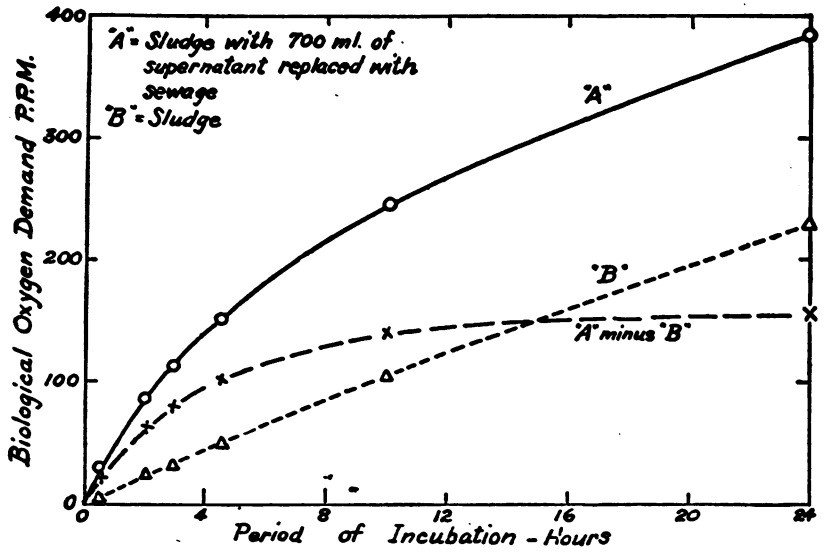


FIGURE 5.—Series 3. Biological oxygen demand of sludge and sludge-sewage mixture obtained by the aeration method.

rection for supernatant is based on the 5-day oxygen demand. With this particular sludge, more time was required for the oxidation of the sewage, so that considerable oxidation was noted between the tenth and twenty-fourth hour. In spite of the fact that this can be considered a poor activated sludge, the sewage was oxidized much more rapidly in its presence. The percentage of the 5-day B. O. D. satisfied in 0.5, 2, 3, 4.5, 10, and 24 hours was 14.6, 36.6, 46.9, 59.3, 84.7, and 102.5, respectively. That is, in the presence of the activated sludge, the oxygen absorbed by sewage was greater in 1 day than the 5-day oxygen demand, determined by the dilution method, of the same sewage.

The term "poor" refers to the physical property of the sludge and not to its oxidizing capacity. On the basis per gram of sludge, the percentage of the 5-day oxygen demand of the sewage satisfied in a

given time by the sludge of series 3 is not much different from that observed in series 1 and 2:

| Time (hours) | 0.5 | 3.0 | 10 |
|---|---|---|---|
| | Percent of 5-day oxygen demand of sewage satisfied per gram of sludge | | |
| Series 1 | 5.8 | 20.1 | 29.0 |
| Series 2 | 4.1 | 15.5 | 20.9 |
| Series 3 | 5.3 | 17.2 | 31.1 |

## RATE OF OXIDATION

The deoxygenation constant, $k$, observed in this group of experiments is much larger than that observed for polluted water. The unimolecular equation $Y=L(1-10^{-kt})$ does not fit the observed values for the oxidation of sewage in the presence of activated sludge of series 1 and 2 very satisfactorily. This is to be expected if nitrification is in progress. Using the statistical treatment method of Reed and Theriault (*7*) for determining the $k$ value, $k$ (when $t$ is expressed in days) for series 1 was found to be 2.009, and for series 2 it was 1.992. The same $k$ value (2.0) gave values for series 3 which were in good agreement with the observed values. The $k$ value of 2.0 corresponds with the value of 0.1 observed for river water. It is significant that this is practically the same $k$ value (2.0) as was deduced by Theriault (*6*) from the mathematical analysis of a single sludge oxidation curve. He concluded that the curve was the resultant of two curves, one representing a rapid oxidation and the other a much slower oxidation. This rapid oxidation was attributed to a purely chemical or enzymatic effect by Theriault and McNamee (*6*). The sludge used in these experiments was taken from the bottom of a channel, and it is probable that it contained reduced substances capable of reacting with dissolved oxygen. However, in the light of the present experiment, it is probable that the greater part of this "immediate" oxygen demand resulted from the oxidation of the organic matter present in the sludge liquor. No attempt has been made in the present experiment to study the mechanism of the oxidation process. This rapid oxidation may or may not be enzymatic.

## SUMMARY

The soluble and colloidal matter of sewage is oxidized much more rapidly than has generally been realized. "Good" activated sludge can dispose of the greater part of the oxidizable substances in a period of 5 hours; less efficient activated sludge may require a much longer time. In the presence of nitrifying activated sludge, the

5-hour oxygen demand of the sewage may be greater than the total first-stage oxygen demand. The total oxygen demand of the sewage in the presence of activated sludge is lower than the total oxygen demand observed under the conditions of the biochemical oxygen demand test, which probably means that a considerable amount of the material is used to synthesize activated sludge flocs. If this be the case, then, strictly speaking, the sewage cannot be considered completely oxidized until the sludge itself is disintegrated by other organisms. If nitrification is occurring, the rate of oxidation of the sewage in the presence of activated sludge cannot be expressed very satisfactorily by the unimolecular equation. Compared with the $k$ value of 0.1 observed for river water, the $k$ value observed for sewage in the presence of activated sludge is about 2.0. It is concluded that a large part of the oxidation required for the stabilization of the oxidizable substances present in sewage occurs during the first few hours of contact with "good" activated sludge.

ACKNOWLEDGMENTS

It is desired to express appreciation to the members of the Stream Pollution Investigations Station of the United States Public Health Service for their valuable assistance and to Principal Chemist C. C. Ruchhoft for his helpful suggestions throughout this experiment.

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## DEATHS DURING WEEK ENDED JULY 11, 1936

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

| | Week ended July 11, 1936 | Corresponding week, 1935 |
|---|---|---|
| Data from 86 large cities of the United States: | | |
| Total deaths | 8,528 | 7,657 |
| Deaths per 1,000 population, annual basis | 11.9 | 10.7 |
| Deaths under 1 year of age | 543 | 541 |
| Deaths under 1 year of age per 1,000 estimated live births | 49 | 50 |
| Deaths per 1,000 population, annual basis, first 28 weeks of year | 12.8 | 12.1 |
| Data from industrial insurance companies: | | |
| Policies in force | 68,562,192 | 67,930,187 |
| Number of death claims | 11,226 | 12,449 |
| Death claims per 1,000 policies in force, annual rate | 8.6 | 9.6 |
| Death claims per 1,000 policies, first 28 weeks of year, annual rate | 10.5 | 10.2 |

# PREVALENCE OF DISEASE

*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring*

## UNITED STATES

### CURRENT WEEKLY STATE REPORTS

**Reports for Weeks Ended July 18, 1936, and July 20, 1935**

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended July 18, 1936 and July 20, 1935*

| Division and State | Diphtheria | | Influenza | | Measles | | Meningococcus meningitis | |
|---|---|---|---|---|---|---|---|---|
| | Week ended July 18, 1936 | Week ended July 20, 1935 | Week ended July 18, 1936 | Week ended July 20, 1935 | Week ended July 18, 1936 | Week ended July 20, 1935 | Week ended July 18, 1936 | Week ended July 20, 1935 |
| New England States: | | | | | | | | |
| Maine | ---- | ---- | ---- | ---- | 84 | 49 | 0 | 0 |
| New Hampshire | ---- | 1 | ---- | ---- | 1 | 1 | 0 | 0 |
| Vermont | ---- | ---- | ---- | ---- | 13 | 44 | 0 | 0 |
| Massachusetts | 9 | 5 | ---- | ---- | 273 | 98 | 1 | 1 |
| Rhode Island | 3 | ---- | ---- | ---- | 13 | 76 | 0 | 0 |
| Connecticut | ---- | 7 | ---- | 1 | 41 | 70 | 0 | 0 |
| Middle Atlantic States: | | | | | | | | |
| New York | 37 | 16 | [1] 5 | ---- | 660 | 925 | 4 | 8 |
| New Jersey | 19 | 5 | 7 | ---- | 171 | 309 | 5 | 9 |
| Pennsylvania | 36 | 28 | ---- | ---- | 277 | 553 | 2 | 7 |
| East North Central States: | | | | | | | | |
| Ohio | 15 | 13 | 3 | 3 | 259 | 181 | 6 | 2 |
| Indiana | 8 | 7 | 15 | 13 | 1 | 20 | 2 | 1 |
| Illinois | 15 | 28 | 4 | 8 | 16 | 209 | 8 | 8 |
| Michigan | 11 | 7 | 1 | ---- | 35 | 619 | 1 | 4 |
| Wisconsin | ---- | 3 | 16 | 19 | 72 | 581 | 0 | 0 |
| West North Central States: | | | | | | | | |
| Minnesota | 5 | 6 | ---- | ---- | 25 | 37 | 0 | 0 |
| Iowa | 6 | 12 | ---- | ---- | 2 | 18 | 1 | 3 |
| Missouri | 10 | 27 | 11 | 17 | 10 | 35 | 1 | 4 |
| North Dakota | ---- | ---- | 1 | ---- | 2 | 13 | 0 | 0 |
| South Dakota | ---- | 2 | ---- | ---- | 1 | 8 | 0 | 0 |
| Nebraska | 5 | 5 | ---- | ---- | 2 | 11 | 0 | 0 |
| Kansas | 2 | 5 | ---- | 8 | 7 | 52 | 1 | 2 |
| South Atlantic States: | | | | | | | | |
| Delaware | ---- | 1 | ---- | ---- | 3 | 12 | 0 | 1 |
| Maryland [2] [3] | 6 | 3 | 3 | 2 | 129 | 33 | 2 | 2 |
| District of Columbia [3] | 3 | 10 | ---- | 1 | 32 | 5 | 3 | 2 |
| Virginia [3] | 6 | 8 | ---- | ---- | 36 | 37 | 4 | 2 |
| West Virginia [3] | 3 | 9 | 4 | 13 | 4 | 17 | 8 | 2 |
| North Carolina | 11 | 6 | ---- | ---- | 6 | 9 | 3 | 2 |
| South Carolina [4] | 3 | 4 | 23 | 58 | 2 | 1 | 0 | 1 |
| Georgia [4] | 7 | 17 | ---- | ---- | ---- | ---- | 1 | 0 |
| Florida | ---- | 6 | 1 | ---- | 7 | 3 | 3 | 1 |

See footnotes at end of table.

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended July 18, 1936, and July 20, 1935*—Continued

| Division and State | Diphtheria | | Influenza | | Measles | | Meningococcus meningitis | |
|---|---|---|---|---|---|---|---|---|
| | Week ended July 18, 1936 | Week ended July 20, 1935 | Week ended July 18, 1936 | Week ended July 20, 1935 | Week ended July 18, 1936 | Week ended July 20, 1935 | Week ended July 18, 1936 | Week ended July 20, 1935 |
| East South Central States: | | | | | | | | |
| Kentucky | 1 | 5 | ---- | ---- | 7 | 50 | 12 | 2 |
| Tennessee [2] | 1 | 5 | 56 | 5 | 18 | 19 | 2 | 3 |
| Alabama [4] | 13 | 19 | 2 | 7 | 1 | 17 | 2 | 1 |
| Mississippi [3] | 1 | 12 | ---- | ---- | ---- | ---- | 0 | 0 |
| West South Central States: | | | | | | | | |
| Arkansas | 4 | 3 | 2 | 3 | ---- | 4 | 0 | 0 |
| Louisiana | 9 | 11 | 18 | 13 | 1 | 15 | 2 | 0 |
| Oklahoma [3] | 10 | 4 | 6 | 20 | 2 | 7 | 1 | 0 |
| Texas [4] | 21 | 23 | 30 | 11 | 55 | 15 | 0 | 1 |
| Mountain States: | | | | | | | | |
| Montana | ---- | 1 | ---- | ---- | 2 | 49 | 0 | 1 |
| Idaho [3] | ---- | ---- | ---- | ---- | 12 | 3 | 1 | 0 |
| Wyoming [3] | ---- | 1 | ---- | ---- | 6 | 14 | 0 | 0 |
| Colorado | 3 | 9 | ---- | ---- | 9 | 32 | 0 | 1 |
| New Mexico | 1 | 1 | 3 | 3 | 4 | 3 | 1 | 0 |
| Arizona | 1 | ---- | 6 | ---- | 24 | ---- | 1 | 0 |
| Utah [3] | ---- | ---- | ---- | ---- | 23 | 5 | 0 | 0 |
| Pacific States: | | | | | | | | |
| Washington | ---- | 1 | ---- | ---- | 36 | 75 | 0 | 0 |
| Oregon [3] | 2 | 2 | 10 | 3 | 5 | 53 | 0 | 1 |
| California | 23 | 34 | 11 | 12 | 296 | 294 | 6 | 2 |
| Total | 310 | 372 | 238 | 220 | 2,685 | 4,681 | 84 | 65 |
| First 29 weeks of year | 13,995 | 16,615 | 141,011 | 103,000 | 265,634 | 687,538 | 5,699 | 3,860 |

