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COOPERATIVE CAMPAIGN FOR THE ERADICATION OF PLAGUE IN PERU

FINAL REPORT

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Historical.—Bubonic plague made its appearance in Peru in April, 1903. From that date to June 30, 1931, there have occurred in that country 20,269 cases, with an average death rate of 50 per cent. Plague cases have been reported from 197 cities, towns, and villages, and from other places, such as farms and hamlets which have no municipal organization.

The infection has also occurred in about 37 seaports, from which it spread to neighboring places through railways, public roads, and other means of communication.

Pan American Sanitary Code.—On November 14, 1924, the plenipotentiary delegates of 18 countries, represented in the Pan American Union, signed ad referendum, in Habana, a sanitary treaty known as the Pan American Sanitary Code. This treaty has for its purpose, among other things, the prevention of the international spread of infections or diseases likely to be conveyed to human beings, and the standardization of cooperative measures for the prevention of the introduction and spread of disease into and from the territories of the signatory countries. The Government of Peru ratified this treaty in 1925.

Action by the Pan American Sanitary Bureau.—In June, 1929, the directing council of the Pan American Sanitary Bureau, after considering the resolutions adopted by the Eighth Pan American Sanitary Conference, held in Lima, Peru, in October, 1927, authorizing the appointment of traveling representatives of the bureau, and, pursuant to the powers regarding cooperative work in the Pan American Sanitary Code, authorized cooperative epidemiological studies of plague in such South American countries as had plague in their territories and were willing to accept such cooperation. The Government of Peru accepted the proposed cooperation and, by an executive decree of September 5, 1930, authorized a cooperative campaign against bubonic plague. For the part played by Peruvian authorities in this work, see the last paragraph of this report.

Beginning of the campaign.—After finishing the necessary preparations, including purchase of necessary material and the adaptation of a building for laboratory purposes, the antiplague campaign in Peru began October 13, 1930, in Lima, to embrace afterwards, Callao, next the Departments of the North and finally those in the South of the country. All employees were given a month of training at half salary, at Lima, before being sent for work outside the city. Those who failed to show the proper spirit were dismissed, so that only those showing interest, enthusiasm, and faithfulness were kept in the service.

Organization.—The country was divided into sectors which, in general, coincided with the boundaries of the Departments, with the exception of the Department of Lima. To each Department there was sent a sanitary assistant, charged with the duty of spreading poison in all places where cases of plague had developed during the preceding five years. To the chief seaports of the Republic there were sent assistant epidemiologists who were instructed to trap and examine rats and send smears prepared with material from suspected rats or guinea pigs which had died after being inoculated with material obtained from rats.

After having carried out poisoning operations in the Departments of Arequipa and Ica two or three times without finding any case of plague (excepting four doubtful cases at Lomas, in the month of February) or any infected rats, the sanitary assistants and epidemiologists, with the single exception of the epidemiologist at Mollendo, were transferred to the Departments in the north of the country. In the cities of Lima and Callao and the municipalities of Rimac, La Victoria, La Punta, and Bellavista, plague squads, directed by sanitary inspectors, were set to trapping rats and to distributing poison packages in every building.

At the seaports the assistant epidemiologists not only trapped and examined rats, but also sent fleas to the Lima laboratory for identification and computation of prevalence indices. In order to prevent the spread of plague to other seaports and dissemination to foreign countries, rat poisoning was also carried out in the ports themselves and neighboring towns.

Methods used.—As plague is essentially a disease of the rat, transmitted to human beings by rat-infesting fleas, every effort in the campaign was devoted to the destruction of the above-mentioned rodents. For that purpose 70 tons of poison were prepared and distributed throughout all the plague foci in the country. This poison consisted of flour with 18 per cent of arsenic, and, at times, from 5 to 10 per cent of grated cheese, or some ground dried fish or dried seal meat. Once prepared, the poison was wrapped in paper,

forming cone shaped packages, which contained about 1 teaspoonful of poison in each package.

The traps used in Lima, Callao, and the seaports served not only for the destruction of rats but to make epidemiological studies and determine the flea index, as well as the amount of plague infection among rats.

Results obtained.—The following figures show the results obtained:

Total number of cases of plague in the Republic from April 28, 1903, to June 30, 1931	20, 269
Average number of cases per month in the same period	60
Average number of cases per month from 1920 to 1930	51. 6
Average number of cases per month, 1930	31. 5
Average number of cases per month, January 1 to June 30, 1931	16

(NOTE.—In general, the months of November, December, January, February, March and, at times, April, are those showing the largest number of cases.)

Cases in the whole Republic during the year 1930

January, 56; February, 29; March, 16; April, 36; May, 26; June, 26; July 11; August, 22; September, 13; October, 28; November, 37; December, 78.

Cases in the Republic in 1931

January, 33; February, 28; March, 9; April, 16; May, 2; June, 9; July, 1 (up to July 20).

Cases in the Republic since the beginning of the antiplague campaign

October, 1930, 28, in 13 foci; November, 37, in 12 foci; December, 78, in 23 foci; January, 1931, 33, in 14 foci; February, 28, in 12 foci; March, 9, in 5 foci; April, 16, in 7 foci; May, 2, in 2 foci; June, 9, in 4 foci; July, 1 (to July 20), in 1 focus.

Cases in Lima since the beginning of the campaign

October, 1930, 2; November, 4; December, 7; January, 1931, 0; February, 2 [1]; March, 2 [1]; April, 0; May, 0; June, 3 [1].

Epidemiological data.—As Dr. C. R. Eskey, consulting epidemiologist of the campaign, will submit a detailed epidemiological report, it will not be necessary to treat extensively that phase of the subject in this report.

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[1] The cases reported in February, March, and June were, in all probability, not contracted in Lima by autochthonous infection. One of the February patients was a tramp without a permanent home who had been looking for work not only in the city of Lima, but on the neighboring plantations; the other, a Chinaman, lived practically under the same conditions. Of the March cases, I was able to verify that one had become ill through infection brought in, probably, from Huacho. The other had also been infected, in all probability, outside the city.

The three cases reported in June occurred in the vicinity of the Central Market. The first became ill five days after having removed a rat from a trap, and the other two had lived together in the same room of a boarding house near the Central Market. Two infected rats were caught in the same neighborhood, and there are good reasons for believing that the infection was introduced from the outside, through merchandise brought for sale to the market, as happened with the case in March. After an intensive poisoning drive in the market and all the nearby houses, no more cases of plague occurred, nor has even one infected rat been found there.

Other than the rat, there has not been found in any part of the country any rodent or other animal acting as a reservoir for plague, with the single exception of an infected mouse, which was found dead in the same room in Lima where the two cases of plague were discovered. Many animals, such as wild rats, buzzards, and others, were examined, but none of them was found infected.

There are three species of rats in Peru. The most common is the *Rattus norvegicus*. There also exist large numbers of *Rattus rattus* and *Rattus alexandrinus*. All of these are, or may be, plague vectors. They also act as hosts for *X. cheopis*, the flea generally responsible for the dissemination of plague.

Eight varieties of fleas have been found. Among them one new variety has not been identified as yet—possibly two new varieties.

The flea index which, at the beginning, was 8 per rat, in Lima, has decreased to less than 1 per rat. The highest index found in the country was in Pacasmayo, and was 34 per rat. The index has decreased there to less than 4 per rat. In general, the flea index in the entire country has been reduced between 80 and 90 per cent. After taking into account such factors as climate, humidity, varieties of rats, flea indices, types of construction of dwellings, and customs of the people, the epidemiological studies indicate that the following-named places are most favorable for harboring plague:

Department of Piura, especially in the villages of Ayavaca and Huancabamba. However, since the marked diminution of cases of plague in the Province of Loja, Ecuador, the number of cases in the Department of Piura has decreased considerably. The cooperative work by Peru and Ecuador, in accordance with an agreement signed in Piura, July, 1930, by representatives of both countries, should continue.

Department of Lambayeque, especially on certain plantations in the vicinity of Chiclayo and in Villa Eten.

Department of La Libertad, especially in Pacasmayo, San Pedro, certain plantations in the valleys of Chicama and of Santa Catalina and in the city of Trujillo.

Department of Lima, more especially in the Huacho and Huaral country region, and also in the plantations along the Rimac and Carabaillo Rivers. Without a doubt, the latest infections in Lima were introduced from Huacho, Huaral, and neighboring plantations. This was clearly brought out in one of the cases of plague which occurred in the month of March, and there are valid reasons for believing that the cases in February, March, and June may be traced to the same source.

Another phenomenon attracting considerable public attention and which has been observed personally by the writer in Lima, Callao, and Miraflores, and in Monsefu, Villa Eten, Chiclayo, and other towns, is

the marked decrease in the number of fleas in comparison with the usual number of fleas found previously in these places.

This same fact has been noted in antiplague campaigns in other countries and generally coincides with a decrease of from 50 to 60 per cent in the number of rats, and serves, to a certain extent, as evidence of the success attained by the use of poison.

Epidemiological data for the seaports

Ports	Number of rats trapped	Infected rats	Human cases in the year 1931	Date of last case
Mollendo	1,823	None.	None.	
Cerro Azul	312	None.	None.	
Pisco	763	None.	None.	
Chimbote	58	None.	None.	
Salaverry	1,349	3	1	January.
Pacasmayo	849	6	4	February.
Eten	567	None.	None.	
Pimentel	267	None.	None.	
Paita	1,469	1	None.	
Callao	4,931	None.	None.	

Number of poisonings

Mollendo, 5; Cerro Azul, 2; Pisco, 3; Chimbote, 3; Salaverry, 5; Pacasmayo, 5; Eten, 6; Pimentel, 6; Paita, 4; Callao, 4.

Epidemiological data for Lima since January 1, 1931

Human cases of plague, 7; last case in June.