| Division and State | Poliomyelitis | | Scarlet fever | | Smallpox | | Typhoid fever | |
|---|---|---|---|---|---|---|---|---|
| | Week ended July 18, 1936 | Week ended July 20, 1935 | Week ended July 18, 1936 | Week ended July 20, 1935 | Week ended July 18, 1936 | Week ended July 20, 1935 | Week ended July 18, 1936 | Week ended July 20, 1935 |
| New England States: | | | | | | | | |
| Maine | 4 | 0 | 4 | 4 | 0 | 0 | 1 | 4 |
| New Hampshire | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| Vermont | 2 | 0 | 3 | 7 | 0 | 0 | 0 | 0 |
| Massachusetts | 3 | 12 | 54 | 53 | 0 | 0 | 20 | 2 |
| Rhode Island | 0 | 2 | 9 | 7 | 0 | 0 | 0 | 0 |
| Connecticut | 1 | 3 | 7 | 6 | 0 | 0 | 1 | 2 |
| Middle Atlantic States: | | | | | | | | |
| New York | 4 | 21 | 155 | 177 | 0 | 0 | 11 | 13 |
| New Jersey | 0 | 1 | 40 | 28 | 0 | 0 | 6 | 3 |
| Pennsylvania | 1 | 1 | 179 | 182 | 0 | 0 | 6 | 62 |
| East North Central States: | | | | | | | | |
| Ohio | 2 | 1 | 118 | 74 | 3 | 0 | 20 | 7 |
| Indiana | 1 | 0 | 22 | 13 | 0 | 0 | 9 | 8 |
| Illinois | 2 | 2 | 109 | 166 | 19 | 1 | 10 | 18 |
| Michigan | 0 | 0 | 86 | 82 | 0 | 0 | 9 | 15 |
| Wisconsin | 0 | 1 | 86 | 83 | 5 | 10 | 0 | 6 |
| West North Central States: | | | | | | | | |
| Minnesota | 0 | 0 | 46 | 43 | 0 | 4 | 1 | 23 |
| Iowa | 1 | 0 | 20 | 19 | 9 | 6 | 0 | 2 |
| Missouri | 0 | 2 | 35 | 13 | 3 | 0 | 17 | 25 |
| North Dakota | 0 | 0 | 7 | 15 | 0 | 0 | 2 | 1 |
| South Dakota | 0 | 0 | 8 | 4 | 3 | 3 | 1 | 0 |
| Nebraska | 0 | 0 | 20 | 10 | 6 | 3 | 1 | 0 |
| Kansas | 0 | 0 | 55 | 17 | 0 | 7 | 5 | 13 |
| South Atlantic States: | | | | | | | | |
| Delaware | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 3 |
| Maryland [2 3] | 0 | 0 | 13 | 17 | 0 | 0 | 11 | 18 |
| District of Columbia [3] | 0 | 1 | 3 | 3 | 0 | 0 | 2 | 1 |
| Virginia [3] | 2 | 72 | 13 | 17 | 0 | 0 | 15 | 46 |
| West Virginia [3] | 0 | 0 | 25 | 11 | 0 | 0 | 8 | 16 |
| North Carolina | 2 | 48 | 11 | 19 | 1 | 1 | 16 | 37 |
| South Carolina [4] | 0 | 1 | 0 | 2 | 0 | 0 | 9 | 26 |
| Georgia [4] | 2 | 1 | 4 | 1 | 0 | 0 | 41 | 61 |
| Florida | 0 | 0 | 5 | 3 | 0 | 0 | 1 | 3 |

See footnotes at end of table.

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended July 18, 1936, and July 20, 1935*—Continued

| Division and State | Poliomyelitis | | Scarlet fever | | Smallpox | | Typhoid fever | |
|---|---|---|---|---|---|---|---|---|
| | Week ended July 18, 1936 | Week ended July 20, 1935 | Week ended July 18, 1936 | Week ended July 20, 1935 | Week ended July 18, 1936 | Week ended July 20, 1935 | Week ended July 18, 1936 | Week ended July 20, 1935 |
| East South Central States: | | | | | | | | |
| Kentucky | 2 | 5 | 8 | 12 | 0 | 0 | 14 | 39 |
| Tennessee [2] | 30 | 3 | 5 | 11 | 0 | 0 | 33 | 38 |
| Alabama [4] | 35 | 3 | 9 | 15 | 0 | 0 | 16 | 16 |
| Mississippi [3] | 12 | 0 | 3 | 12 | 0 | 0 | 14 | 17 |
| West South Central States: | | | | | | | | |
| Arkansas | 0 | 1 | 1 | 4 | 0 | 5 | 14 | 34 |
| Louisiana | 1 | 7 | ------- | 4 | 0 | 0 | 25 | 24 |
| Oklahoma [5] | 0 | 0 | 11 | 4 | 0 | 0 | 27 | 27 |
| Texas [4] | 1 | 1 | 31 | 17 | 1 | 0 | 46 | 32 |
| Mountain States: | | | | | | | | |
| Montana | 0 | 0 | 23 | 4 | 22 | 8 | 2 | 1 |
| Idaho [2] | 0 | 0 | 6 | 1 | 2 | 0 | 1 | 0 |
| Wyoming [2] | 0 | 0 | 6 | 11 | 0 | 10 | 0 | 1 |
| Colorado | 0 | 0 | 9 | 29 | 1 | 0 | 1 | 4 |
| New Mexico | 0 | 0 | 12 | 6 | 0 | 0 | 8 | 6 |
| Arizona | 1 | 0 | 3 | 4 | 0 | 0 | 2 | 2 |
| Utah [3] | 0 | 0 | 15 | 34 | 0 | 0 | 0 | 2 |
| Pacific States: | | | | | | | | |
| Washington | 3 | 0 | 16 | 11 | 0 | 23 | 1 | 3 |
| Oregon [3] | 0 | 1 | 7 | 27 | 2 | 1 | 3 | 3 |
| California | 7 | 35 | 86 | 73 | 1 | 3 | 7 | 7 |
| Total | 119 | 227 | 1,389 | 1,357 | 78 | 85 | 438 | 672 |
| First 29 weeks of year | 823 | 1,599 | 179,921 | 176,437 | 6,043 | 5,166 | 4,714 | 6,295 |

[1] New York City only.
[2] Rocky Mountain spotted fever, week ended July 18, 1935, 18 cases, as follows: Maryland, 3; District of Columbia, 1; Virginia, 5; West Virginia, 1; Tennessee, 3; Idaho, 3; Wyoming, 1; Oregon, 1.
[3] Week ended earlier than Saturday.
[4] Typhus fever, week ended July 18, 1936, 36 cases, as follows: South Carolina, 1; Georgia, 10; Alabama, 16; Texas, 9.
[5] Exclusive of Oklahoma City and Tulsa.

## SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week:

| State | Meningococcus meningitis | Diphtheria | Influenza | Malaria | Measles | Pellagra | Poliomyelitis | Scarlet fever | Smallpox | Typhoid fever |
|---|---|---|---|---|---|---|---|---|---|---|
| *May 1936* | | | | | | | | | | |
| Florida | 13 | 11 | 23 | 16 | 91 | 5 | 0 | 24 | 0 | 17 |
| *June 1936* | | | | | | | | | | |
| Colorado | 6 | 13 | 1 | ------- | 89 | ------- | 2 | 137 | 5 | 3 |
| Maryland | 18 | 28 | 4 | 2 | 1,230 | 4 | 1 | 153 | 0 | 12 |
| Michigan | 11 | 61 | 1 | 5 | 276 | 1 | 3 | 1,244 | 1 | 17 |
| Minnesota | 10 | 22 | 5 | 1 | 751 | ------- | 0 | 640 | 58 | 19 |
| New Jersey | 8 | 30 | 31 | 0 | 2,101 | ------- | 3 | 692 | 0 | 17 |
| Ohio | 24 | 79 | 50 | 6 | 1,822 | ------- | 2 | 651 | 0 | 32 |
| Pennsylvania | 24 | 134 | ------- | 1 | 3,573 | ------- | 4 | 1,382 | 0 | 61 |
| Texas | 7 | 95 | 310 | 2,565 | 656 | 71 | 6 | 118 | 8 | 45 |
| Vermont | ------- | ------- | ------- | ------- | 725 | ------- | 0 | 45 | 0 | 4 |

*May 1936*

| Florida: | Cases |
|---|---|
| Chicken pox | 105 |
| Dysentery | 1 |
| Mumps | 143 |
| Rabies in man | 1 |
| Typhus | 1 |
| Undulant fever | 2 |
| Whooping cough | 67 |

*June 1936*

| | |
|---|---|
| Anthrax in man: | |
| Pennsylvania | 2 |
| Chicken pox: | |
| Colorado | 67 |
| Maryland | 259 |
| Michigan | 1,186 |
| Minnesota | 159 |
| New Jersey | 901 |
| Ohio | 792 |
| Pennsylvania | 1,471 |
| Texas | 80 |
| Vermont | 108 |
| Diarrhea: | |
| Maryland | 9 |
| Diarrhea and enteritis: | |
| Ohio (under 2 years) | 11 |
| Dysentery: | |
| Colorado (amoebic) | 1 |
| Maryland (bacillary) | 4 |
| Michigan (amoebic) | 1 |
| Michigan (para) | 1 |
| Minnesota (amoebic) | 5 |
| Minnesota (bacillary) | 1 |
| New Jersey (amoebic) | 3 |
| Ohio (bacillary) | 1 |
| Pennsylvania (amoebic) | 1 |
| Pennsylvania (bacillary) | 1 |
| Texas (bacillary) | 82 |
| Epidemic encephalitis: | |
| Colorado | 1 |
| Maryland | 1 |
| Minnesota | 1 |
| New Jersey | 5 |
| Pennsylvania | 1 |
| Texas | 1 |

*June 1936*—Continued

| German measles: | Cases |
|---|---|
| Maryland | 230 |
| New Jersey | 749 |
| Ohio | 69 |
| Pennsylvania | 911 |
| Vermont | 34 |
| Impetigo contagiosa: | |
| Maryland | 8 |
| Lead poisoning: | |
| Maryland | 1 |
| Michigan | 2 |
| Ohio | 16 |
| Mumps: | |
| Colorado | 127 |
| Maryland | 828 |
| Michigan | 852 |
| New Jersey | 1,111 |
| Ohio | 476 |
| Pennsylvania | 1,512 |
| Texas | 556 |
| Vermont | 72 |
| Ophthalmia neonatorum: | |
| Maryland | 3 |
| New Jersey | 13 |
| Ohio | 62 |
| Pennsylvania | 1 |
| Paratyphoid fever: | |
| Michigan | 1 |
| Texas | 4 |
| Puerperal septicemia: | |
| Ohio | 2 |
| Rabies in animals: | |
| Maryland | 1 |
| Michigan | 8 |
| New Jersey | 26 |
| Texas | 18 |
| Rabies in man: | |
| Pennsylvania | 1 |
| Rocky Mountain spotted fever: | |
| Colorado | 2 |
| Maryland | 3 |
| New Jersey | 1 |
| Pennsylvania | 1 |

*June 1936*—Continued

| Septic sore throat: | Cases |
|---|---|
| Maryland | 11 |
| Michigan | 24 |
| Ohio | 120 |
| Tetanus: | |
| Maryland | 1 |
| New Jersey | 1 |
| Ohio | 6 |
| Pennsylvania | 1 |
| Trachoma: | |
| Minnesota | 1 |
| New Jersey | 2 |
| Ohio | 4 |
| Pennsylvania | 1 |
| Trichinosis: | |
| Michigan | 4 |
| Ohio | 1 |
| Tularaemia: | |
| Minnesota | 8 |
| New Jersey | 1 |
| Texas | 4 |
| Typhus fever: | |
| New Jersey | 1 |
| Texas | 6 |
| Undulant fever: | |
| Maryland | 3 |
| Michigan | 10 |
| Minnesota | 4 |
| New Jersey | 6 |
| Ohio | 3 |
| Pennsylvania | 1 |
| Vincent's infection: | |
| Maryland | 16 |
| Michigan | 15 |
| Whooping cough: | |
| Colorado | 139 |
| Maryland | 374 |
| Michigan | 1,417 |
| Minnesota | 102 |
| New Jersey | 531 |
| Ohio | 1,016 |
| Pennsylvania | 1,011 |
| Texas | 126 |
| Vermont | 63 |

## PLAGUE INFECTION IN CALIFORNIA

The director of public health of California has reported plague infection in a collection of 113 fleas received at the laboratory on July 2, 1936, from 4 miles northwest of Santa Cruz, Santa Cruz County. He has also reported plague infection in ground squirrels received at the laboratory on July 9 from localities in Modoc County, as follows: 1 squirrel from 8 miles north and 5 miles east of Davis Creek; 1 squirrel from 1 mile southeast of Buck Creek, Rangers Station; and 1 squirrel from 2 miles south and 1 mile west of Buck Creek, Rangers Station.

## WEEKLY REPORTS FROM CITIES

*City reports for week ended July 11, 1936*

[This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table. Weekly reports are received from about 700 cities, from which the data are tabulated and filed for reference.]

| State and city | Diphtheria cases | Influenza | | Measles cases | Pneumonia deaths | Scarlet fever cases | Smallpox cases | Tuberculosis deaths | Typhoid fever cases | Whooping cough cases | Deaths, all causes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cases | Deaths | | | | | | | | |
| Maine: | | | | | | | | | | | |
| Portland | 0 | ------ | 0 | 16 | 1 | 1 | 0 | 0 | 0 | 0 | 20 |
| New Hampshire: | | | | | | | | | | | |
| Concord | 0 | ------ | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 14 |
| Manchester | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| Nashua | 0 | ------ | ------ | 0 | ------ | 0 | 0 | ------ | 0 | 0 | ------ |
| Vermont: | | | | | | | | | | | |
| Barre | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| Burlington | 0 | ------ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| Rutland | 0 | ------ | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Massachusetts: | | | | | | | | | | | |
| Boston | 7 | ------ | 0 | 95 | 21 | 18 | 0 | 15 | 0 | 53 | 240 |
| Fall River | 1 | ------ | 1 | 0 | 5 | 2 | 0 | 1 | 0 | 0 | 29 |
| Springfield | 0 | ------ | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 28 |
| Worcester | 0 | ------ | 0 | 37 | 2 | 3 | 0 | 3 | 0 | 3 | 51 |
| Rhode Island: | | | | | | | | | | | |
| Pawtucket | 0 | ------ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Providence | 1 | ------ | 1 | 10 | 1 | 5 | 0 | 3 | 0 | 7 | 73 |
| Connecticut: | | | | | | | | | | | |
| Bridgeport | 0 | ------ | 0 | 6 | 3 | 0 | 0 | 0 | 0 | 7 | 33 |
| Hartford | 0 | ------ | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 30 |
| New Haven | 0 | ------ | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 6 | 33 |
| New York: | | | | | | | | | | | |
| Buffalo | 0 | ------ | 0 | 63 | 9 | 15 | 0 | 7 | 0 | 2 | 148 |
| New York | 36 | 2 | 1 | 384 | 47 | 73 | 0 | 83 | 5 | 96 | 1,362 |
| Rochester | 0 | ------ | 0 | 3 | 3 | 0 | 0 | 2 | 0 | 5 | 65 |
| Syracuse | 0 | ------ | 1 | 20 | 5 | 3 | 0 | 1 | 0 | 12 | 50 |
| New Jersey: | | | | | | | | | | | |
| Camden | 1 | ------ | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 22 |
| Newark | 0 | ------ | 0 | 22 | 4 | 8 | 0 | 11 | 0 | 22 | 125 |
| Trenton | 0 | ------ | 0 | 5 | 1 | 0 | 0 | 0 | 1 | 4 | 36 |
| Pennsylvania: | | | | | | | | | | | |
| Philadelphia | 5 | 2 | 1 | 70 | 8 | 15 | 0 | 18 | 2 | 63 | 375 |
| Pittsburgh | 1 | ------ | 1 | 2 | 11 | 23 | 0 | 4 | 0 | 22 | 150 |
| Reading | 0 | ------ | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 4 | 47 |
| Scranton | 1 | ------ | ------ | 0 | ------ | 0 | 0 | ------ | 0 | 0 | ------ |
| Ohio: | | | | | | | | | | | |
| Cincinnati | 1 | ------ | 1 | 4 | 5 | 5 | 0 | 6 | 1 | 2 | 144 |
| Cleveland | 1 | ------ | 1 | 70 | 9 | 22 | 0 | 10 | 0 | 87 | 246 |
| Columbus | 1 | ------ | 0 | 0 | 3 | 1 | 0 | 1 | 0 | 18 | 99 |
| Toledo | 0 | ------ | 0 | 2 | 3 | 3 | 0 | 8 | 0 | 34 | 69 |
| Indiana: | | | | | | | | | | | |
| Anderson | 0 | ------ | 0 | 0 | 2 | 4 | 0 | 2 | 0 | 1 | 11 |
| Fort Wayne | 0 | ------ | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 22 |
| Indianapolis | 0 | ------ | 0 | 0 | 13 | 2 | 0 | 4 | 0 | 4 | 132 |
| South Bend | 0 | ------ | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 25 |
| Terre Haute | 0 | ------ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 |
| Illinois: | | | | | | | | | | | |
| Alton | 0 | ------ | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 5 |
| Chicago | 18 | 2 | 1 | 9 | 44 | 87 | 0 | 47 | 2 | 100 | 792 |
| Elgin | 1 | ------ | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 14 |
| Moline | 0 | ------ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 11 |
| Springfield | 0 | ------ | 0 | 0 | 2 | 4 | 0 | 0 | 2 | 1 | 46 |
| Michigan: | | | | | | | | | | | |
| Detroit | 5 | 1 | 0 | 8 | 8 | 41 | 0 | 21 | 2 | 124 | 304 |
| Flint | 0 | ------ | 0 | 1 | 3 | 3 | 0 | 1 | 0 | 2 | 32 |
| Grand Rapids | 0 | ------ | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 4 | 34 |
| Wisconsin: | | | | | | | | | | | |
| Kenosha | 0 | ------ | 0 | 0 | 0 | 4 | 3 | 0 | 0 | 1 | 8 |
| Madison | 0 | ------ | 0 | 7 | 0 | 0 | 0 | 1 | 1 | 25 | 26 |
| Milwaukee | 1 | ------ | 0 | 12 | 9 | 26 | 0 | 2 | 0 | 31 | 119 |
| Racine | 0 | ------ | 0 | 0 | 2 | 5 | 1 | 2 | 0 | 0 | 18 |
| Superior | 0 | ------ | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 8 |
| Minnesota: | | | | | | | | | | | |
| Duluth | 0 | ------ | 0 | 2 | 0 | 12 | 0 | 0 | 0 | 19 | 25 |
| Minneapolis | 0 | ------ | 0 | 22 | 7 | 10 | 0 | 1 | 0 | 1 | 163 |
| St. Paul | 0 | ------ | 0 | 16 | 5 | 2 | 1 | 3 | 0 | 14 | 89 |
| Iowa: | | | | | | | | | | | |
| Cedar Rapids | 0 | ------ | ------ | 1 | ------ | 2 | 0 | ------ | 0 | 5 | ------ |
| Davenport | 0 | ------ | ------ | 0 | ------ | 2 | 0 | ------ | 0 | 0 | ------ |
| Des Moines | 0 | ------ | ------ | 0 | ------ | 0 | 0 | ------ | 0 | 0 | 56 |

*City reports for week ended July 11, 1936*—Continued

| State and city | Diphtheria cases | Influenza | | Measles cases | Pneumonia deaths | Scarlet fever cases | Smallpox cases | Tuberculosis deaths | Typhoid fever cases | Whooping cough cases | Deaths, all causes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cases | Deaths | | | | | | | | |
| Iowa—Continued. | | | | | | | | | | | |
| Sioux City | 0 | | | 0 | | 3 | 4 | | 0 | 0 | |
| Waterloo | 2 | | | 0 | | 0 | 0 | | 0 | 0 | |
| Missouri: | | | | | | | | | | | |
| Kansas City | 2 | | 0 | 1 | 6 | 16 | 0 | 4 | 1 | 1 | 86 |
| St. Joseph | | | | | | | | | | | |
| St. Louis | 3 | | 0 | 9 | 5 | 12 | 0 | 3 | 3 | 15 | 212 |
| North Dakota: | | | | | | | | | | | |
| Fargo | 0 | | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 20 |
| Grand Forks | 0 | | | 0 | | 0 | 0 | | 0 | 0 | |
| Minot | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| South Dakota: | | | | | | | | | | | |
| Aberdeen | 0 | | | 0 | | 0 | 0 | | 0 | 0 | |
| Sioux Falls | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Nebraska: | | | | | | | | | | | |
| Omaha | 3 | | 0 | 2 | 12 | 6 | 1 | 3 | 1 | 3 | 78 |
| Kansas: | | | | | | | | | | | |
| Lawrence | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Topeka | 0 | | 0 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 18 |
| Wichita | 0 | | 0 | 0 | 3 | 3 | 0 | 1 | 0 | 5 | 28 |
| Delaware: | | | | | | | | | | | |
| Wilmington | 0 | | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 4 | 30 |
| Maryland: | | | | | | | | | | | |
| Baltimore | 2 | 2 | 2 | 78 | 4 | 8 | 0 | 8 | 1 | 71 | 176 |
| Cumberland | 0 | | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 17 |
| Frederick | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| District of Col.: | | | | | | | | | | | |
| Washington | 8 | | 0 | 51 | 15 | 1 | 0 | 10 | 0 | 33 | 173 |
| Virginia: | | | | | | | | | | | |
| Lynchburg | 0 | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 7 | 5 |
| Norfolk | 0 | | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 26 |
| Richmond | 0 | | 0 | 0 | 2 | 2 | 0 | 4 | 0 | 8 | 55 |
| Roanoke | 2 | | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 14 |
| West Virginia: | | | | | | | | | | | |
| Charleston | 0 | | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 15 |
| Huntington | 0 | | | 0 | | 0 | 0 | | 1 | 0 | |
| Wheeling | 1 | | 0 | 4 | 1 | 0 | 0 | 0 | 1 | 0 | 15 |
| North Carolina: | | | | | | | | | | | |
| Gastonia | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Raleigh | | | | | | | | | | | |
| Wilmington | 1 | | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 16 |
| Winston-Salem | 0 | | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 9 |
| South Carolina: | | | | | | | | | | | |
| Charleston | 0 | 1 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 1 | 45 |
| Columbia | | | | | | | | | | | |
| Florence | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | 10 |
| Greenville | 0 | | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| Georgia: | | | | | | | | | | | |
| Atlanta | 1 | | 0 | 0 | 11 | 1 | 0 | 5 | 0 | 2 | 91 |
| Brunswick | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Savannah | 1 | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 35 |
| Florida: | | | | | | | | | | | |
| Miami | 0 | | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 2 | 23 |
| Tampa | 0 | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 24 |
| Kentucky: | | | | | | | | | | | |
| Ashland | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Covington | 0 | | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 14 |
| Lexington | 1 | | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 21 |
| Louisville | 2 | | 1 | 0 | 6 | 3 | 0 | 5 | 0 | 2 | 99 |
| Tennessee: | | | | | | | | | | | |
| Knoxville | 0 | | 0 | 2 | 1 | 0 | 0 | 1 | 2 | 0 | 20 |
| Memphis | 0 | | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 20 | 66 |
| Nashville | 0 | | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 52 |
| Alabama: | | | | | | | | | | | |
| Birmingham | 2 | | 0 | 0 | 5 | 2 | 0 | 5 | 0 | 1 | 76 |
| Mobile | 0 | | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 16 |
| Montgomery | 1 | | | 0 | | 1 | 0 | | 0 | 0 | |
| Arkansas: | | | | | | | | | | | |
| Fort Smith | 0 | | | 0 | | 0 | 0 | | 1 | 0 | |
| Little Rock | 0 | | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 6 |
| Louisiana: | | | | | | | | | | | |
| Lake Charles | 0 | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| New Orleans | 4 | | 0 | 1 | 10 | 3 | 0 | 11 | 3 | 14 | 149 |
| Shreveport | 1 | | 0 | 1 | 2 | 0 | 0 | 3 | 4 | 0 | 41 |
| Oklahoma: | | | | | | | | | | | |
| Oklahoma City | 3 | 2 | 0 | 0 | 4 | 2 | 0 | 3 | 0 | 0 | 41 |