Rats trapped, 26,336; rats examined, 22,448; infected rats, 6; infected mice, 1; last infected rat found in June.

Statistical data of plague for Peru

Cases reported since April 28, 1903	20,269
Annual average	720
Annual average from 1920–1930	619
Number of cases in 1930	378
Number of cases from January 1 to June 30, 1930	189
Number of cases from January 1 to June 30, 1931	97

Number of monthly cases in 1930 and 1931

1930:

January, 56; February, 29; March, 16; April, 36; May, 26; June, 26; July, 11; August, 22; September, 13; October, 28; November, 37; December, 78.

1931:

January, 33; February, 28; March, 9; April, 16; May, 2; June, 9; July, 1 (up to July 20).

NOTE.—The antiplague campaign began October 13, 1930.

Number of plague foci in the country since 1903	197
Number of foci in the last five years	108
Number of foci and adjacent places poisoned	125

NOTE.—In reporting plague foci, no account is taken of many plantations and other places lacking a municipal organization.

Number of poisonings	297
Tons of poison distributed	70
Packages of poison in 70 tons	21, 000, 000
Estimated number of rats destroyed	4, 000, 000

NOTE.—The number of rats destroyed is estimated by observations made in different towns to the effect that rats usually eat from one-fifth to one-sixth of the packages distributed in the houses.

Cost of the antiplague campaign

Total monthly expenses approved by the Government from September, 1930, to June 30, 1931, 10 months, Peruvian soles	[2] 155, 574
Cost per rat destroyed (as calculated above), Peruvian sol	[3] 0. 038
Tons of commercial arsenic used	12. 6
Tons of other material used, flour, etc	57. 4
Traps in use, including cages and snap or deadfall traps	12, 000

From the beginning the campaign was conducted in the most economical manner possible, and, as a result, there is a small balance left in the treasury of the Department of Public Works. This surplus will be used to purchase arsenic and new traps to replace those which have become useless during the campaign. The necessary orders have already been sent out and the articles should arrive sometime during the month of August.

All the salaries, wages, accounts, and invoices up to June 30, 1931, have been paid.

Accounting.—The monthly expenses of the campaign were budgeted in the month preceding that in which the money was to be spent.

As soon as the budget was approved and the order for payments signed, the money was deposited, in cash, by the Director of the Treasury with the cashier of the Department of Public Works. As needed, funds were withdrawn by means of invoices previously approved by the National Chief of the Antiplague Campaign and one of the representatives of the Pan American Sanitary Bureau, as well as the National Director of Health. As a result of this simple, rapid, and efficient method of procedure, it was possible to have constantly on hand an up-to-date financial statement of the campaign; and, as all purchases were on a cash basis, or cash on presentation of bills, the articles were obtained at much lower prices than would otherwise have been the case, resulting in great economy.

This method was authorized by executive decree of September 5, 1930, and should continue when the permanent antiplague service becomes operative.

Remarks.—The number of plague cases (97) occuring in the first six months of 1931 is only 51.3 per cent of the number (189) occurring in the first six months of 1930 and 25 per cent of the average (386) for the first six months of the years 1920–1930. However, there is a remarkable difference in the statistics of the years referred to, because

[2] About $43,747. [3] About $0.01.

in previous years the monthly average varied but slightly, while during the year 1931 there has been an almost constant decrease, beginning with the month of December, 1930, due to the antiplague campaign.

All the seaports of the country are free from bubonic plague. There has not been a case of plague in any seaport, according to the records of the Department of Public Health, since April, 1931. This last case was reported from Puerto Chicama, and there are grounds for assuming that it was either imported or infected in some other locality and was not autochthonous to the seaport. The last plague-infected rat found in a seaport was in Pacasmayo, March 3, 1931. Among the sixty-odd seaports in the country, 37 have had plague since 1903. Unfortunately, it is not possible to declare as yet any port clean, due to the presence of cases of smallpox in various parts of the country and the lack, in some of the ports, of certain requirements contemplated by the Pan American Sanitary Code.

As explained above, there have been 197 urban foci of plague in the country since 1903. This figure was reduced to 108 during the years from 1925 to 1930. In the first six months of 1931, there were only 34 urban foci and, during the last three months, when the results of the antiplague campaign were most evident, only 13 active foci. In a sense, therefore, it may be considered that bubonic plague is under control in Peru, but it can not be said to be definitely eradicated as yet, for there may still be sporadic cases from time to time.

Recommendations.—The National Antiplague Service should continue its activities with determination and energy, at least for a year, and, preferably, two years, from the date on which the last case was reported.

An advisory commission should be appointed, composed of the following members of the consulting board of the Department of Health: Drs. Abel Olaechea and Ramón E. Ribeyro, and the Assistant Director of Health.

The advisory commission should make frequent inspections of the activities of the National Plague Service, interviewing the chief of the service, auditing the accounts of the campaign, and one of its members should place his approval, together with that of the chief of the service, on all accounts, pay rolls, and invoices, before sending them to the Director of Health for approval.

The employees of the National Antiplague Service, appointed by executive decree of July 15, 1931, must be regarded as holding permanent positions while performing their duties satisfactorily, and no employee should be removed without the knowledge and approval of the advisory commission. This recommendation is made because of the fact that those employees who have been retained as permanent employees in the service are those showing most interest and ability

and faithfulness, and, having more experience, a better knowledge of the work.

Epidemiological studies and experience with the cases of plague which occurred in the months of March and June demonstrate clearly that the Central Market of Lima is a constant menace to public health from the standpoint of bubonic plague. An infection may occur at any time, brought in in loads of vegetables, merchandise, or other products coming from infected places. Consequently, it is absolutely necessary to reconstruct the market and make it rat proof. Also, all the houses, the warehouses, grocery stores, and places where provisions and merchandise are stored should be made rat proof. The storage of such products in private houses or dwellings must be definitely prohibited and there must be in operation a service of inspection, charged with the duty of enforcing these provisions.

The National Antiplague Service, in the form in which it is organized, can poison all the plague foci of the country every three months, and, at the same time, apply preventive measures should any case of plague develop. The methods which have proved successful up to the present time must continue without modification.

Acknowledgment.—The Government of Peru, since the beginning of the campaign, has demonstrated much interest and rendered all assistance possible. The same may be said of the Ministry of Public Works and the Department of Health. Those especially entitled to mention are the Minister of the Treasury, Don Rafael Larco Herrera, the present Director of the Treasury, Mr. Campodónico, the accountant of the Ministry of Public Works, Mr. J. F. Cortez, Dr. Nicolás Cavassa, chief of the National Antiplague Service up to January, 1931, and Dr. Benjamin Mostajo, epidemiologist and chief of the National Antiplague Service. Credit must be given for the greater part of the success attained to the interest, enthusiasm, and application of Doctor Mostajo.

OCCURRENCE OF A COLONY OF THE TICK PARASITE HUNTERELLUS HOOKERI HOWARD IN WEST AFRICA

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Interest in hymenopterous parasites of ticks has been increasing of late, particularly in relation to their possible value as a means of combating disease-carrying ticks in the United States. Studies relating to this subject are being conducted in Montana by Prof. R. A. Cooley and his associates of the State Board of Entomology with a parasite, *Ixodiphagus caucurtei* du Buysson, introduced from France in 1926.

Opportunity to make limited observations of tick-parasite activities was presented incidental to the investigations of the writer while in Nigeria as a member of the West African Yellow Fever Commis-

sion of the International Health Division of the Rockefeller Foundation. These observations are recorded because they indicated the existence of a well-established colony of tick parasites which apparently offers an exceptional opportunity for intensive bionomical studies under natural conditions. The discovery of this colony has already been noted. (Philip, 1931.)

The first clue to the occurrence of such parasites near Lagos was the observation in February, 1929, of a minute hymenopteron on a dog which had been allowed to wander about the vicinity of the Commission compound at Yaba. The insect retreated into the hair of the animal too quickly to be captured.

Rhipicephalus sanguineus Latr. was the tick which was most in evidence in southern Nigeria. It was most commonly found on dogs and was practically never observed on human beings, despite frequent contacts with infested areas. The European residents of the region make a practice of "ticking" their pets every 2 or 3 days, so abundant are these pests in several residential sections at certain seasons of the year. Examination of dogs in the vicinity of Apapa, a European settlement on the mainland near Lagos Harbor, revealed large numbers of adult parasites on dogs from late March to June, 1929. They were found on both long-haired and short-haired animals, particularly those belonging to residents living on the edge of the settlement where the dogs had access to grassy areas bordering "the bush."

Engorged nymphs of *Rhipicephalus* which were picked from two European owned dogs at Apapa during the 3 weeks prior to April 12, 1929, were separated in a number of vials and stored at laboratory temperature. Flat and partially engorged ticks were discarded. Subsequently, parasites emerged in considerable numbers. Emergence counts, however, were delayed until September 30, with the results presented in the accompanying table. Isolations to determine the number of parasites emerging from individual nymphs were not attempted.

Percentage of parasitism among engorged nymphs of R. sanguineus

Nymph lots separated April 12		Parasitized nymph count September 30			
		Parasites recovered		No parasitism evident	
Vial No	Total number of nymphs	Nymphs with emergence holes	Nymphs with parasites unescaped	Shrunken nymphs	Adult ticks molted out
1	36	26	5	4	1
2	73	49	16	8	0
3	5	3	0	2	0
4	36	25	9	2	0
5	58	48	8	1	1
6	65	48	10	7	0
7	50	32	12	6	0
Total	323	231	60	30	2

Parasitism of nymphs without emergence holes, as listed in the fourth column, was confirmed by dissection. Twenty contained parasite pupæ and 11 others contained larvæ which had failed to complete development. The remaining 29 contained adult parasites which had been unable to effect an emergence hole through the "shell" of the nymph.

Dissection of the "shrunken nymphs" failed to reveal evidence of parasitism. Whether these nymphs died of mechanical injury after removal from the dogs or as a result of unfavorable storage conditions was not apparent. Parasitism was not evident, although it can not be said that even these had not been parasitized, as death perhaps occurred before development of the parasites was possible.

It is seen, therefore, that 90.09 per cent is the minimum figure for parasitism in the total of 323 nymphs, with the possibility that the percentage was even higher.

A few flat nymphs of *R. sanguineus* were placed in the ears of a caged rabbit and allowed to attach, and some of the adult parasites were then liberated in the ears of the same animal. The females immediately busied themselves looking for ticks and were repeatedly observed to oviposit in the nymphs, although evidence of feeding in the latter was still not perceptible. Unfortunately, lack of time prevented following these experiments further, but the readiness of the parasites to function under confined conditions was demonstrated.

Intensive study of this area through two or more consecutive seasons would be most enlightening as to the behavior of this parasite in a locality where it is established. The present meager figures do not justify conclusions as to its effectiveness in the control of ticks, since the ticks were apparently maintaining themselves in considerable abundance in spite of the heavy parasitism. It is quite possible that, at the time of these observations, *Hunterellus* was just overtaking the *Rhipicephalus* population in the Lagos area, and that an observation a year later would have revealed a marked change in numbers of hosts and parasites. This is further suggested by studies by Thompson and others who have shown that populations of hosts may be on the increase for a number of generations, the effects of parasitism being imperceptible in spite of the fact that with each succeeding generation the parasites are overtaking the hosts and will determine the ultimate destruction of the host population. (See Chapman, 1926, p. 159.)

Whether or not *Hunterellus* has been a native of Nigeria for long is a matter of moment, since it seems so well established near Lagos. The shifting European population, particularly in official work, with consequent movement of pet dogs to the new appointments in the colonies, would have its effect in dispersal of the parasites. If recently introduced, the parasites should still be concentrated in the vicinity of the

European communities. There is little contact allowed between the pets of the Europeans and the local, short-haired dogs in the native sections. Only a few of the latter were examined in the native sections but failed to show evidence of the presence of adult parasites.

Such points as the above could be settled by further observations of the local host-parasite complex. The data secured might also give a

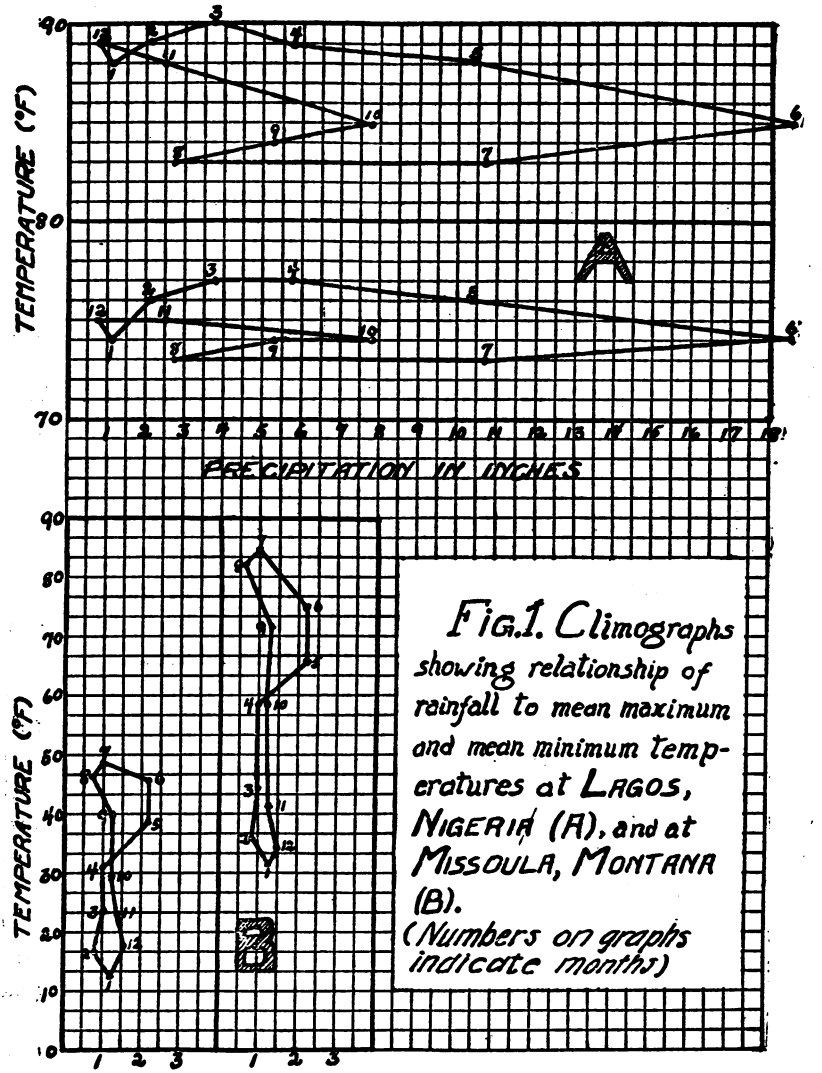

Fig. 1. Climographs showing relationship of rainfall to mean maximum and mean minimum temperatures at Lagos, Nigeria (A), and at Missoula, Montana (B). (Numbers on graphs indicate months)

clue as to the possibilities of using this particular parasite in combating ticks in other localities.

Climographs representing the average rainfall plotted against the mean maximum and mean minimum monthly temperature for a period of 28 years at Lagos, are presented in Figure 1(A) in order that some idea may be gained of the climatic factors under which

this colony of parasites exists. The relative stability of the yearly march of temperature and the tremendous amount of rainfall reaching a maximum in June are to be remarked. Attempts at introduction of such parasites into temperate climates will therefore have to cope with a considerable difference in climate conditions, in addition to the adaptation of the parasites to new tick hosts. Climographs for Missoula, Mont. (Bitterroot Valley) are also presented in Figure 1(B) to give a rough comparison of these climatic differences under temperate conditions within the range of the Rocky Mountain spotted fever tick, *Dermacentor andersoni* Stiles. For obvious reasons it was impossible to plot this graph on the same scale of magnitude as that in (A). The existence of *Hunterellus* in the southern United States indicates that these parasites can become adapted to more temperate conditions, however.

Parasitism was not observed in 5 other local species of Nigerian ticks, whose hosts included hump-backed cattle, rabbits, and snakes, which were collected near Lagos and near Shaki about 300 miles inland.

Hunterellus appears to have become rather widespread. Wood (1911) records localities in Texas and California in the United States, Monterrey in Mexico, and in Lourenço Marques, Portuguese East Africa, as observed by C. W. Howard. Costa Lima (1915) later observed adults on dogs in Brazil, in addition to rearing the parasites from *Rhipicephalus* nymphs collected from the same animals.

The only other observations on adult parasites in nature are reported by Professor Cooley (1929–30), who found *Ixodiphagus* attacking *Hyalomma aegyptium* Linn. in South Africa.

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EXTENT OF RURAL HEALTH SERVICE IN THE UNITED STATES, 1927–1931[1]

According to data obtained by the Office of Rural Sanitation of the Public Health Service from the health departments of the States, Table 1 presents a list, by States, of counties (or districts) in which the rural sections thereof at the beginning of the calendar years 1927, 1928, 1929, 1930, and 1931, respectively, were provided with local health service under the administration of whole-time county or (local) district health officers.

In making up the lists of counties by States for 1931 it was decided to include as having whole-time health service a number of counties which are operating in groups under the direction of full-time district health officers maintained jointly by the pooling of individual county appropriations. It was also decided to include all counties in which there are whole-time local organizations maintained entirely by the State health department. Including these counties, which in some instances have not been listed heretofore, accounts for some of the increases noted for 1931.

TABLE 1.—*List of counties or districts in which as of January 1, 1927, 1928, 1929, 1930, and 1931, respectively, rural sections were provided with health service under whole-time local health officers*

ALABAMA

1927	1928	1929	1930	1931
Baldwin.	Baldwin.	Baldwin.	Baldwin.	Baldwin.
Barbour.	Barbour.	Barbour.	Barbour.	Barbour.
Calhoun.	Calhoun.	Blount.	Blount.	Blount.
Chambers.	Chambers.	Bullock.	Bullock.	Bullock.
Coffee.	Coffee.	Calhoun.	Calhoun.	Calhoun.
Colbert.	Colbert.	Chambers.	Chambers.	Chambers.
Covington.	Covington.	Cherokee.	Cherokee.	Cherokee.
Dallas.	Cullman.	Clarke.	Choctaw.	Choctaw.
Escambia.	Dale.	Cleburne.	Clarke.	Clarke.
Etowah.	Dallas.	Coffee.	Cleburne.	Cleburne.
Franklin.	Elmore.	Colbert.	Coffee.	Coffee.
Houston.	Escambia.	Conecuh.	Colbert.	Colbert.
Jackson.	Etowah.	Covington.	Conecuh.	Conecuh.
Jefferson.	Franklin.	Crenshaw.	Covington.	Covington.
Lauderdale.	Houston.	Cullman.	Crenshaw.	Crenshaw.
Lawrence.	Jefferson.	Dale.	Cullman.	Cullman.
Lee.	Lauderdale.	Dallas.	Dale.	Dale.
Limestone.	Lawrence.	De Kalb.	Dallas.	Dallas.
Madison.	Lee.	Elmore.	De Kalb.	De Kalb.
Marengo.	Limestone.	Escambia.	Elmore.	Elmore.
Marshall.	Madison.	Etowah.	Escambia.	Escambia.
Mobile.	Marengo.	Franklin.	Etowah.	Etowah.
Montgomery.	Marshall.	Houston.	Franklin.	Franklin.
Morgan.	Mobile.	Jackson.	Geneva.	Geneva.
Pike.	Monroe.	Jefferson.	Houston.	Houston.
Sumter.	Montgomery.	Lamar.	Jackson.	Jackson.
Talladega.	Morgan.	Lauderdale.	Jefferson.	Jefferson.
Tallapoosa.	Pike.	Lawrence.	Lamar.	Lamar.
Tuscaloosa.	Sumter.	Lee.	Lauderdale.	Lauderdale.
Walker.	Talladega.	Limestone.	Lawrence.	Lawrence.
	Tallapoosa.	Lowndes.	Lee.	Lee.
	Tuscaloosa.	Macon.	Limestone.	Limestone.
	Walker.	Madison.	Lowndes.	Lowndes.
		Marengo.	Macon.	Macon.
		Marshall.	Madison.	Madison.
		Mobile.	Marengo.	Marengo.
		Monroe.	Marshall.	Marion.