*City reports for week ended July 11, 1936*—Continued

| State and city | Diphtheria cases | Influenza cases | Influenza deaths | Measles cases | Pneumonia deaths | Scarlet fever cases | Smallpox cases | Tuberculosis deaths | Typhoid fever cases | Whooping cough cases | Deaths, all causes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Texas:** | | | | | | | | | | | |
| Dallas | 2 | 1 | 1 | 17 | 2 | 7 | 0 | 4 | 0 | 3 | 77 |
| Fort Worth | 1 | ------ | 0 | 2 | 1 | 1 | 0 | 2 | 2 | 0 | 35 |
| Galveston | 0 | ------ | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 13 |
| Houston | 4 | ------ | 0 | 0 | 7 | 0 | 0 | 7 | 2 | 0 | 91 |
| San Antonio | 1 | ------ | 0 | 0 | 3 | 0 | 0 | 7 | 0 | 0 | 77 |
| **Montana:** | | | | | | | | | | | |
| Billings | 0 | ------ | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 12 |
| Great Falls | 0 | ------ | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 11 |
| Helena | 0 | ------ | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 2 |
| Missoula | 0 | ------ | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| **Idaho:** | | | | | | | | | | | |
| Boise | 0 | ------ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| **Colorado:** | | | | | | | | | | | |
| Colorado Springs | 0 | ------ | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 12 |
| Denver | 1 | ------ | 1 | 9 | 0 | 6 | 0 | 3 | 0 | 26 | 81 |
| Pueblo | 0 | ------ | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 7 |
| **New Mexico:** | | | | | | | | | | | |
| Albuquerque | 0 | ------ | 0 | 2 | 4 | 2 | 0 | 5 | 1 | 0 | 21 |
| **Utah:** | | | | | | | | | | | |
| Salt Lake City | 0 | ------ | 0 | 3 | 1 | 14 | 0 | 0 | 1 | 11 | 31 |
| **Nevada:** | | | | | | | | | | | |
| Reno | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| **Washington:** | | | | | | | | | | | |
| Seattle | 0 | ------ | 1 | 42 | 2 | 0 | 0 | 8 | 2 | 11 | 86 |
| Spokane | 0 | ------ | 0 | 5 | 1 | 7 | 0 | 1 | 0 | 9 | 23 |
| Tacoma | 0 | ------ | 0 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 38 |
| **Oregon:** | | | | | | | | | | | |
| Portland | 0 | ------ | 0 | 1 | 5 | 4 | 0 | 0 | 0 | 20 | 58 |
| Salem | 0 | ------ | ------ | 1 | ------ | 0 | 0 | ------ | 0 | 2 | ------ |
| **California:** | | | | | | | | | | | |
| Los Angeles | 3 | 4 | 0 | 42 | 11 | 18 | 0 | 21 | 0 | 48 | 286 |
| Sacramento | 0 | ------ | 0 | 0 | 4 | 8 | 0 | 2 | 0 | 27 | 26 |
| San Francisco | 1 | ------ | 0 | 15 | 4 | 16 | 0 | 14 | 0 | 18 | 192 |

| State and city | Meningococcus meningitis cases | Meningococcus meningitis deaths | Poliomyelitis cases |
|---|---|---|---|
| **New York:** | | | |
| Buffalo | 0 | 1 | 0 |
| New York | 9 | 4 | 3 |
| Rochester | 0 | 1 | 0 |
| **New Jersey:** | | | |
| Newark | 3 | 1 | 0 |
| Trenton | 1 | 1 | 0 |
| **Ohio:** | | | |
| Cleveland | 2 | 0 | 0 |
| **Illinois:** | | | |
| Chicago | 3 | 2 | 2 |
| Springfield | 0 | 1 | 0 |
| **Michigan:** | | | |
| Detroit | 1 | 0 | 0 |
| Flint | 1 | 1 | 0 |
| **Iowa:** | | | |
| Cedar Rapids | 0 | 0 | 1 |
| **Missouri:** | | | |
| St. Louis | 3 | 1 | 0 |
| **Maryland:** | | | |
| Baltimore | 2 | 1 | 0 |
| **District of Columbia:** | | | |
| Washington | 2 | 0 | 0 |
| **West Virginia:** | | | |
| Huntington | 0 | 1 | 0 |
| Wheeling | 1 | 0 | 0 |
| **North Carolina:** | | | |
| Wilmington | 1 | 0 | 0 |
| **South Carolina:** | | | |
| Greenville | 0 | 1 | 0 |
| **Georgia:** | | | |
| Atlanta | 1 | 1 | 0 |
| **Kentucky:** | | | |
| Ashland | 2 | 0 | 0 |
| Louisville | 1 | 1 | 1 |
| **Tennessee:** | | | |
| Memphis | 1 | 0 | 2 |
| Nashville | 0 | 0 | 3 |
| **Alabama:** | | | |
| Birmingham | 2 | 0 | 4 |
| **Louisiana:** | | | |
| Shreveport | 0 | 1 | 0 |
| **Oregon:** | | | |
| Portland | 1 | 1 | 0 |
| **California:** | | | |
| Los Angeles | 2 | 1 | 0 |
| Sacramento | 0 | 0 | 1 |
| San Francisco | 0 | 0 | 1 |

*Epidemic encephalitis.*—Cases: Cleveland, 1; Toledo, 1; Washington, D. C., 1; Birmingham, 1.
*Pellagra.*—Cases: Boston, 2; Topeka, 1; Baltimore, 1; Charleston, S. C., 1; Atlanta, 1; Savannah, 1; Memphis, 1; Birmingham, 4; Los Angeles, 1; San Francisco, 1.
*Typhus fever.*—Cases: Savannah, 1; Montgomery, 1. Deaths: New Orleans, 1.

# FOREIGN AND INSULAR

## CUBA

*Vital statistics—1932.*—Following are vital statistics for Cuba for the year 1932:

| | |
|---|---|
| Population July 1, 1932 | 4,031,552 |
| Marriages | 12,076 |
| Births | 65,706 |
| Births per 1,000 population | 16.3 |
| Stillbirths | 5,560 |
| Deaths | 43,355 |
| Deaths per 1,000 population | 10.75 |
| Deaths under 1 year of age | 7,590 |
| Deaths from— | |
| Alcoholism (acute and chronic) | 11 |
| Anthrax | 8 |
| Appendicitis | 176 |
| Bronchitis | 1,322 |
| Bronchopneumonia | 3,249 |
| Cancer | 1,554 |
| Cerebral hemorrhage | 736 |
| Cerebrospinal meningitis | 3 |
| Cirrhosis of the liver | 462 |
| Diabetes | 192 |
| Diarrhea and enteritis (under 2 years) | 4,871 |
| Deaths from—Continued. | |
| Diphtheria | 144 |
| Dysentery | 71 |
| Erysipelas | 40 |
| Hookworm disease | 252 |
| Influenza | 209 |
| Leprosy | 26 |
| Malaria | 704 |
| Measles | 53 |
| Nephritis, acute | 576 |
| Nephritis, chronic | 1,516 |
| Poliomyelitis | 4 |
| Puerperal septicemia | 244 |
| Scarlet fever | 1 |
| Suicide | 575 |
| Syphilis | 162 |
| Tetanus | 183 |
| Tuberculosis (all forms) | 3,012 |
| Typhoid fever | 391 |
| Whooping cough | 66 |

## MEXICO

*Anthrax.*—According to information dated July 8, 1936, anthrax had appeared among cattle on several ranches located east of the city of Durango, Mexico, and south of the Santiago River. Up to July 3, 1936, 35 head of cattle had contracted the disease. The ranches have all been quarantined.

## SWITZERLAND

*Zurich—Poliomyelitis.*—According to information dated July 9, 1936, 9 cases of poliomyelitis had been reported in the city of Zurich, Switzerland, including 1 case brought from an outlying district. All necessary precautions had been taken. During the week ended June 28, 1936, 7 cases were reported in the city of Zurich, Switzerland.

## VENEZUELA

*Vital statistics—1935.*—The following table shows the births and deaths reported in Venezuela during 1935, together with the number of deaths reported from certain diseases.

| | |
|---|---|
| Population (estimated, Jan. 1, 1935) | 3,195,654 |
| Deaths | 54,267 |
| Death rate per 1,000 population | 16.98 |
| Births | 91,948 |
| Birth rate per 1,000 population | 28.77 |
| Deaths from— | |
| Bronchitis | 676 |
| Cancer and other malignant tumors | 593 |
| Diarrhea and enteritis under 2 years | 2,348 |
| Dysentery | 778 |
| Erysipelas | 67 |
| Malaria | 4,749 |
| Measles | 55 |
| Deaths from—Continued. | |
| Meningitis | 263 |
| Nephritis | 791 |
| Pneumonia and bronchopenumonia | 1,589 |
| Poliomyelitis | 5 |
| Scarlet fever | 8 |
| Smallpox | 3 |
| Syphilis | 397 |
| Tetanus neonatorum | 598 |
| Tuberculosis, pulmonary | 3,031 |
| Typhoid fever | 310 |
| Whooping cough | 467 |

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From medical officers of the Public Health Service, American consuls, International Office of Public Health, Pan American Sanitary Bureau, health section of the League of Nations, and other sources. The reports contained in the following table must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

### CHOLERA

[C indicates cases; D, deaths; P, present]

| Place | | Dec. 1–28, 1935 | Dec. 29, 1935–Jan. 25, 1936 | Jan. 26–Feb. 29, 1936 | Mar. 1–28, 1936 | Week ended— | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | April 1936 | | | | May 1936 | | | | | June 1936 | | | |
| | | | | | | 4 | 11 | 18 | 25 | 2 | 9 | 16 | 23 | 30 | 6 | 13 | 20 | 27 |
| Ceylon: | | | | | | | | | | | | | | | | | | |
| Batticaloa [1] | | | | | | | | | | | | | | | | | | |
| Provinces | C | | | | | | 14 | 4 | | | | | | | | | | |
| India | C | 11,615 | 14,233 | 13,729 | 16,605 | 6,413 | 5,717 | 6,008 | 5,890 | 4,542 | 4,613 | 4,172 | 4,116 | | | | | |
| | D | 6,169 | 7,799 | 7,183 | 7,988 | 2,930 | 2,855 | 2,978 | 2,982 | 2,285 | 2,201 | 2,112 | 2,120 | | | | | |
| Assam | C | 707 | 318 | 92 | 59 | 20 | 19 | 45 | 53 | 75 | 124 | 115 | 96 | 157 | 86 | 98 | 41 | 37 |
| | D | 396 | 167 | 46 | 30 | 12 | 4 | 22 | 27 | 37 | 51 | 65 | 49 | 90 | 46 | 41 | 49 | 16 |
| Bassein | C | | | | | | | | | | | 3 | | 6 | 6 | 3 | 1 | 2 |
| Bombay Presidency | C | 941 | 459 | 332 | 130 | 40 | 36 | 32 | 37 | 63 | 87 | 85 | 130 | | | | | |
| | D | 445 | 237 | 149 | 55 | 14 | 13 | 10 | 5 | 25 | 27 | 34 | 37 | | | | | |
| Bombay | C | | | | | | | | | | | | | | [2] 1 | | | |
| Calcutta | C | 103 | 140 | 380 | 802 | 245 | 171 | 230 | 153 | 161 | 192 | 268 | 225 | 166 | 191 | 133 | 180 | 76 |
| Central Provinces and Berar | C | 98 | 14 | 56 | 217 | 122 | 102 | 49 | 84 | 38 | 23 | 163 | 184 | 307 | 279 | 404 | 288 | |
| Chittagong | C | | | | | | | | | 4 | 1 | | | 1 | | 7 | 1 | 5 |
| Madras Presidency | C | 2,855 | 3,870 | 2,877 | 2,751 | 442 | 463 | 404 | 368 | 265 | 221 | 292 | 346 | | | | | |
| | D | 1,336 | 2,013 | 1,407 | 1,340 | 189 | 226 | 192 | 151 | 146 | 116 | 158 | 187 | | | | | |
| Madras | C | 13 | 9 | 70 | 26 | 1 | 2 | 1 | 1 | | 1 | 1 | | | | | | |
| | D | 7 | 3 | 26 | 11 | | | 1 | | | | | | | | | | |
| Moulmein | C | | | 2 | 10 | 1 | | 1 | | 1 | | 2 | | | 1 | | | |
| Negapatam | C | 7 | 22 | 56 | 6 | 1 | 1 | | | | | | | | | | | 13 |
| | D | 4 | 8 | 27 | 2 | | | | | | | | | | | | | 9 |
| Northwest Frontier Province | C | | 1 | 1 | | | | | | | | | | | | | | |
| Punjab | C | 7 | 1 | | | | 1 | 1 | 4 | 3 | 5 | 3 | 15 | 35 | 35 | 61 | 54 | 81 |
| Rangoon | C | | [2] 1 | | | | 4 | | | | | | | | | [2] 1 | | 1 |
| India (French): | | | | | | | | | | | | | | | | | | |
| Chandernagor Territory | C | | 8 | 6 | | | 2 | 3 | 1 | 1 | 1 | | | | | | | |
| Karikal Province | C | | 116 | 91 | | | 1 | 3 | | | | | | | | | | |
| Pondichery Province | C | | 44 | 52 | 74 | | | 3 | 4 | 10 | 6 | | | | | | | |

[1] According to information dated Apr. 8, 1936, 31 cases of cholera with 27 deaths have occurred in the vicinity of Batticaloa, Ceylon.
[2] Imported.

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

### CHOLERA—Continued

[C indicates cases; D, deaths; P, present]

| Place | | Dec. 1–28, 1935 | Dec. 29, 1935–Jan. 25, 1936 | Jan. 26–Feb. 29, 1936 | Mar. 1–28, 1936 | Week ended— April 1936 4 | 11 | 18 | 25 | May 1936 2 | 9 | 16 | 23 | 30 | June 1936 6 | 13 | 20 | 27 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Indochina (see also table below):** | | | | | | | | | | | | | | | | | | |
| Bentre | C | | | | | | | | | | 1 | | | | | | | |
| Pnom-Penh | C | | | | | | | | | | 1 | | | | | | | |
| **Siam:** | | | | | | | | | | | | | | | | | | |
| Ang Thoang Province | C | | | 3 | 6 | 5 | 1 | 3 | 2 | | | | | | | | | |
| | D | | | 3 | 4 | 2 | 1 | 2 | 1 | | | | | | | | | |
| Ayudhaya Province | C | 40 | 74 | 214 | 101 | 1 | 5 | 7 | 12 | 3 | 13 | 4 | | 1 | | | | |
| | D | 35 | 49 | 159 | 69 | 4 | 4 | 9 | 6 | 4 | 11 | 2 | | | | | | |
| Bangkok | C | 49 | 124 | 375 | 148 | 18 | 11 | 17 | 13 | 20 | 8 | 11 | 3 | 10 | 8 | 6 | 10 | 12 |
| Bejrpuri Province | C | | 56 | 66 | 42 | 14 | 18 | 6 | 4 | 7 | 1 | | | | | | | |
| Bichitr Province | C | | | | 20 | 23 | 11 | | | | | | | | | | | |
| Bisnulok Province | C | | | 13 | 106 | 14 | 4 | 49 | 6 | 40 | 20 | 4 | | | | | | |
| Chandapuri Province | C | | | | 15 | | 4 | | | | | | | | | | | |
| Chhaxoengsao Province | C | 55 | 175 | 95 | 21 | 4 | 1 | 1 | 1 | 2 | | 2 | | | | | | |
| Jalapuri Province | C | 3 | 20 | 12 | 9 | 5 | | | 4 | 20 | 8 | 6 | | | | | | |
| Jayanad Province | C | | | 13 | 11 | | | 6 | 13 | | | | | | | | | |
| Kanchanapuri Province | C | | | | 11 | 8 | 1 | 11 | 7 | | | | | 2 | | | | |
| Lobpuri Province | C | 10 | | 7 | 2 | | | | | | | 1 | | | | | | |
| Nagara Nayok Province | C | | | 10 | | | | | | | | | | | | | | |
| Nagara Pathom Province | C | 1 | 4 | 11 | 43 | 6 | 17 | 3 | 1 | 2 | 2 | | | 1 | | | | |
| Nagara Rajsima Province | C | | | 2 | | | | | | | | | | | | | | |
| Nagara Svarga Province | C | | | 15 | 42 | 24 | 3 | 28 | 10 | 9 | 4 | 3 | | 10 | | | | |
| Nondpuri Province | C | 3 | 7 | 21 | 23 | 3 | 2 | 4 | 2 | 10 | 1 | | | | | | | |
| Prachinpuri Province | C | 54 | 26 | 4 | 3 | 1 | | | | | | | | | | | | |
| Prachuabgirikhand Province | C | | | | | | 14 | | | | | | | | | | | |
| Pradhumdhani Province | C | 1 | 4 | 41 | 21 | | 1 | | 4 | 13 | 8 | 5 | | | | | | |
| Prae Province | C | | | | 3 | | | | | | | | | | | | | |
| Rajpuri Province | C | 54 | 63 | 16 | 43 | 13 | 14 | 17 | 26 | 13 | | 3 | | | | | | |
| Sarapuri Province | C | | 2 | 104 | 9 | | | | | | | | | | | | | |
| Singhapuri Province | C | 2 | 1 | 1 | | | | 9 | 7 | 6 | | 1 | | | | | | |
| Smudprakar Province | C | 49 | 15 | 156 | 138 | 5 | 30 | 9 | 2 | 6 | 14 | 9 | | | | | | |
| Smudsagara Province | C | 36 | 58 | 76 | 80 | 10 | 5 | | 6 | 6 | | 5 | | | | | | |
| Smudsongram Province | C | 38 | 49 | 84 | 112 | 27 | 10 | 13 | 9 | 4 | | | | | | | | |
| Subarnpuri Province | C | | | 13 | 48 | 14 | 12 | 11 | 9 | 2 | 7 | | | | | | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Upala Rajdhani Province | C | | | | 35 | | | | | 1 | | 4 | | | | | | | |
| Uttradhani Province | C | | | | 12 | | | | | | | | | | | | | | |
| Utradith Province | C | | | | 5 | 3 | 10 | 4 | | 1 | 4 | | | | | | | | |
| On vessels: | | | | | | | | | | | | | | | | | | | |
| S. S. *Egra* at Rangoon | C | | 1 | | | | | | | | | | | | | | | | |
| S. S. *Floristan* at Masulipatam | C | | [3] 1 | | | | | | | | | | | | | | | | |
| S. S. *Chatala* at Rangoon from Chittagong | C | | | | 1 | | | | | | | | | | | | | | |
| S. S. *Kutsang* at Penang from Calcutta | C | | | | | | 1 | | | | | | | | | | | | |
| S. S. *Karayola* at Penang from Calcutta | C | | | | | | | | | | 1 | | | | | | | | |

| Place | | January 1936 | | | February 1936 | | | March 1936 | | | April 1936 | | | May 1936 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1-10 | 11-20 | 21-31 | 1-10 | 11-20 | 21-29 | 1-10 | 11-20 | 21-31 | 1-10 | 11-20 | 21-30 | 1-10 | 11-20 | 21-31 |
| Indochina (French) (see also table above): | | | | | | | | | | | | | | | | |
| Cambodia [4] | C | 1 | | 1 | 4 | 7 | | 4 | 4 | 3 | | 2 | | | 3 | 1 |
| | D | 1 | | 1 | 3 | 1 | | 4 | 3 | 3 | | 1 | | | 2 | 1 |
| Cochinchina [4] | C | | | 2 | 2 | | 3 | 3 | 4 | 1 | 4 | | 1 | 1 | 1 | 1 |
| | D | | | 2 | 2 | | 3 | 3 | 4 | 1 | 3 | | 1 | 1 | 1 | 1 |

[3] Suspected.
[4] Reports incomplete.

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

### PLAGUE[1]

[C indicates cases; D, deaths; P, present]

| Place | | Dec. 1–28, 1935 | Dec. 29, 1935–Jan. 25, 1936 | Jan. 26–Feb. 29, 1936 | Mar. 1–28, 1936 | Week ended— April 1936 4 | 11 | 18 | 25 | May 1936 2 | 9 | 16 | 23 | 30 | June 1936 6 | 13 | 20 | 27 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Algeria: Bone | C | | | | | [2]3 | | | | | | | | | | | | |
| Argentina (see also table below): Bahia Blanca (vicinity of) | C | | | 2 | | | | | | | | | | | | | | |
| | D | | | 2 | | | | | | | | | | | | | | |
| Azores. (See table below.) | | | | | | | | | | | | | | | | | | |
| Basutoland. (See also table below) | C | | | [2]2 | | | | | | | | | | | | | | |
| Belgian Congo | C | | | | | | | | | | | 1 | | | | | | |
| Brazil. (See also table below). | | | | | | | | | | | | | | | | | | |
| British East Africa: | | | | | | | | | | | | | | | | | | |
| Kenya | C | 25 | 10 | 22 | 9 | 7 | 3 | | 1 | 8 | 2 | 21 | 5 | 1 | 2 | | | |
| Tanganyika | C | | 7 | 2 | 5 | | | | | 3 | | | | | | | | |
| Uganda | C | 61 | 44 | 44 | 62 | 9 | 8 | 16 | 24 | 23 | 17 | 43 | 42 | 28 | 31 | 16 | | |
| | D | 54 | 40 | 42 | 58 | 9 | 8 | 15 | 23 | 22 | 16 | 42 | 40 | 28 | 29 | 16 | | |
| Ceylon: | | | | | | | | | | | | | | | | | | |
| Anuradhapura | C | | | | 1 | | | | | | | | | | | | | |
| Colombo | C | 11 | 10 | 6 | 3 | 1 | 1 | 1 | | 2 | | | | 1 | | 3 | | |
| | D | 10 | 9 | 3 | 3 | 1 | 1 | 1 | | 2 | | | | 1 | | 3 | | |
| Plague-infected rats | | 4 | | 2 | 3 | 2 | | 1 | 5 | 2 | | 1 | | 5 | | 2 | | |
| Hatton | C | | | | | | | | | | | 3 | | | | | | |
| Manar | C | | | | | | | 1 | | | | | | | | | | |
| Weligama | C | | | | | | 1 | | | | | | | | | | | |
| Dutch East Indies: West Java | C | 878 | 726 | 996 | 700 | 107 | 155 | 168 | 174 | 122 | | | | | | | | |
| | D | 873 | 723 | 990 | 689 | 107 | 155 | 168 | 172 | 121 | | | | | | | | |
| Ecuador: | | | | | | | | | | | | | | | | | | |
| Daule [4] | C | | | | 1 | | | | | | | | | | | | | |
| Guayaquil | C | 20 | 8 | 6 | 1 | 1 | | | | | | | | | | | | |
| | D | 4 | 6 | 3 | | 1 | | | | | | | | | | | | |
| Plague-infected rats | | 5 | 2 | | 1 | | | | | | | | | | | | 1 | 2 |
| Egypt: | | | | | | | | | | | | | | | | | | |
| Alexandria: Plague-infected rats | | P | P | P | P | P | | P | | P | | P | | P | | P | | |
| Asyut Province | C | 3 | 6 | 9 | 13 | 4 | 5 | 7 | 2 | 1 | 1 | | | | 2 | | | |
| Girga Province | C | | 1 | 2 | 1 | 1 | | | | | | | 1 | | | | | |
| Minya Province | C | | | 4 | 5 | | | | 1 | 1 | | | | | | | | |
| Suez | C | | | | | | | | | | | | | | 1 | | | |
| Great Britain—England—Liverpool: Plague-infected rats | | 2 | | | | | | | | | | | | | | | | |
| Hawaii Territory: Plague-infected rats: | | | | | | | | | | | | | | | | | | |
| Hawaii Island—Hamakua district: | | | | | | | | | | | | | | | | | | |
| Hamakua Mill | | 1 | | 1 | | | | | | | | | | | | | | |
| Kukaiau | | 1 | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Paauhau | | | 1 | | | | | | | 2 | | | | | | | | | |
| Pohakea Sector | | | | 1 | | 1 | 1 | 2 | | | | | | | | | | | |
| India | C | 1,852 | 2,168 | 3,382 | 3,543 | 602 | 721 | 447 | 564 | 350 | 154 | 63 | 34 | | | | | | |
| | D | 928 | 1,144 | 1,726 | 1,669 | 279 | 357 | 279 | 310 | 192 | 115 | 55 | 24 | | | | | | |
| Bassein | C | 1 | | 7 | 4 | 3 | | 1 | 1 | | 1 | 2 | 1 | 1 | 1 | 1 | | | |
| Plague-infected rats | | | | 2 | | | | | | | | | | | | | | | |
| Bombay Presidency | C | 88 | 99 | 169 | 125 | 9 | 21 | 21 | 17 | 7 | 4 | | | | | | | | |
| | D | 48 | 61 | 110 | 70 | 6 | 12 | 15 | 14 | 3 | 2 | | 1 | | | | | | |
| Bombay | C | | [5] 1 | | | | | | | | | | | | | | | | |
| Central Provinces and Berar | C | 716 | 194 | 584 | 456 | 181 | 135 | 79 | 92 | 45 | 6 | 1 | | | | | | 1 | |
| Karachi | C | | | | 5 | | | | | | | | | | | | | | |
| Madras Presidency | C | 71 | 42 | 29 | 44 | 10 | | 5 | 5 | 1 | | 2 | 2 | | | | | | |
| | D | 51 | 26 | 11 | 38 | 5 | | 5 | 3 | | | 1 | 1 | | | | | | |
| Punjab | C | | | 1 | 14 | 8 | 22 | 54 | 11 | 56 | 1 | 8 | 7 | | | | | | |
| | D | | | | 7 | 4 | 16 | 28 | 5 | 36 | 1 | 7 | 3 | | | | | | |
| Rangoon | C | [5] 1 | | [5] 1 | | | | | | | 3 | | 2 | | | | | 2 | |
| Plague-infected rats | | 1 | | 5 | 2 | | | | | | | | 1 | | | | | | |
| Indochina (see also table below): | | | | | | | | | | | | | | | | | | | |
| Longxuyen | C | | | | | | | | | | | | | | | | 1 | | |
| Pnom-Penh | C | | 1 | 1 | | | | | | | 1 | | | | | | | | |
| Saigon-Cholon | C | | 1 | | | | | | 1 | | | | | | | | | | |
| Tanghai | C | | | | | | 2 | | | | | | 4 | | | | | | |
| Iraq: Baghdad | C | 1 | [5] 1 | | | | | | | | | | | | | | | | |
| Madagascar. (See table below.) | | | | | | | | | | | | | | | | | | | |
| Malta | C | | | | | | | 3 | | 1 | | | | | | 3 | | | |
| | D | | | | | | | 2 | | | | | | | | 1 | | | |
| Peru. (See table below.) | | | | | | | | | | | | | | | | | | | |
| Senegal. (See table below.) | | | | | | | | | | | | | | | | | | | |
| Tunisia: Tunis—Plague-infected rats | | | | 2 | | 1 | 1 | | | | | | | | | | | | |
| Union of South Africa | C | 7 | 44 | 144 | 41 | | [6] 6 | | | | [6] 3 | | [6] 3 | | | [6] 17 | | [6] 15 | |
| Cape Province | C | 2 | | | | | | | | | | | | | | | | | |
| Orange Free State | C | 1 | | | | | | | | | | | | | | | | | |
| United States: | | | | | | | | | | | | | | | | | | | |
| California: | | | | | | | | | | | | | | | | | | | |
| Lassen County—Plague-infected squirrels | | | | | | | | | | | | | | | | 1 | 1 | | 3 |
| Modoc County—Plague-infected squirrels | | | | | | | | | | | | | | | | P | 4 | 7 | [7] 2 |
| Monterey County | C | | | | | | | | | | | | | | | | | | 1 |
| Santa Cruz County—Plague-infected squirrels | | | | | | | | | | | | | | | | | | 21 | [7] 29 |
| Santa Rosa | C | | | | | | | 1 | | | | | | | | P | | | |
| Ventura County—Plague-infected squirrels | | | | | | 1 | | | | | | | | | | | | | |
| Idaho—Bonneville County—Plague-infected squirrels | | | | | | | | | | | | | | | | | P | | 7 |
| Nevada: Elko County—Plague-infected squirrels | | | | | | | | | | | P | | | | | | | | |
| Utah: Beaver County.[8] | | | | | | | | | | | | | | | | | | | |

[1] Including plague in the United States and its possessions.
[2] Suspected.
[3] Includes 1 suspected case.
[4] During the period Jan. 1 to Feb. 20, 1936, 7 cases of plague were reported at Daule and vicinity, Ecuador.
[5] Imported.
[6] For 2 weeks.
[7] During the week ended June 27, 1936, 3 lots of plague-infected fleas in Modoc County, and 7 lots of plague-infected fleas in Santa Cruz County, Calif., were also reported.
[8] Plague has been reported positive near Beaver, Beaver County, Utah, in a boy bitten by a ground squirrel June 24, 1936.