[1] From the Office of Rural Sanitation, United States Public Health Service.

TABLE 1.—*List of counties or districts in which as of January 1, 1927, 1928, 1929, 1930, and 1931, respectively, rural sections were provided with health service under whole-time local health officers*—Continued

ALABAMA—Continued

1927	1928	1929	1930	1931
		Montgomery. Morgan. Pickens. Pike. Shelby. Sumter. Talladega. Tallapoosa. Tuscaloosa. Walker. Washington. Wilcox Winston.	Mobile. Monroe. Montgomery. Morgan. Pickens. Shelby. Sumter. Talladega. Tallapoosa. Tuscaloosa. Walker. Washington. Wilcox. Winston.	Marshall. Mobile. Monroe. Montgomery. Morgan. Perry. Pickens. Pike. Shelby. Sumter. Talladega. Tallapoosa. Tuscaloosa. Walker. Washington. Wilcox. Winston.

ARIZONA

Cochise. Yuma.	Cochise. Coconino. Yuma.	Cochise. Coconino. Yuma.	Cochise. Coconino. Yuma.	Cochise. Coconino. Gila. Maricopa. Pima. Yuma.

ARKANSAS

Garland. Jefferson. Pulaski.	Arkansas. Ashley. Chicot. Conway. Crittenden. Cross. Desha. Drew. Garland. Jackson. Jefferson. Little River. Mississippi. Monroe. Phillips. Pope. Pulaski. Saline. Union. Woodruff. Yell.	Arkansas. Ashley. Chicot. Conway. Crittenden. Cross. Desha. Drew. Faulkner. Garland. Jackson. Jefferson. Little River. Mississippi. Monroe. Phillips. Pope. Pulaski. Saline. Sebastian. Union. White. Woodruff. Yell.	Arkansas. Ashley. Conway. Cross. Desha. Drew. Garland. Jackson. Jefferson. Little River. Mississippi. Monroe. Phillips. Pope. Pulaski. Saline. Sebastian. Union. White. Woodruff. Yell.	Arkansas. Ashley. Clark. Conway. Cross. Desha. Drew. Garland. Jackson. Jefferson. Little River. Lonoke. Mississippi. Monroe. Ouchita. Phillips. Pope. Pulaski. Saline. Sebastian. Union. White. Woodruff. Yell.

CALIFORNIA

Los Angeles. Monterey. Orange. Riverside. San Diego. San Joaquin. San Luis Obispo. Santa Barbara. Yolo.	Los Angeles. Monterey. Orange. Riverside. San Diego. San Joaquin. San Luis Obispo. Santa Barbara. Yolo.	Contra Costa. Los Angeles. Madera. Monterey. Orange. Riverside. San Diego. San Joaquin. San Luis Obispo. Santa Barbara. Yolo.	Contra Costa. Los Angeles. Madera. Monterey. Orange. Riverside. San Diego. San Joaquin. San Luis Obispo. Santa Barbara. Stanislaus. Yolo.	Contra Costa. Imperial. Los Angeles. Madera. Monterey. Orange. Riverside. San Diego. San Joaquin. San Luis Obispo. Santa Barbara. Stanislaus. Yolo.

TABLE 1.—*List of counties or districts in which as of January 1, 1927, 1928, 1929, 1930, and 1931, respectively, rural sections were provided with health service under whole-time local health officers*—Continued

COLORADO

1927	1928	1929	1930	1931
Otero.	Otero.	Otero.	Otero.	Otero.

CONNECTICUT

Fairfield.[1]	Fairfield.[1]	Fairfield.[1]	Fairfield.[1]	Fairfield.[1]

DELAWARE

				Kent. Sussex. New Castle.

FLORIDA

Manatee. Polk. Sarasota.	Manatee. Polk. Sarasota.	Manatee. Polk. Sarasota.	Manatee. Sarasota.	Leon. Manatee. Taylor.

GEORGIA

Baker. Baldwin. Bartow. Bibb. Brooks. Clarke. Cobb. Decatur. De Kalb. Dougherty. Floyd. Glynn. Grady. Hall. Laurens. Lowndes. Mitchell. Richmond. Spalding. Sumter. Thomas. Troup. Walker. Ware.	Baldwin. Bartow. Bibb. Brooks. Chatham. Clarke. Cobb. Coffee. Colquitt. Crisp. Decatur. De Kalb. Dougherty. Floyd. Glynn. Hall. Laurens. Lowndes. Mitchell. Richmond. Spalding. Sumter. Thomas. Troup. Walker. Ware. Washington.	Baldwin. Bartow. Bibb. Brooks. Chatham. Clarke. Cobb. Coffee. Colquitt. Crisp. Decatur. De Kalb. Dougherty. Emanuel. Floyd. Glynn. Grady. Hall. Laurens. Lowndes. Mitchell. Richmond. Spalding. Sumter. Thomas. Troup. Walker. Ware. Washington. Wayne. Worth.	Baldwin. Bartow. Bibb. Brooks. Chatham. Clarke. Clinch. Cobb. Coffee. Colquitt. Crisp. Decatur. De Kalb. Dougherty. Emanuel. Floyd. Glynn. Grady. Hall. Jefferson. Jenkins. Laurens. Lowndes. Mitchell. Richmond. Spalding. Sumter. Thomas. Troup. Walker. Ware. Washington. Wayne. Worth.	Baldwin. Bartow. Bibb. Brooks. Chatham. Clarke. Clinch. Cobb. Coffee. Colquitt. Decatur. De Kalb. Dougherty. Floyd. Glynn. Grady. Hall. Jefferson. Jenkins. Laurens. Lowndes. Mitchell. Richmond. Spalding. Sumter. Thomas. Troup. Walker. Ware. Washington.

IDAHO

			Bonneville. Twin Falls.	Twin Falls.

[1] District.

TABLE 1.—*List of counties or districts in which as of January 1, 1927, 1928, 1929, 1930, and 1931, respectively, rural sections were provided with health service under whole-time local health officers*—Continued

ILLINOIS

1927	1928	1929	1930	1931
Cook. Morgan. Sangamon.	Cook. Du Page. Morgan.	Cook. Du Page. Morgan. Pulaski.	Cook. Du Page. Morgan.	Du Page. Morgan.

IOWA

Dubuque.				Washington. Woodbury.

KANSAS

Butler. Coffey. Ellis. Geary. Jefferson. Lyon. Marion. Ottawa. Phillips.	Butler. Cherokee. Ellis. Geary. Greenwood. Jefferson. Lyon. Marion. Ottawa. Shawnee.	Brown. Butler. Cherokee. Geary. Greenwood. Jefferson. Lyon. Marion. Ottawa. Shawnee.	Brown. Butler. Cherokee. Dickinson. Geary. Greenwood. Lyon. Marion. Ottawa. Sedgwick. Shawnee.	Brown. Butler. Cherokee. Dickinson. Geary. Greenwood. Lyon. Marion. Ottawa. Sedgwick. Seward. Shawnee.

KENTUCKY

Boyd. Daviess. Fayette. Fulton. Jefferson. Johnson. Knott. Mason. Scott.	Ballard. Boyd. Breathitt. Carlisle. Carter. Daviess. Elliott. Estill. Fayette. Floyd. Fulton. Henderson. Hickman. Hopkins. Johnson. Knott. Lawrence. Lee. Leslie. Letcher. Magoffin. Martin. Mason. McLean. Menifee. Morgan. Owsley. Perry. Pike. Scott. Webster. Wolfe.	Ballard. Bell. Boyd. Breathitt. Bullitt. Carlisle. Carter. Daviess. Elliott. Estill. Fayette. Floyd. Fulton. Henderson. Hickman. Hopkins. Johnson. Knott. Knox. Lawrence. Lee. Leslie. Letcher. Magoffin. Martin. Mason. McLean. Menifee. Monroe. Morgan. Ohio. Owsley. Perry. Pike. Scott. Trigg. Webster. Whitley. Wolfe.	Ballard. Bell. Boyd. Breathitt. Bullitt. Calloway. Carlisle. Carter. Daviess. Elliott. Estill. Fayette. Floyd. Fulton. Henderson. Hickman. Hopkins. Jefferson. Johnson. Kenton. Knott. Knox. Lawrence. Lee. Leslie. Letcher. Magoffin. Martin. Mason. McLean. Menifee. Monroe. Morgan. Muhlenberg. Ohio. Owsley. Perry. Pike. Scott. Trigg. Union. Wayne. Webster. Whitley. Wolfe.	Bell. Boyd. Breathitt. Bullitt. Calloway. Carlisle. Carter. Daviess. Elliott. Estill. Fayette. Floyd. Fulton. Henderson. Hickman. Hopkins. Jefferson. Kenton. Knott. Knox. Lawrence. Lee. Leslie. Letcher. Lincoln. Madison. Magoffin. Martin. Mason. McLean. Menifee. Monroe. Morgan. Muhlenberg. Ohio. Owsley. Perry. Pike. Scott. Trigg. Union. Wayne. Webster.