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

### PLAGUE—Continued

[C indicates cases; D, deaths; P, present]

| Place | | December 1935 | January 1936 | February 1936 | March 1936 | April 1936 | May 1936 |
|---|---|---|---|---|---|---|---|
| Argentina (see also table above): | | | | | | | |
| Buenos Aires Province | C | | | 2 | | | |
| Cordoba Province | C | 5 | 1 | | | | |
| San Luis Province | C | | | | | 6 | |
| Santa Fe | C | | 1 | | | | |
| Azores | C | 2 | 3 | 4 | | 2 | |
| Basutoland | C | 16 | | | | | |
| Brazil: | | | | | | | |
| Bahia State | C | 20 | | | | | |
| Ceara State | C | | | 7 | 54 | 3 | |
| Pernambuco State | C | | | | [9] 15 | | |
| Indochina (see also table above): | | | | | | | |
| Cambodia | C | | 1 | 2 | 1 | 1 | 1 |
| Cochinchina | C | | 1 | | | 1 | 1 |
| Madagascar (central region) | C | 507 | 503 | 382 | 206 | 96 | 48 |
| | D | 485 | 485 | 358 | 196 | 95 | 47 |

| Place | | December 1935 | January 1936 | February 1936 | March 1936 | April 1936 | May 1936 |
|---|---|---|---|---|---|---|---|
| Peru | C | 9 | 23 | 19 | 10 | 15 | 5 |
| Arequipa Department | C | | 5 | | | | |
| Lambayeque Department | C | 1 | 4 | 3 | | | |
| Libertad Department | C | | 5 | 1 | 1 | 6 | 4 |
| Lima Department | C | 7 | 9 | 8 | 3 | 6 | 1 |
| Callao | C | | 1 | 2 | 4 | 1 | |
| | D | | 1 | 2 | 1 | 1 | |
| Plague-infected rats | | | | | P | | |
| Piura Department | C | | | 5 | | 2 | |
| Trujillo Department | C | | | | 2 | | |
| Senegal: | | | | | | | |
| Dakar [10] | C | | 1 | 1 | | | |
| | D | | 1 | 1 | | | |
| Thies [10] | C | | | | | | 2 |
| Tivaouane [10] | C | 1 | | | | 1 | 5 |

[9] From Jan. 1 to Mar. 16, 1936.
[10] Reports incomplete.

74357°—36——3

## SMALLPOX

[C indicates cases; D, deaths; P, present]

| Place | | Dec. 1–28, 1935 | Dec. 29, 1935–Jan. 25, 1936 | Jan. 26–Feb. 29, 1936 | Mar. 1–28, 1936 | Week ended— April 1936 4 | 11 | 18 | 25 | May 1936 2 | 9 | 16 | 23 | 30 | June 1936 6 | 13 | 20 | 27 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Algeria:** | | | | | | | | | | | | | | | | | | |
| Algiers Department | C | | | 2 | | | | | | | | | | | | | | |
| Constantine Department | C | | | | | | | 1 | | | | | | | 1 | | | |
| Oran Department | C | | | | | | | | | | | | | | 1 | | 5 | |
| **Angola.** (See table below.) | | | | | | | | | | | | | | | | | | |
| **Argentina** (see also table below): | | | | | | | | | | | | | | | | | | |
| Corrientes Province | C | | | | 5 | | | | | | | | | | | | | |
| Jujuy Province | C | | | | 7 | | | | | | | | | | | | | |
| **Belgian Congo.** (See table below.) | | | | | | | | | | | | | | | | | | |
| **Bolivia.** (See table below.) | | | | | | | | | | | | | | | | | | |
| **Brazil: Porto Alegre** (alastrim) | C | 27 | | | | | | | | | | | | | | | | |
| | D | | | | | | | | 3 | | | | | | | | | |
| **British East Africa:** | | | | | | | | | | | | | | | | | | |
| Tanganyika | C | | 9 | 8 | 57 | | | | | | 11 | 61 | 1 | | | | | |
| Uganda | C | | 10 | 12 | 7 | | | | | | | | | | | | | |
| **British Somaliland** | C | 7 | 4 | 34 | | | | | | | | 6 | 2 | 2 | 1 | 10 | | |
| **British South Africa: Southern Rhodesia** | C | | | 1 | | | | | | | | | | | | | | |
| **Canada:** | | | | | | | | | | | | | | | | | | |
| Alberta | C | | [1] 1 | 3 | 30 | 1 | | | | 1 | 1 | | | | | [1] 2 | | |
| British Columbia | C | 2 | 2 | | [1] 1 | | | | | | | | | | | | | |
| Ontario | C | | | | | [1] 1 | | | | | | | | | | | | |
| **Ceylon: Colombo** | C | | 1 | | | | | | | | | | | | | | | |
| **China** (see also table below): | | | | | | | | | | | | | | | | | | |
| Amoy | C | | | 3 | | | | 1 | | | | | | | | | | |
| Canton | C | | | | | 1 | | | | | | | | | | | | |
| Dairen | C | | | 4 | 2 | 1 | | 1 | 1 | 2 | 2 | 1 | | | | | | |
| Foochow | C | P | P | P | P | | | P | | P | | | | P | | | | |
| Hangchow | C | 1 | 3 | 15 | 8 | 2 | 1 | | 2 | 2 | 2 | 2 | | 1 | | | | |
| Hankow | C | | | 4 | 1 | | | 2 | | | 1 | | | | 1 | | | |
| Hong Kong | C | | | | 6 | 4 | 2 | 1 | | 1 | 1 | | | 3 | 2 | | | |
| Nanking | C | 43 | 16 | 41 | 38 | 21 | 9 | 10 | 39 | 27 | 12 | 18 | 10 | | 1 | | | |
| Shanghai | C | 6 | 5 | 30 | 23 | 15 | 9 | 17 | 9 | 11 | 9 | 10 | 9 | 10 | 1 | 9 | 4 | 3 |
| Swatow | C | 1 | | 2 | 1 | 2 | 2 | | | | | | | | | | | |
| Tientsin | C | 3 | | | 2 | | 1 | | | | | | 1 | | | | | |

[1] For 2 weeks.

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

### SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

| Place | | Dec. 1-28, 1935 | Dec. 29, 1935-Jan. 25, 1936 | Jan. 26-Feb. 29, 1936 | Mar. 1-28, 1936 | Week ended— April 1936 4 | 11 | 18 | 25 | May 1936 2 | 9 | 16 | 23 | 30 | June 1936 6 | 13 | 20 | 27 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chosen. (See table below.) | | | | | | | | | | | | | | | | | | |
| Colombia (see also table below) | C | 32 | 68 | 13 | 88 | ------- | ------- | [2] 30 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- |
| Bogota | C | 3 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- |
| Dahomey. (See table below.) | | | | | | | | | | | | | | | | | | |
| Dutch East Indies: Palembang | C | ------- | ------- | ------- | 1 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- |
| Ecuador. (See table below.) | | | | | | | | | | | | | | | | | | |
| Egypt: Provinces | C | ------- | ------- | 2 | 5 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 1 | 1 | ------- |
| Eritrea | C | ------- | ------- | 1 | 5 | ------- | ------- | 2 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- |
| Asmara | C | ------- | ------- | ------- | ------- | ------- | ------- | 1 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- |
| France. (See table below.) | | | | | | | | | | | | | | | | | | |
| Great Britain: England and Wales—London and Great Towns | C | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 3 | ------- | 1 | ------- | ------- | ------- | ------- | ------- | ------- |
| Greece: Salonika | C | ------- | 6 | 14 | 20 | 5 | 5 | 5 | 5 | 5 | 8 | 8 | 8 | 8 | 8 | ------- | ------- | ------- |
| Guatemala. (See table below.) | | | | | | | | | | | | | | | | | | |
| India | C | 9,617 | 19,883 | 34,355 | 31,312 | 8,327 | 9,390 | 8,385 | 8,646 | 8,667 | 7,400 | 7,401 | 7,458 | ------- | ------- | ------- | ------- | ------- |
| | D | 2,106 | 4,220 | 8,417 | 7,679 | 2,215 | 2,548 | 2,244 | 2,084 | 2,121 | 1,913 | 2,190 | 1,936 | ------- | ------- | ------- | ------- | ------- |
| Assam | C | 168 | 116 | 798 | 321 | 57 | 60 | 32 | 70 | 36 | 112 | 35 | 34 | 53 | 33 | 13 | 32 | 17 |
| Bassein | C | ------- | [1] 1 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- |
| Bombay Presidency | C | 741 | 1 703 | 3,444 | 2,820 | 741 | 826 | 570 | 722 | 773 | 592 | 565 | 374 | 443 | 215 | 294 | ------- | ------- |
| | D | 103 | 282 | 650 | 556 | 104 | 167 | 137 | 152 | 124 | 111 | 99 | 88 | 79 | 41 | 51 | ------- | ------- |
| Bombay | C | 30 | 86 | 266 | 277 | 87 | 104 | 74 | 57 | 63 | 45 | 43 | 47 | 39 | 22 | 22 | 35 | 20 |
| | D | 21 | 49 | 149 | 157 | 46 | 65 | 45 | 39 | 40 | 31 | 24 | 38 | 22 | 14 | 12 | 29 | 13 |
| Calcutta | C | 88 | 270 | 1,606 | 1,305 | 563 | 383 | 288 | 318 | 200 | 126 | 100 | 77 | 64 | 70 | 133 | 40 | 32 |
| | D | 56 | 133 | 893 | 945 | 425 | 310 | 217 | 214 | 158 | 103 | 86 | 67 | 52 | 49 | 64 | 27 | 28 |
| Central Provinces and Berar | C | 808 | 1,266 | 2,652 | 2,109 | 461 | 913 | 561 | 891 | 661 | 563 | 665 | 585 | 569 | 403 | 389 | 308 | ------- |
| Chittagong | D | ------- | 1 | 1 | ------- | ------- | ------- | ------- | 1 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 3 |
| Cochin | C | ------- | ------- | 21 | 7 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- |
| Karachi | C | 11 | 17 | 77 | 28 | 13 | 7 | 11 | 5 | 6 | 5 | 3 | 1 | 4 | 2 | 1 | 1 | ------- |
| Madras Presidency | C | 1,366 | 1,312 | 1,214 | 1,980 | 316 | 296 | 322 | 302 | 271 | 252 | 222 | 272 | ------- | ------- | ------- | ------- | ------- |
| | D | 269 | 176 | 191 | 294 | 56 | 49 | 68 | 41 | 58 | 38 | 28 | 53 | ------- | ------- | ------- | ------- | ------- |
| Madras | C | 5 | 3 | 3 | 12 | ------- | ------- | 1 | ------- | 1 | ------- | ------- | 3 | 1 | ------- | ------- | ------- | ------- |
| Moulmein | C | 6 | 27 | 61 | 83 | 12 | 9 | 7 | 7 | 2 | 9 | 7 | 11 | 6 | 6 | 8 | 7 | ------- |
| Negapatam | C | ------- | 3 | 2 | ------- | 1 | 2 | ------- | ------- | ------- | 1 | ------- | ------- | ------- | ------- | ------- | ------- | ------- |
| Northwest Frontier Province | C | 7 | 26 | 50 | 1 | 3 | ------- | 16 | 2 | ------- | 5 | ------- | ------- | 6 | ------- | 5 | ------- | 11 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Punjab | C | 313 | 498 | 641 | 437 | 53 | 83 | 135 | 101 | 97 | 47 | 70 | 60 | 103 | 77 | 73 | 92 | 78 |
| Rangoon | C | 4 | 9 | 10 | 16 | 8 | 5 | 3 | 4 | | | | 3 | 1 | 5 | | [3] 1 | 2 |
| Sind State | C | | | | | | 21 | 43 | 26 | 71 | 54 | 45 | 26 | 53 | 72 | 17 | 63 | 41 |
| Tuticorin | C | 5 | | | | | | | | | | | | | | | | |
| Vizagapatam | C | 9 | 36 | 39 | 19 | | 1 | 1 | | | 3 | | 1 | 1 | | 1 | | 1 |
| India (French): | | | | | | | | | | | | | | | | | | |
| Chandernagor Territory | C | | 165 | 239 | | | 12 | 10 | 7 | 6 | 4 | | | | | | | |
| Karikal Province | C | | 5 | | | | | 1 | 1 | | | | | | | | | |
| Pondichery Province | C | | 13 | 4 | | | 1 | | 1 | 1 | 1 | | | | | | | |
| | D | | 7 | | | | 1 | | 1 | 1 | | | | | | | | |
| India (Portuguese) | C | | 1 | | 9 | | | | | | | | | | | | | |
| Indochina (see also table below): | | | | | | | | | | | | | | | | | | |
| Haiphong | C | | | 1 | | | | | | | | | | | | | | |
| Pnom-Penh | C | | | | | | | | | | | | | | | | 1 | |
| Saigon | C | | | | | | 1 | | | | | | | | | | | |
| Tourane | C | | | | 1 | | | | 1 | 1 | | | | | | | | |
| Iran | C | 12 | 9 | 12 | 1 | | | | | | | | | | | | | |
| Iraq | C | 36 | 58 | 40 | 9 | 2 | 4 | 2 | 2 | 1 | 4 | | 1 | 5 | | 1 | | |
| Baghdad | C | | 1 | | | 1 | | | 1 | 1 | | | | | | | | |
| Basra | C | | | | | | | 2 | 1 | | | | | | | | | |
| Japan: | | | | | | | | | | | | | | | | | | |
| Kobe | C | | | | | 1 | | | | | | | | | | | | |
| Moji | C | | | 1 | 1 | | | | | | | | | | | | | |
| Nagasaki | C | | | | | | | 1 | | | | | | | | | | |
| Osaka | C | | | | 5 | | | | | | | | | 1 | | | | 1 |
| Yamaguchi Prefecture | C | | 1 | | | | | | | | | | | | | | | |
| Yokohama | C | | | | | | | | | | | | | 1 | | | | |
| Libya: Tripolitania | C | | 2 | | | | | | | | | | | | | | | |
| Mexico (see also table below): | | | | | | | | | | | | | | | | | | |
| Chihuahua | C | | 1 | 1 | | 2 | | | | 2 | | | | | | | 2 | |
| Guadalajara | D | 16 | 13 | 46 | 30 | 9 | 13 | 8 | 3 | | 4 | 5 | 8 | 4 | 1 | | 3 | 2 |
| Mazatlan | C | | | 1 | 2 | | | | | | | | | | | | | |
| Mexico, D. F | C | 5 | 4 | 11 | 12 | 10 | 4 | 3 | 3 | | | | | | | | | |
| Monterrey | C | | | 2 | 2 | | | | 1 | | | | | | | | | |
| San Luis Potosi | D | | | | 1 | | | | | | | | | | | | | |
| Torreon | C | 1 | 1 | | 2 | | | | | | | | | | | | | |
| Morocco. (See table below.) | | | | | | | | | | | | | | | | | | |
| Mozambique. (See table below.) | | | | | | | | | | | | | | | | | | |
| Nigeria | C | 427 | 84 | 549 | 1,637 | | [1] 162 | | [1] 347 | 343 | | 84 | | | | | | |
| Lagos | C | | | 2 | | | | | | | | | | | | | | |
| Niger Territory. (See table below.) | | | | | | | | | | | | | | | | | | |
| Nyasaland. (See table below.) | | | | | | | | | | | | | | | | | | |
| Oman: Sharjah and Pirate Coast | C | | 875 | 70 | 46 | | | | | | | | | | | | | |
| Peru. (See table below.) | | | | | | | | | | | | | | | | | | |
| Poland | C | | | 1 | | | | | | | | | | | | | | |
| Portugal (see also table below): | | | | | | | | | | | | | | | | | | |
| Lisbon | C | 8 | 3 | 5 | 5 | | 1 | 1 | 1 | | | 1 | | | | | | |
| Oporto | C | | | | | | | | | | | | | | | 1 | | |