TABLE 1.—*List of counties or districts in which as of January 1, 1927, 1928, 1929, 1930, and 1931, respectively, rural sections were provided with health service under whole-time local health officers*—Continued

LOUISIANA [1]

1927	1928	1929	1930	1931
Caddo. Claiborne. De Soto Lafourche. Natchitoches. Ouachita. Plaquemines. St. Mary. Washington. Webster.	Assumption. Avoyelles. Caddo. Caldwell. Catahoula. Claiborne. Concordia. De Soto. East Carroll. Franklin. Iberia. Lafayette. Lafourche. La Salle. Madison. Morehouse. Natchitoches. Ouachita. Plaquemines. Rapides. Richland. St. Martin. St. Mary. Tangipahoa. Tensas. Washington. Webster. West Carroll.	Assumption. Avoyelles. Caddo. Caldwell. Catahoula. Claiborne. Concordia. De Soto. East Carroll. Franklin. Iberia. Iberville. Lafayette. Lafourche. La Salle. Madison. Morehouse. Natchitoches. Ouachita. Point Coupee. Rapides. Richland. St. Landry. St. Martin. St. Mary. Tensas. Terrebonne. Webster. West Carroll.	Assumption. Avoyelles. Caddo. Caldwell. Catahoula. Claiborne. Concordia. De Soto. East Carroll. Franklin. Iberia. Iberville. Lafayette. Lafourche. La Salle. Lincoln. Madison. Morehouse. Natchitoches. Ouachita. Point Coupee. Rapides. Richland. St. Landry. St. Martin. St. Mary. Tensas. Terrebonne. Washington. Webster. West Carroll.	Assumption. Avoyelles. Caddo. Caldwell. Catahoula. Claiborne. Concordia. De Soto. East Carroll. Franklin. Iberia. Iberville. Lafayette. Lafourche. La Salle. Lincoln. Madison. Morehouse. Natchitoches. Ouachita. Point Coupee. Rapides. Richland. St. Landry. St. Martin. St. Mary. Tensas. Terrebonne. Washington. Webster. West Carroll.

MAINE

Oldtown. Rumford.[2] Sanford.[2] Waterville. York.	Motbov Union.[2] Rumford.[2] Sanford.[2] Vassalboro.[2]	Motbov Union.[2] Rumford.[2] Sanford.[2] Vassalboro.[2]	Motbov Union.[2] Rumford.[2] Sanford.[2] Vassalboro.[2]	Motbov Union.[2] Rumford.[2] Sanford.[2] Vassalboro.[2]

MARYLAND

Allegany. Baltimore. Calvert. Carroll. Frederick. Montgomery.	Allegany. Baltimore. Calvert. Carroll. Frederick. Montgomery. Prince Georges. Talbot.	Allegany. Baltimore. Calvert. Carroll. Frederick. Harford. Montgomery. Prince Georges. Talbot.	Allegany. Baltimore. Calvert. Carroll. Cecil. Frederick. Harford. Montgomery. Prince Georges. Talbot. Wicomico.	Anne Arundel. Allegany. Baltimore. Calvert. Carroll. Cecil. Frederick. Harford. Kent. Montgomery. Prince Georges. Talbot. Washington. Wicomico.

MASSACHUSETTS

Cape Cod.[4]	Barnstable.[4]	Barnstable.	Barnstable.	Barnstable

[1] Parishes.
[2] Including towns of Orono, Milford, Bradley, and Veazie.
[3] Town (township) wholly or partly rural.
[4] District.
[5] See Reprint No. 1184, p. 34, from Public Health Reports of Oct. 21, 1927.

TABLE 1.—*List of counties or districts in which as of January 1, 1927, 1928, 1929, 1930, and 1931, respectively, rural sections were provided with health service under whole-time local health officers*—Continued

MICHIGAN

1927	1928	1929	1930	1931
		Oakland. Saginaw. Wexford.	Genesee. Oakland. Saginaw. Wexford.	Alcona.[1] Alpena.[1] Antrim.[1] Charlevoix.[1] Cheboygan.[1] Crawford.[1] Emmet.[1] Genesee. Iosco.[1] Isabella. Kalkaska.[1] Kent. Midland. Missaukee.[1] Montmorency.[1] Oakland. Ogemaw.[1] Oscoda.[1] Otsego.[1] Ottawa. Presque Isle.[1] Roscommon.[1] Saginaw. Wexford.

MINNESOTA

St. Louis.	St. Louis.	St. Louis.	St. Louis.	St. Louis.

MISSISSIPPI

Bolivar. Clarke. Coahoma. Forrest. Hancock. Harrison. Hinds. Holmes. Jackson. Jones. Lamar. Lee. Leflore. Pearl River. Perry. Sharkey. Union. Washington.	Bolivar. Clarke. Coahoma. Forrest. Hancock. Harrison. Hinds. Holmes. Humphreys. Issaquena. Jackson. Jones. Lamar. Lee. Leflore. Pearl River. Perry. Sharkey. Sunflower. Tishomingo. Union. Warren. Washington. Yazoo.	Adams. Bolivar. Clarke. Coahoma. Copiah. Forrest. Hancock. Harrison. Hinds. Holmes. Humphreys. Issaquena. Jackson. Jones. Lamar. Lauderdale. Lee. Leflore. Lincoln. Monroe. Pearl River. Perry. Sharkey. Sunflower. Tishomingo. Union. Warren. Washington. Yazoo.	Adams. Bolivar. Clarke. Coahoma. Copiah. Forrest. Hancock. Harrison. Hinds. Holmes. Humphreys. Issaquena. Jackson. Lamar. Lauderdale. Lee. Leflore. Lincoln. Monroe. Pearl River. Perry. Sharkey. Sunflower. Tishomingo. Union. Warren. Washington. Yazoo.	Adams. Bolivar. Clarke. Coahoma. Copiah. Forrest. Hancock. Harrison. Hinds. Holmes. Humphreys. Issaquena. Jackson. Lamar. Lauderdale. Lee. Leflore. Lincoln. Monroe. Pearl River. Perry. Sharkey. Sunflower. Tishomingo. Union. Warren. Washington. Yazoo.

MISSOURI

Boone. Dunklin. Greene. Holt. Jackson. Marion. New Madrid. Nodaway.	Boone. Dunklin. Greene. Holt. Jackson. Marion. Mississippi. New Madrid.	Boone. Dunklin. Greene. Jackson. Marion. Mississippi. New Madrid. Nodaway.	Boone. Buchanan. Dunklin. Greene. Jackson. Marion. Mississippi. New Madrid.	Boone. Buchanan. Dunklin. Greene. Jackson. Marion. Miller. New Madrid.

[1] Included in four districts of four counties each.

TABLE 1.—*List of counties or districts in which as of January 1, 1927, 1928, 1929, 1930, and 1931, respectively, rural sections were provided with health service under whole-time local health officers*—Continued

MISSOURI—Continued

1927	1928	1929	1930	1931
Pemiscot. Pettis. St. Francois. St. Louis.	Nodaway. Pemiscot. Pettis. Scott. St. Francois. St. Louis.	Pemiscot. St. Francois. St. Louis. Scott.	Nodaway. Pemiscot. St. Francois. St. Louis. Scott.	Nodaway. Pemiscot. Scott. St. Francois. St. Louis.

MONTANA

Cascade. Lewis and Clark. Missoula.	Cascade. Lewis and Clark. Missoula.	Cascade. Lewis and Clark. Missoula.	Cascade. Gallatin. Lewis and Clark. Missoula.	Cascade. Gallatin. Lewis and Clark. Missoula.

NEW MEXICO

Bernalillo. Chaves. Dona Ana. Eddy. McKinley. Santa Fe. San Miguel. Union. Valencia.	Bernalillo. Chaves. Dona Ana. Eddy. McKinley. Santa Fe. Union. Valencia.	Bernalillo. Chaves. Dona Ana. Eddy. Santa Fe. Union. Valencia.	Bernalillo. Chaves. Dona Ana. Eddy. McKinley. Union. Valencia.	Bernalillo. Dona Ana. Eddy. Lea. McKinley. Santa Fe. Union. Valencia.

NEW YORK

Cattaraugus.	Cattaraugus.	Cattaraugus. Suffolk.	Cattaraugus. Cortland. Suffolk. Westchester.	Cattaraugus. Cortland. Suffolk. Westchester.

NORTH CAROLINA

Beaufort. Bertie. Bladen. Brunswick. Buncombe. Cabarrus. Carteret. Columbus. Craven. Cumberland. Davidson. Durham. Edgecombe. Forsyth. Granville. Guilford. Halifax. Henderson. Johnston. Lenoir. Mecklenburg. Nash. New Hanover. Northampton. Pamlico. Pitt. Richmond. Robeson. Rowan. Rutherford. Sampson. Surry. Vance. Wake. Wayne. Wilkes. Wilson.	Beaufort. Bertie. Bladen. Brunswick. Buncombe. Cabarrus. Carteret. Columbus. Craven. Cumberland. Davidson. Durham. Edgecombe. Forsyth. Granville. Guilford. Halifax. Henderson. Johnston. Lenoir. Mecklenburg. Nash. New Hanover. Northampton. Pamlico. Pitt. Richmond. Robeson. Rowan. Rutherford. Sampson. Surry. Vance. Wake. Wayne. Wilkes. Wilson.	Beaufort. Bertie. Bladen. Brunswick. Buncombe. Cabarrus. Columbus. Craven. Cumberland. Davidson. Durham. Edgecombe. Forsyth. Gaston. Granville. Guilford. Halifax. Henderson. Johnston. Lenoir. Mecklenburg. Moore. Nash. New Hanover. Northampton. Pamlico. Pitt. Richmond. Randolph. Robeson. Rowan. Rutherford. Sampson. Surry. Vance. Wake. Wayne. Wilkes. Wilson.	Beaufort. Bertie. Bladen. Buncombe. Cabarrus. Cherokee. Columbus. Craven. Cumberland. Davidson. Durham. Edgecombe. Forsyth. Gaston. Granville. Guilford. Halifax. Henderson. Johnston. Lenoir. Mecklenburg. Moore. Nash. New Hanover. Northampton. Pitt. Randolph. Richmond. Robeson. Rowan. Rutherford. Sampson. Surry. Vance. Wake. Wayne. Wilkes. Wilson.	Beaufort. Bertie. Bladen. Buncombe. Cabarrus. Cherokee. Columbus. Craven. Cumberland. Davidson. Durham. Edgecombe. Forsyth. Franklin. Gaston. Guilford. Granville. Halifax. Henderson. Johnston. Lenoir. Mecklenburg. Moore. Nash. New Hanover. Northampton. Pitt. Randolph. Richmond. Robeson. Rowan. Rutherford. Sampson. Surry. Vance. Wake. Wayne. Wilkes. Wilson.

TABLE 1.—*List of counties or districts in which as of January 1, 1927, 1928, 1929, 1930, and 1931, respectively, rural sections were provided with health service under whole-time local health officers*—Continued

OHIO

1927	1928	1929	1930	1931
Allen.	Allen.	Allen.	Allen.	Allen.
Ashtabula.	Ashtabula.	Ashtabula.	Ashtabula.	Ashtabula.
Belmont.	Belmont.	Belmont.	Belmont.	Belmont.
Butler.	Butler.	Butler.	Butler.	Butler.
Clermont.	Clermont.	Clinton.	Clinton.	Clinton.
Clinton.	Clinton.	Columbiana.	Columbiana.	Columbiana.
Columbiana.	Columbiana.	Coshocton.	Coshocton.	Coshocton.
Coshocton.	Coshocton.	Crawford.	Crawford.	Crawford.
Crawford.	Crawford.	Cuyahoga.	Cuyahoga.	Cuyahoga.
Cuyahoga.	Cuyahoga.	Darke.	Darke.	Darke.
Darke.	Darke.	Delaware.	Delaware.	Delaware.
Delaware.	Delaware.	Erie.	Erie.	Erie.
Erie.	Erie.	Fayette.	Fayette.	Fayette.
Fayette.	Fayette.	Franklin.	Franklin.	Franklin.
Geauga.	Franklin.	Geauga.	Geauga.	Hamilton.
Hamilton.	Geauga.	Hamilton.	Hamilton.	Hancock.
Hancock.	Hamilton.	Hancock.	Hancock.	Hocking.
Hocking.	Hancock.	Hocking.	Hocking.	Huron.
Huron.	Hocking.	Huron.	Huron.	Jackson.
Jefferson.	Huron.	Jefferson.	Jefferson	Jefferson.
Lake.	Jefferson.	Lake.	Lake.	Lorain.
Lorain.	Lake.	Lorain.	Lorain.	Lucas.
Lucas.	Lorain.	Lucas.	Lucas.	Mahoning.
Mahoning.	Lucas.	Mahoning.	Mahoning.	Marion.
Marion.	Mahoning.	Marion.	Marion.	Meigs.
Meigs.	Marion.	Meigs.	Meigs.	Mercer.
Mercer.	Meigs.	Mercer.	Mercer.	Miami.
Miami.	Mercer.	Miami.	Miami.	Montgomery.
Montgomery.	Miami.	Montgomery.	Montgomery.	Morrow.
Morrow.	Montgomery.	Morrow.	Morrow.	Muskingum.
Muskingum.	Morrow.	Perry.	Perry.	Perry.
Perry.	Muskingum.	Preble.	Pickaway.	Pickaway.
Preble.	Perry.	Richland.	Preble.	Preble.
Richland.	Preble.	Ross.	Richland.	Richland.
Ross.	Richland.	Sandusky.	Ross.	Ross.
Sandusky.	Ross.	Scioto.	Sandusky.	Sandusky.
Scioto.	Sandusky.	Seneca.	Scioto.	Scioto.
Seneca.	Scioto.	Shelby.	Seneca.	Seneca.
Shelby.	Seneca.	Stark.	Shelby.	Shelby.
Stark.	Shelby.	Summit.	Stark.	Stark.
Summit.	Stark.	Trumbull.	Summit.	Summit.
Trumbull.	Summit.	Tuscarawas.	Trumbull.	Trumbull.
Tuscarawas.	Trumbull.	Washington.	Tuscarawas.	Tuscarawas.
Union.	Tuscarawas.	Wayne.	Washington.	Washington.
Washington.	Washington.	Wood.	Wayne.	Wayne.
Wayne.	Wayne.		Wood.	Wood.
Wood.	Wood.			

OKLAHOMA

Carter.	Carter.	Carter.	Carter.	Carter.
Kay.	Kay.	Kay.	Le Flore.	Le Flore.
Le Flore.	Le Flore.	Le Flore.	McCurtain.	McCurtain.
McCurtain.	McCurtain.	McCurtain.	Muskogee.	Muskogee.
Muskogee.	Muskogee.	Muskogee.	Okmulgee.	Okmulgee.
Oklahoma.	Okmulgee.	Okmulgee.	Osage.	Ottawa.
Okmulgee.	Ottawa.	Osage.	Ottawa.	Pittsburg.
Ottawa.	Pittsburg.	Ottawa.	Pittsburg.	Pottawatomie.
Pittsburg.	Seminole.	Pittsburg.	Seminole.	Seminole.
		Seminole.		

OREGON

Clackamas.	Clackamas.	Clackamas.	Clackamas.	Clackamas.
Coos.	Coos.	Coos.	Coos.	Coos.
Douglas.	Douglas.	Douglas.	Douglas.	Douglas.
Jackson.	Jackson.	Jackson.	Jackson.	Jackson.
Klamath.	Klamath.	Klamath.	Klamath.	Klamath.
	Marion.	Marion.	Marion.	Lane.
	Multnomah.	Multnomah.	Multnomah.	Marion.
				Multnomah.

TABLE 1.—*List of counties or districts in which as of January 1, 1927, 1928, 1929, 1930, and 1931, respectively, rural sections were provided with health service under whole-time local health officers*—Continued

PENNSYLVANIA

1927	1928	1929	1930	1931
				Allegheny. Bucks. Luzerne.

SOUTH CAROLINA

Aiken. Anderson. Beaufort. Charleston. Cherokee. Darlington. Dillon. Fairfield. Georgetown. Greenville. Greenwood. Horry. Marion. Newberry. Orangeburg. Spartanburg.	Aiken. Anderson. Beaufort. Charleston. Cherokee. Darlington. Dillon. Fairfield. Georgetown. Greenville. Greenwood. Horry. Marion. Newberry. Orangeburg. Spartanburg.	Aiken. Anderson. Beaufort. Berkeley. Charleston. Cherokee. Darlington. Dillon. Dorchester. Fairfield. Georgetown. Greenville. Greenwood. Horry. Marion. Newberry. Oconee. Orangeburg. Richland. Spartanburg.	Aiken. Anderson. Beaufort. Berkeley. Charleston. Cherokee. Darlington. Dillon. Dorchester. Fairfield. Florence. Georgetown. Greenville. Greenwood. Horry. Kershaw. Lexington. Marion. Newberry Oconee. Orangeburg. Richland. Spartanburg.	Aiken. Anderson. Beaufort. Berkeley. Charleston. Cherokee. Darlington. Dillon. Dorchester. Fairfield. Florence. Georgetown. Greenville. Greenwood. Horry. Kershaw. Lexington. Marion. Newberry. Oconee. Orangeburg. Richland. Spartanburg.

SOUTH DAKOTA

Brown. Pennington.	Pennington.	Pennington.	Pennington.	Pennington.

TENNESSEE

Blount. Davidson. Dyer. Gibson. Hamilton. Lauderdale. Montgomery. Obion. Roane. Rutherford. Sevier. Shelby. Weakley. Williamson.	Blount. Bradley. Davidson. Dyer. Gibson. Hamilton. Lake. Lauderdale. Montgomery. Obion. Roane. Rutherford. Sevier. Shelby. Washington. Weakley. Williamson.	Blount. Bradley. Carter. Davidson. Dyer. Gibson. Greene. Hamilton. Knox. Lake. Lauderdale. Monroe. Montgomery. Obion. Roane. Rutherford. Sevier. Shelby. Sullivan. Washington. Weakley. Williamson. Wilson.	Bledsoe. Blount. Bradley. Carter. Clay. Davidson. Dyer. Fentress. Gibson. Giles. Greene. Grundy. Hamilton. Hardeman. Jackson. Knox. Lake. Lauderdale. Lincoln. Meigs. Monroe. Montgomery. Obion. Overton. Pickett. Rhea. Roane. Rutherford. Sequatchie. Sevier. Shelby. Sullivan. Sumner.	Bledsoe. Blount. Bradley. Carter. Clay. Davidson. Dyer. Fentress. Gibson. Giles. Greene. Grundy. Hamilton. Hardeman. Humphreys. Jackson. Knox. Lake. Lauderdale. Lewis. Lincoln. Maury. Meigs. Monroe. Montgomery. Obion. Overton. Pickett. Rhea. Roane. Rutherford. Sequatchie. Sevier.