[1] For 2 weeks.
[2] For 3 weeks.
[3] Imported.

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

### SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

| Place | | Dec. 1–28, 1935 | Dec. 29, 1935–Jan. 25, 1936 | Jan. 26–Feb. 29, 1936 | Mar. 1–28, 1936 | Week ended— April 1936 4 | 11 | 18 | 25 | May 1936 2 | 9 | 16 | 23 | 30 | June 1936 6 | 13 | 20 | 27 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Portuguese East Africa. (See table below.) | | | | | | | | | | | | | | | | | | |
| Salvador. (See table below.) | | | | | | | | | | | | | | | | | | |
| Saudi Arabia | C | | | 8 | | | | 10 | 2 | 1 | 4 | 1 | | | | | | |
| Sierra Leone | C | 116 | 37 | 135 | 215 | | [1] 3 | | [1] 6 | | [1] 9 | | | | | | | |
| Freetown | C | 2 | | 1 | | | [1] 1 | | | | [1] 2 | | | | | | | |
| Spain | C | 1 | 20 | 12 | 15 | 20 | | 2 | 2 | 3 | 3 | | 2 | 4 | | 21 | | |
| Straits Settlements: Singapore | C | | | | | | | | | | | | | | | | [2] 1 | |
| Sudan (Anglo-Egyptian) | C | | 3 | 5 | 12 | 2 | | 1 | 3 | 13 | 2 | 2 | | | | | 4 | 1 |
| Turkey. (See table below.) | | | | | | | | | | | | | | | | | | |
| Uruguay. (See table below.) | | | | | | | | | | | | | | | | | | |

[1] For 2 weeks.

[2] Imported.

On vessels:

| | | | |
|---|---|---|---|
| S. S. *Ekma* at Rangoon from Calcutta | 1 case | Dec. | 10, 1935 |
| S. S. *Cape St. Francis* at Rangoon from Calcutta | 1 case | Dec. | 17, 1935 |
| S. S. *Bankura* at Karachi | 1 case | Jan. | 4, 1936 |
| S. S. *Jalgopal* at Rangoon from Aracan | 1 case | Jan. | 5, 1936 |
| S. S. *Matua* at Suez from Calcutta | 1 case | Jan. | 21, 1936 |
| S. S. *Khosrou* at Kamaran quarantine station | 1 case | Feb. | 15, 1936 |
| S. S. *Karapara* at Rangoon from Calcutta | 1 case | Mar. | 9, 1936 |
| S. S. *Egra* at Calcutta | 1 case | Mar. | 10, 1936 |
| S. S. *City of Aukland* at Rangoon from Calcutta | 2 cases | Mar. | 15, 1936 |
| S. S. *Khandalla* at Rangoon from Calcutta | 1 case | Mar. | 16, 1936 |
| S. S. *Haishang* at Rangoon | 1 case | Mar. | 18, 1936 |

On vessels—Continued.

| | | | |
|---|---|---|---|
| S. S. *Cranfield* at Madras from Calcutta | 1 case | Mar. | 27, 1936 |
| S. S. *Hokuryo Maru* at Moji from Tientsin | 1 case | Apr. | 2, 1936 |
| S. S. *City of Adelaide* at Colachel from Rangoon | 1 case | Apr. | 13, 1936 |
| S. S. *Egra* at Rangoon from Calcutta | 1 case | Apr. | 13, 1936 |
| S. S. *City of London* at Suez from Calcutta | 1 case | Apr. | 20, 1936 |
| S. S. *Manipura* at Port Sudan from Calcutta | 1 case | Apr. | 23, 1936 |
| S. S. *Kasagi Maru* at Moji from Shanghai | 1 case | May | 4, 1936 |
| S. S. *Awaji Maru* at Nagasaki from Dairen | 1 case | May | 8, 1936 |
| S. S. *Bhutan* at Kobe from Shanghai | 8 cases | May | 13, 1936 |
| S. S. *Jinkai Maru* at Moji from Hongay | 1 case | June | 1, 1936 |
| S. S. *Rohna* at Penang from Madras | 1 case | June | 11, 1936 |

| Place | | December 1935 | January 1936 | February 1936 | March 1936 | April 1936 | May 1936 |
|---|---|---|---|---|---|---|---|
| Angola | C | | 5 | 12 | | | |
| Argentina (see also table above): | | | | | | | |
| Buenos Aires Province | C | | | 4 | | 7 | 12 |
| Entre Rios Province | C | | | 5 | 1 | | |
| Jujuy Province | C | | | | 7 | 3 | 3 |
| Belgian Congo | C | 54 | 456 | 227 | 198 | | |
| Bolivia | C | 43 | 48 | 18 | 62 | 18 | 31 |
| China: Manchuria—Harbin | C | 1 | 1 | 3 | | | 7 |
| Chosen | C | 53 | 86 | 248 | 345 | 313 | |
| Colombia (see also table above): | | | | | | | |
| Barranquilla | D | | | 1 | 1 | | |
| Santa Marta | D | | | 1 | | | |
| Dahomey | C | 11 | | 18 | 11 | | |
| Ecuador: Guayaquil | C | | | 1 | | | |
| France | C | 18 | 76 | 24 | 30 | | |
| Guatemala | C | | 2 | 14 | 2 | 5 | 1 |
| Indochina (see also table above) | C | 44 | 57 | 229 | 196 | 221 | 142 |
| | D | 3 | 3 | 31 | 15 | 30 | 19 |
| Mexico (see also table above): | | | | | | | |
| Aguascalientes State—Aguascalientes | C | | | 5 | 4 | 4 | |
| Chiapas State | C | | 1 | | | | |
| Chihuahua State—Chihuahua | C | | | | 1 | | |
| Coahuila State—Torreon | C | | | 1 | | | |
| Colima State | C | | | 1 | 1 | | |
| Guanajuato State | C | | 5 | | 5 | | |
| Leon | C | | 1 | | | | |
| Jalisco State | C | | 109 | | | | |
| | D | | 28 | | | | |
| Mexico (see also table above)—Con. | | | | | | | |
| Jalisco State—Con. | | | | | | | |
| Guadalajara | C | | 85 | 115 | 70 | 39 | |
| | D | | 24 | 50 | 43 | 34 | |
| Lower California | C | | | 7 | | | |
| Mexico State | C | | | 2 | 4 | 6 | |
| Mexico, D. F | C | | 10 | 22 | 18 | 13 | |
| Mexico City | C | | 9 | | | | |
| Morelos State | C | | | | 1 | | |
| Puebla State | C | | 2 | 9 | 2 | | |
| Puebla | C | | | 8 | 2 | 1 | |
| Quintana Roo | C | | | | 1 | | |
| San Luis Potosi State—San Luis Potosi | C | | | | 8 | | |
| Sonora State | C | | | 1 | 1 | 1 | |
| Tamaulipas State | C | | 8 | | | | |
| Tlaxcala State | D | | | | 1 | | |
| Morocco | C | | 9 | 1 | 2 | 15 | 6 |
| Mozambique | C | | 3 | 1 | 2 | 5 | |
| Niger Territory | C | 43 | | | | | |
| Nyasaland | C | | 3 | 50 | 1 | 3 | |
| Peru | C | | 31 | 7 | 21 | 7 | 21 |
| Portugal (see also table above) | C | 74 | 103 | | 49 | 16 | |
| | D | 11 | 6 | | 8 | | |
| Portuguese East Africa | C | | 3 | | | | |
| Salvador | C | 12 | 32 | 46 | 13 | 39 | 48 |
| Turkey | C | | 5 | 6 | 1 | 1 | 16 |
| Uruguay | C | | 3 | | | | |