TABLE 1.—*List of counties or districts in which as of January 1, 1927, 1928, 1929, 1930, and 1931, respectively, rural sections were provided with health service under whole-time local health officers*—Continued

TENNESSEE—Continued

1927	1928	1929	1930	1931
			Tipton. Washington. Weakley. Williamson. Wilson.	Shelby. Sullivan. Sumner. Tipton. Unicoi. Washington. Weakley. Williamson. Wilson.
TEXAS				
Cameron. Hidalgo. Jefferson. McLennan. Tarrant.	Cameron. Hidalgo. McLennan. Tarrant.	Cameron. Hidalgo. McLennan. Tarrant.	Cameron. Hidalgo. Jefferson. McLennan. Nolan. Tarrant.	Cameron. Hidalgo. Jefferson. McLennan. Nolan. Potter. Tarrant.
UTAH				
Box Elder. Davis. Morgan. Summit. Wasatch. Weber.	Box Elder. Davis. Summit. Utah. Wasatch.	Box Elder. Davis. Utah.	Box Elder. Davis. Utah.	Davis. Utah.
VIRGINIA				
Accomac. Albemarle. Arlington. Augusta. Brunswick. Fairfax. Halifax. Henrico. Isle of Wight. James City. Nansemond. Northampton. Southampton. Sussex. Wise.	Accomac. Albemarle. Arlington. Augusta. Brunswick. Halifax. Henrico. Isle of Wight. Nansemond. Norfolk. Northampton. Princess Anne. Rockbridge. Southampton.	Accomac. Albemarle. Arlington. Augusta. Brunswick. Greensville. Halifax. Henrico. Isle of Wight. Nansemond. Norfolk. Northampton. Princess Anne. Rockbridge. Southampton. Wise.	Accomac. Albemarle. Arlington. Augusta. Brunswick. Fairfax. Greensville. Halifax. Henrico. Isle of Wight. Nansemond. Norfolk. Northampton. Princess Anne. Rockbridge. Southampton. Wise.	Accomac. Albemarle. Amelia.[1] Appomattox.[1] Arlington. Augusta. Brunswick. Buckingham.[1] Charlotte.[1] Cumberland.[1] Fairfax. Greensville. Halifax. Henrico. Isle of Wight. Lunenburg.[1] Nansemond. Norfolk. Northampton. Nottaway.[1] Powhatan.[1] Prince Edward.[1] Princess Anne. Rockbridge. Southampton. Wise.
WASHINGTON				
Chelan. King. Snohomish. Spokane. Walla Walla. Yakima.	Chelan. King. Snohomish. Spokane. Walla Walla. Whitman. Yakima.	Chelan. King. Snohomish. Spokane. Walla Walla. Whitman. Yakima.	Chelan. Clark. King. Snohomish. Spokane. Walla Walla. Whitman. Yakima.	Chelan. Clark. King. Snohomish. Spokane. Walla Walla. Whitman. Yakima.

[1] Included in 1 district of 9 counties.

TABLE 1.—*List of counties or districts in which as of January 1, 1927, 1928, 1929, 1930, and 1931, respectively, rural sections were provided with health service under whole-time local health officers*—Continued

WEST VIRGINIA

1927	1928	1929	1930	1931
Boone.	Berkeley.	Berkeley.	Berkeley.	Berkeley.
Brooke.	Boone.	Boone.	Boone.	Boone.
Gilmer.	Brooke.	Brooke.	Brooke.	Brooke.
Hancock.	Gilmer.	Fayette.	Fayette.	Fayette.
Harrison.	Hancock.	Gilmer.	Gilmer.	Gilmer.
Kanawha.	Harrison.	Hancock.	Hancock.	Hancock.
Logan.	Kanawha.	Harrison.	Harrison.	Harrison.
Marion.	Lewis.	Kanawha.	Kanawha.	Kanawha.
Marshall.	Logan.	Logan.	Logan.	Logan.
Ohio.	Marion.	Marion.	Marion.	Marion.
Preston.	Marshall.	Ohio.	Monongalia.	Marshall.
Roane.	Ohio.	Preston.	Ohio.	Monongalia.
Wood.	Preston.	Raleigh.	Preston.	Ohio.
	Wood.	Wood.	Raleigh.	Preston.
			Wood.	Raleigh.
				Wood.

WYOMING

Natrona.	Natrona.	Natrona.		

Résumé of Table 1

State	Number of counties Jan. 1					Increase or decrease in 1927	Increase or decrease in 1928	Increase or decrease in 1929	Increase or decrease in 1930
	1927	1928	1929	1930	1931				
Alabama	30	33	50	51	54	+3	+17	+1	+3
Arizona	2	3	3	3	6	+1			+3
Arkansas	3	21	24	21	24	+18	+3	−3	+3
California	9	9	11	12	13		+2	+1	+1
Colorado	1	1	1	1	1				
Connecticut	1	1	1	1	1				
Delaware					3				+3
Florida	3	3	3	2	3			−1	+1
Georgia	24	27	31	34	30	+3	+4	+3	−4
Idaho				2	1			+2	−1
Illinois	3	3	4	3	2		+1	−1	−1
Iowa	1				2	−1			+2
Kansas	9	10	10	11	12	+1		+1	+1
Kentucky	9	32	39	45	43	+23	+7	+6	−2
Louisiana	10	28	29	31	31	+18	+1	+2	
Maine	5	4	4	4	4	−1			
Maryland	6	8	9	11	14	+2	+1	+2	+3
Massachusetts	1	1	1	1	1				
Michigan			[1]3	4	24		+3	+1	+20
Minnesota	1	1	1	1	1				
Mississippi	18	24	29	28	28	+6	+5	−1	
Missouri	12	14	12	13	13	+2	−2	+1	
Montana	3	3	3	4	4			+1	
New Mexico	9	8	7	7	8	−1	−1		+1
New York	1	1	2	4	4		+1	+2	
North Carolina	37	37	39	38	39		+2	−1	+1
Ohio	47	47	45	46	46		−2	+1	
Oklahoma	9	9	10	9	9		+1	−1	
Oregon	5	7	7	7	8	+2			+1
Pennsylvania					3				+3
South Carolina	16	16	20	23	23		+4	+3	
South Dakota	2	1	1	1	1	−1			
Tennessee	14	17	23	38	42	+3	+6	+15	+4
Texas	5	4	4	6	7	−1		+2	+1
Utah	6	5	3	3	2	−1	−2		−1
Virginia	15	14	16	17	26	−1	+2	+1	+9
Washington	6	7	7	8	8	+1		+1	
West Virginia	13	14	14	15	16	+1		+1	+1
Wyoming	1	1	1					−1	
Total	337	416	467	505	557	+79	+51	+38	+52

The accompanying map shows the location of the counties or districts in the United States in the rural sections of which local health service under the direction of whole-time local (county or district) health officers was in operation on January 1, 1931.

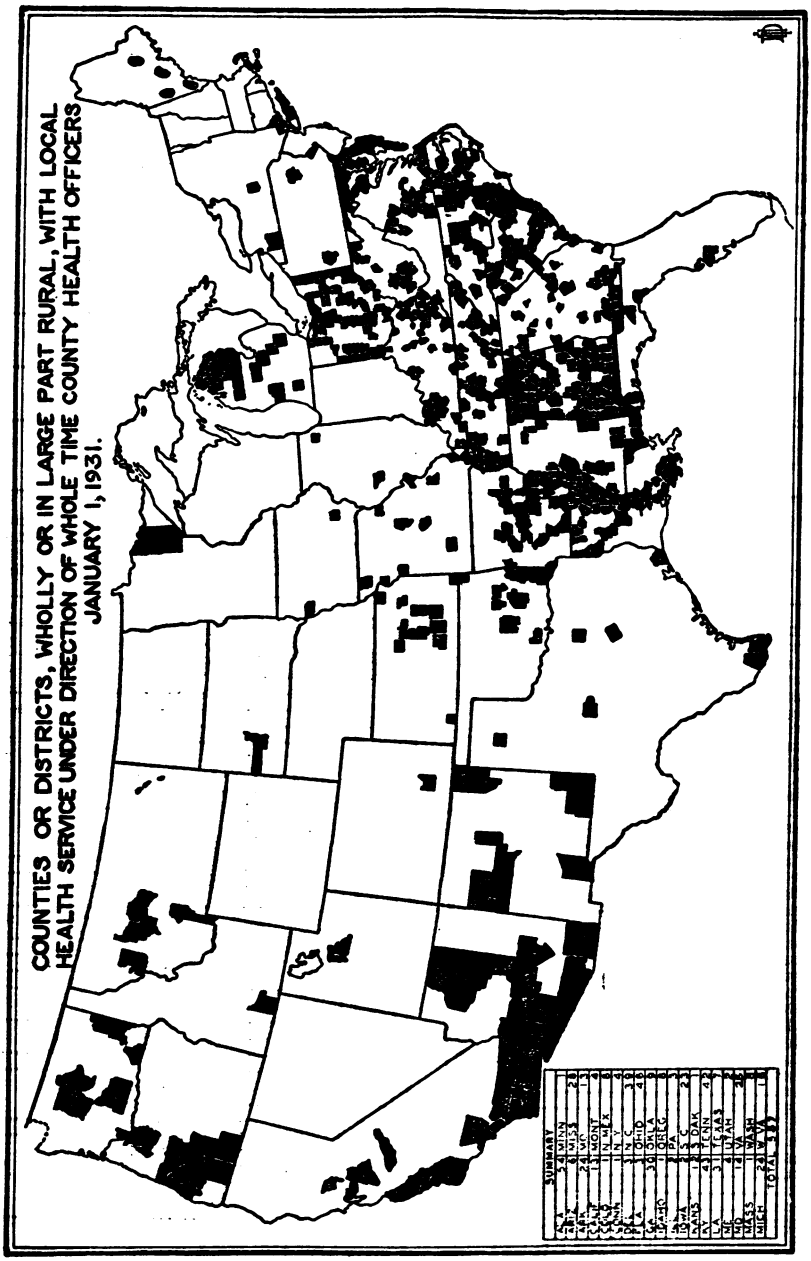

FIGURE 1.—Rural areas having whole-time health officers, 1931

Within the period January 1, 1930, to January 1, 1931, whole-time county or (local) district health service was established in 61 units

and was discontinued in 9—a net gain of 52. The largest gain in one State was that of 20 in Michigan. Delaware took the lead in the percentage of rural population under whole-time local health service, all of its three counties having been provided with full-time local organizations financed by the State. Of the States in which the counties maintain the health organizations, with or without assistance from the State health department or other sources, Alabama, with 85.49, had the highest percentage of rural population under whole-time service.