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

### TYPHUS FEVER

[C indicates cases; D, deaths; P, present]

| Place | | Dec. 1–28, 1935 | Dec. 29, 1935–Jan. 25, 1936 | Jan. 26–Feb. 29, 1936 | Week ended— March 1936 7 | 14 | 21 | 28 | April 1936 4 | 11 | 18 | 25 | May 1936 2 | 9 | 16 | 23 | 30 | June 1936 6 | 13 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Algeria: | | | | | | | | | | | | | | | | | | | | |
| Algiers Department | C | | 4 | 31 | 7 | | 53 | 4 | 31 | 26 | 15 | 5 | 21 | 11 | 38 | 2 | 8 | 3 | | 74 |
| Algiers | C | | 1 | | | | | | | | | | | | 2 | 1 | 1 | 1 | | 2 |
| Constantine Department | C | | 25 | 60 | | 10 | 24 | 15 | 22 | 16 | 6 | 18 | 5 | 34 | 8 | 9 | 5 | 5 | | 14 |
| Bone | C | | 1 | | | | | | | | | | | 1 | | | | | | |
| Constantine | C | | 3 | | | 1 | | | | | | | | 2 | | | | 1 | | |
| Philippeville | C | | | | | | | | | | | | | | | | | 1 | | |
| Oran Department | C | | 7 | 53 | | 12 | | | 4 | 12 | 1 | 15 | | 5 | 7 | | | 6 | | |
| Australia: Sydney | C | | 1 | | | | | | | | | | | 1 | | | | | | |
| Basutoland | C | | | | | | [1] 3 | | | | | | | | | | | | | |
| Bolivia. (See table below.) | | | | | | | | | | | | | | | | | | | | |
| Bulgaria | C | | 14 | 11 | | | | | 16 | 14 | | 17 | | | | | | | | |
| Chile | C | | | 430 | | | | [2] 235 | | | | | | | | | | | | |
| Santiago Province [3] | | | | | | | | | | | | | | | | | | | | |
| Valparaiso | C | 37 | 12 | 29 | 2 | 1 | 2 | 3 | 1 | 4 | 6 | 1 | | | | 1 | 1 | 3 | 1 | |
| China: | | | | | | | | | | | | | | | | | | | | |
| Hankow | C | | | | | | | 1 | | 1 | | 2 | | | | 2 | | 1 | | |
| Nanking | C | | | | | | | | | 1 | | | | | | | | | | |
| Shanghai | C | 3 | | | | | | | | | | | 1 | | 1 | 1 | | 3 | | |
| Tientsin | C | | | 1 | 1 | | | | | | 1 | | | 1 | | 3 | | 2 | | |
| Tsingtao | C | 3 | | 1 | | | | 1 | | | | | | | | | 1 | | | |
| Chosen. (See table below.) | | | | | | | | | | | | | | | | | | | | |
| Czechoslovakia. (See table below.) | | | | | | | | | | | | | | | | | | | | |
| Egypt: | | | | | | | | | | | | | | | | | | | | |
| Alexandria | C | 1 | 1 | | 2 | 3 | 1 | 2 | | | 1 | | | | 1 | | | | | |
| Asyut Province | C | | | 7 | | 1 | | 1 | 1 | | | | | | 2 | | | | | |
| Beheira Province | C | 12 | 28 | 82 | 33 | 31 | | 39 | 49 | | | | | | 28 | | | 35 | | |
| Cairo | C | | 1 | 11 | | | 1 | | 3 | | 2 | 1 | 5 | 1 | | 2 | | | 1 | |
| Dakahliya Province | C | | 1 | 35 | 4 | 3 | | 7 | 6 | | | | | | 15 | | | 9 | | |
| Gharbiya Province | C | | 46 | 78 | 49 | 37 | | 45 | 33 | | | | | | 32 | | | 27 | | |
| Girga Province | C | | 1 | | | | | | 1 | | | | | | | | | | | |
| Minufiya Province | C | | | 30 | 9 | 2 | | 7 | | | | | | | 2 | | | 2 | | |
| Port Said | C | | | | | | | | | | | | | | 1 | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Qena Province | C | | | 3 | 1 | | | 24 | 20 | | | | | | 1 | | | 1 | | |
| Sharkiya Province | C | | 1 | 1 | 1 | 11 | | 1 | | | | | | | 2 | | | | | |
| Provinces | C | 41 | 138 | 371 | 86 | 153 | 133 | | 119 | 159 | 153 | 132 | 109 | 107 | 106 | 98 | 93 | 72 | 76 | 95 |
| Finland. (See table below.) | | | | | | | | | | | | | | | | | | | | |
| Greece (see also table below): Salonika | C | 4 | 3 | 9 | 6 | 6 | 6 | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Guatemala. (See table below.) | | | | | | | | | | | | | | | | | | | | |
| Hawaii Territory: Honolulu | C | 1 | | | | 1 | 4 | 2 | | | | | | 1 | | | | | | |
| Hungary | C | | 3 | | | | 7 | | 2 | 2 | | | 1 | | | | | | | |
| Iran | C | 2 | 17 | 9 | | 3 | 2 | 4 | 7 | 8 | 7 | 3 | 5 | 6 | 2 | 7 | 1 | 5 | 6 | |
| Teheran | C | | 1 | | 1 | 1 | 1 | 1 | 2 | 2 | 6 | 1 | | | | | | | | |
| Iraq | C | 17 | 19 | | | | | | | | | | | | | | | | | |
| Irish Free State: Mayo County | C | | | | | | | | | 2 | | | 1 | | | | | | | |
| Japan | C | | 1 | | | | | | | | | | | | | | | | | |
| Latvia. (See table below.) | | | | | | | | | | | | | | | | | | | | |
| Lithuania | C | | 69 | 9 | 6 | | | [1]7 | | [1]8 | | [1]2 | | | 4 | | | 2 | 9 | |
| Mexico (see also table below): | | | | | | | | | | | | | | | | | | | | |
| Mexico, D. F | C | 68 | 35 | 71 | 9 | 9 | 9 | 15 | 13 | 14 | 6 | 11 | | | | | | | | |
| San Luis Potosi | D | | | 1 | | | | | | | | | | | | | | | | 1 |
| Morocco (see also table below) | C | 12 | 39 | 37 | | | 3 | 2 | 4 | 1 | 29 | 5 | 5 | 13 | 4 | 1 | 5 | 2 | | 3 |
| Palestine: Haifa | C | | 3 | 2 | | | | | 1 | | | | | | | 7 | 1 | 1 | 1 | [4]9 |
| Panama Canal Zone. (See table below.) | | | | | | | | | | | | | | | | | | | | |
| Peru. (See table below.) | | | | | | | | | | | | | | | | | | | | |
| Poland | C | 230 | 382 | 671 | 126 | 153 | 144 | 196 | 134 | 129 | 113 | 143 | 148 | 139 | 104 | 110 | 86 | | 85 | 45 |
| | D | 22 | 24 | 43 | 6 | 6 | 16 | 11 | 2 | 11 | 9 | 7 | 8 | 11 | 7 | 4 | 5 | | 4 | 3 |
| Portugal (see also table below): Oporto | C | | | | | 1 | | | | | | | | | | | | | | |
| Rumania. (See table below.) | | | | | | | | | | | | | | | | | | | | |
| Straits Settlements: Singapore | C | 2 | 3 | | | 1 | 1 | | | | 1 | | | | | | | | | |
| Syria: Beirut | C | | | [4]2 | | | | | | | | | | | | | | | | |
| Trans-Jordan | C | | 6 | 11 | 2 | | | 4 | 5 | 5 | | | | | | | | | | |
| Tunisia: | | | | | | | | | | | | | | | | | | | | |
| Tunis | C | 1 | 5 | | | 3 | 1 | 5 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | | | 2 | |
| Provinces | C | 31 | 61 | 64 | 14 | 30 | 45 | 49 | 14 | 37 | 26 | 50 | 27 | 18 | 29 | 22 | 18 | 10 | 21 | |
| Turkey. (See table below.) | | | | | | | | | | | | | | | | | | | | |
| Union of South Africa. (See table below.) | | | | | | | | | | | | | | | | | | | | |
| Yugoslavia. (See table below.) | | | | | | | | | | | | | | | | | | | | |

[1] For 2 weeks.
[2] For 4 weeks.
[3] A report dated Jan. 20, 1936, states that there were 305 cases of typhus fever with 58 deaths in Santiago Province, Chile, from Nov. 2–16, 1936.
[4] Imported.

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

### TYPHUS FEVER—Continued

[C indicates cases; D, deaths; P, present]

| Place | | December 1935 | January 1936 | February 1936 | March 1936 | April 1936 | May 1936 |
|---|---|---|---|---|---|---|---|
| Bolivia | C | 168 | 135 | 115 | 110 | 75 | 33 |
| China: Manchuria—Harbin | C | | 1 | 5 | 9 | | 33 |
| Chosen | C | 50 | 51 | | | | |
| Czechoslovakia | C | | 14 | 25 | 219 | 13 | 34 |
| Finland | C | | | | 5 | 112 | 10 |
| Greece (see also table above) | C | 9 | 5 | 7 | 6 | 5 | 3 |
| Guatemala | C | 7 | 9 | 17 | 6 | 114 | 116 |
| Latvia | C | | | | 5 | | |
| Mexico (see also table above): | | | | | | | |
| Aguascalientes State: Aguascalientes | C | | | 5 | 5 | 5 | |
| Durango State | C | | | 1 | 1 | | |
| Guanajuato State | C | | 15 | | 56 | 2 | |
| Leon | C | | 7 | 16 | 20 | | |
| Mexico State | C | | | 2 | 15 | 6 | |
| | D | | | 3 | | | |
| Mexico, D. F | C | | 86 | 73 | 52 | 40 | |
| Mexico City | C | | 75 | | | 20 | |
| | D | | 22 | | | | |
| Oaxaca State | C | | 1 | 2 | | | |
| Mexico—Continued. | | | | | | | |
| Puebla State | C | | 1 | | | | |
| Puebla | C | | | 2 | 3 | 3 | |
| Queretaro State | C | | 3 | | | | |
| San Luis Potosi State: San Luis Potosi | C | | 8 | 6 | 6 | 3 | |
| Tlaxcala State | C | | | | 1 | | |
| Morocco (see also table above) | C | 13 | 45 | 30 | 7 | 45 | 26 |
| Panama Canal Zone | C | 1 | 2 | 1 | 1 | | |
| Peru | C | | 143 | 103 | 118 | 103 | 118 |
| Portugal (see also table above) | C | | 1 | 1 | 1 | 1 | |
| Rumania | C | 210 | 572 | 905 | 1,581 | 1,587 | |
| Turkey | C | 35 | 33 | 51 | 33 | 79 | 39 |
| Istanbul | C | | 5 | 4 | 4 | 1 | 1 |
| Union of South Africa: | | | | | | | |
| Cape Province | C | 76 | 36 | 57 | 39 | 48 | |
| Natal | C | 1 | 7 | 2 | 3 | 1 | |
| Orange Free State | C | 4 | 17 | 21 | 5 | 18 | |
| Travsvaal | C | 12 | 1 | 13 | 3 | 3 | |
| Yugoslavia | C | | 131 | 80 | 113 | 106 | 125 |

## YELLOW FEVER

[C indicates cases; D, deaths; P, present]

| Place | | Dec. 1–28, 1935 | Dec. 29, 1935, Jan. 25, 1936 | Jan. 26–Feb. 29, 1936 | Week ended— March 1936 | | | | April 1936 | | | | May 1936 | | | | | June 1936 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 7 | 14 | 21 | 28 | 4 | 11 | 18 | 25 | 2 | 9 | 16 | 23 | 30 | 6 | 13 | 20 |
| Bolivia: Santa Cruz Department.[1] | | | | | | | | | | | | | | | | | | | | |
| Brazil:[2] | | | | | | | | | | | | | | | | | | | | |
| Amazonas State | C | | | | | | | 1 | | | | | 1 | | 1 | 1 | | | | |
| Bahia State | C | 1 | 2 | | | | | | | | | | | | | | | | | |
| Maranhao State | C | | | | | | | | | | | | | | | | 1 | | | |
| Matto Grosso State | C | 1 | 1 | 2 | 1 | | | | | 1 | | 1 | | | | | | | | |
| Minas Geraes State | C | 10 | 8 | 11 | 1 | | 4 | 2 | | 1 | 1 | | 1 | | | 3 | 1 | 1 | | |
| | D | 5 | 8 | 11 | 1 | | 4 | 2 | | 1 | 1 | | 1 | | | 3 | 1 | 1 | | |
| Parana State [3] | C | | | 9 | 1 | 7 | 5 | 6 | 1 | 2 | | | | | | | | | | |
| Sao Paulo State [3] | C | 11 | 4 | 23 | 17 | 5 | 7 | 6 | [5] 3 | | | | 1 | 1 | 6 | 6 | 2 | 2 | 3 | 1 |
| Colombia: | | | | | | | | | | | | | | | | | | | | |
| Boyaca Department | C | | | 3 | | | | | | | | | | | | | | | | |
| Intendencia of Meta | C | | | 3 | | | | | | | | | | | | | | | | |
| Dahomey:[4] | | | | | | | | | | | | | | | | | | | | |
| Gold Coast: | | | | | | | | | | | | | | | | | | | | |
| Koforidua | C | | | | | | | | | | 1 | | | | | | | | | |
| Kumasi | C | | | 1 | | | | 1 | | | | | | | | | | | | |
| Preprawaso | C | | | | | | | | | 1 | | | | | | | | | | |
| Ivory Coast: Vavua | C | | | | | | | | 1 | | | | | | | | | | | |
| Niger Territory: Fada N'Gourma | C | | | | | | | | | | 1 | | | | | | | | | |
| Senegal: | | | | | | | | | | | | | | | | | | | | |
| Dakar | C | [5] 1 | | | | | | | | | | | | | | | | | | |
| M'Bake | C | 1 | | | | | | | | | | | | | | | | | | |
| Thies | C | | | | | | | | | | | | | | | | | | | 1 |
| Tivaouane | C | | | | | | | | | | | | | | | | | 1 | 1 | |
| Sudan (French): Kayes.[6] | | | | | | | | | | | | | | | | | | | | |

[1] Yellow fever has been reported in Bolivia as follows: For the month of February, 2 cases; March, 10 cases: April, 1 case, May, 1 case.
[2] Yellow fever has also been reported in Brazil as follows: Parana State, Feb. 16–25, 1936, 5 cases, 5 deaths; Sao Paulo State, no date given, 3 cases and 4 deaths. Mar. 24–31, 1936, 2 cases, 2 deaths.
[3] Includes 1 case of yellow fever reported in the city of Sao Paulo, Brazil.
[4] During the week ended July 11, 1936, 1 suspected case of yellow fever was reported at Dahomey.
[5] Suspected.
[6] During the week ended July 4, 1936, 1 suspected case of yellow fever with 1 death was reported at Kayes, French Sudan.