TABLE 2.—*Percentage of rural population having on January 1, 1931, local health service under whole-time local (county or district) health officers*

State	Rural population (census 1930)	Rural population with local health service under direction of whole-time health officers	Percentage of rural population with local health service under direction of whole-time health officers
Alabama	1,901,975	1,626,099	85.49
Arizona	285,717	181,056	63.37
Arkansas	1,471,604	601,615	40.88
California	1,516,655	714,727	47.13
Colorado	515,909	13,771	2.67
Connecticut	475,133	100,054	21.06
Delaware	115,234	115,234	100.00
Florida	708,433	33,422	4.72
Georgia	2,013,016	535,138	26.58
Idaho	315,525	21,041	6.67
Illinois	1,994,927	39,853	2.00
Indiana	1,442,611	0	0
Iowa	1,491,647	37,494	2.52
Kansas	1,151,165	186,708	16.22
Kentucky	1,815,563	792,448	43.65
Louisiana	1,268,061	707,551	55.80
Maine	475,917	31,327	6.58
Maryland	656,657	500,451	76.21
Massachusetts	418,188	13,510	3.23
Michigan	1,540,250	403,537	26.20
Minnesota	1,306,337	48,313	3.70
Mississippi	1,670,971	684,216	40.95
Missouri	1,770,248	493,291	27.87
Montana	356,570	35,139	9.85
Nebraska	891,856	0	0
Nevada	56,594	0	0
New Hampshire	192,214	0	0
New Jersey	702,090	0	0
New Mexico	316,501	106,528	33.66
New York	2,066,114	261,097	12.64
North Carolina	2,360,429	1,302,065	55.16
North Dakota	567,539	0	0
Ohio	2,139,326	1,316,535	61.54
Oklahoma	1,574,350	313,439	19.91
Oregon	464,040	214,363	46.19
Pennsylvania	3,097,139	456,142	14.73
Rhode Island	52,068	0	0
South Carolina	1,367,685	826,877	60.46
South Dakota	561,942	9,675	1.72
Tennessee	1,720,018	901,758	52.43
Texas	3,435,367	182,539	5.31
Utah	241,583	29,312	12.13
Vermont	240,845	0	0
Virginia	1,636,314	528,041	32.27
Washington	678,857	301,817	44.46
West Virginia	1,237,701	550,270	44.46
Wisconsin	1,585,163	0	0
Wyoming	155,468	0	0
Total	53,819,525	15,216,453	28.27

Of the 548 counties or districts with local health service under whole-time local (county or district) health officers at the beginning

of the present calendar year, 488, or 89 per cent, are receiving financial assistance for the support of their local health service from one or more of the following agencies: The State board of health, the United States Public Health Service, the Rockefeller Foundation.

Table 2 presents, by States, the percentage of rural population having local health service under the direction of whole-time local

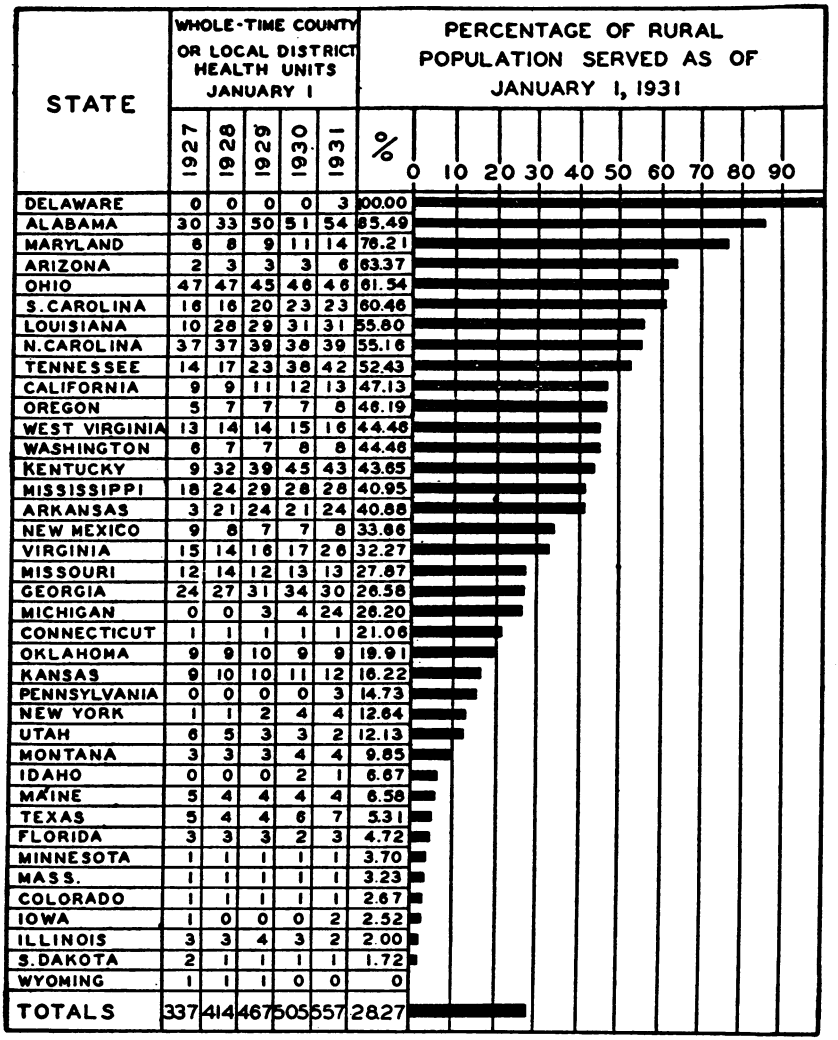

FIGURE 2.—Number of whole-time county health units, by States, 1927–1931, and percentage of rural population served on January 1, 1931

(county or district) health officers at the beginning of 1931. It will be noted that over 70 per cent of our rural population is as yet unprovided with local health service approaching adequacy.

The accompanying chart shows, by States, the number of counties or local districts with health service under the direction of whole-

time county or local district health officers as of January 1, 1927, 1928, 1929, 1930, and 1931, and the percentage of the rural population of each State receiving such service on January 1, 1931.

COURT DECISION RELATING TO PUBLIC HEALTH

License requirement for wholesale food establishments upheld.—(Illinois Supreme Court; City of Chicago *v.* Arbuckle Bros., 176 N. E. 761; decided June 18, 1931.) Section 2004 of the Chicago municipal code defined the term "wholesale food establishment" and provided that "No person, firm or corporation shall establish, maintain or operate any wholesale food establishment without first having obtained a license as hereinafter required." Section 2009 of the code set forth the sanitary requirements governing wholesale food establishments. The defendant, a corporation engaged in the business of receiving, packing, and selling, at wholesale, coffees, teas, spices, and flavoring extracts, was convicted in the municipal court of conducting a wholesale food establishment without a license, in violation of section 2004. On appeal to the supreme court, the question presented for determination was the validity of such section.

Among the powers given to the city council by statute were the following:

> 50. To regulate the sale of meats, poultry, fish, butter, cheese, lard, vegetables, and all other provisions, and to provide for place and manner of selling the same and to control the location thereof.
>
> 53. To provide for and regulate the inspection of meats, poultry, fish, butter, cheese, lard, vegetables, cotton, tobacco, flour, meal and other provisions.
>
> 78. To do all acts, make all regulations, which may be necessary or expedient for the promotion of health or the suppression of disease.

The court laid down the proposition that "A municipal corporation has no power to legislate upon any subject except by the express provision of a statute giving it the power, or by clear implication from such a statute as necessarily incident to the powers expressly granted," but, after a consideration of the powers set forth, declared that "coffee, tea, spices, and flavoring extracts we regard as within the meaning of 'other provisions' mentioned in paragraphs 50 and 53, whose inspection and sale and the place and manner thereof the city council may regulate and provide for." It stated that the power to regulate included the power to license, and affirmed the judgment of the trial court.

DEATHS DURING WEEK ENDED AUGUST 22, 1931

Summary of information received by telegraph from industrial insurance companies for the week ended August 22, 1931, and corresponding week of 1930. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)

	Week ended August 22, 1931	Corresponding week, 1930
Policies in force	74, 973, 572	75, 743, 912
Number of death claims	12, 270	13, 050
Death claims per 1,000 policies in force, annual rate	8. 5	9. 0
Death claims per 1,000 policies, first 34 weeks of year, annual rate	10. 1	9. 9

Deaths[1] from all causes in certain large cities of the United States during the week ended August 22, 1931, infant mortality, annual death rate, and comparison with corresponding week of 1930. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)

The rates published in this summary are based upon midyear population estimates derived from the 1930 census

City	Week ended Aug. 22, 1931				Corresponding week, 1930		Death rate[2] for the first 34 weeks	
	Total deaths	Death rate[2]	Deaths under 1 year	Infant mortality rate[3]	Death rate[2]	Deaths under 1 year	1931	1930
Total (82 cities)	6, 882	10. 1	614	[4] 48	9. 5	679	12. 4	12. 3
Akron	39	7. 9	5	49	4. 9	3	8. 0	8. 0
Albany [5]	25	10. 1	2	40	13. 1	1	14. 0	15. 2
Atlanta	90	16. 9	9	92	8. 1	6	15. 6	16. 2
White	47		4	63		1		
Colored	43	(6)	5	144	(6)	5	(6)	(6)
Baltimore [5]	173	11. 1	21	71	10. 0	17	14. 9	14. 4
White	119		14	61		13		
Colored	54	(6)	7	109	(6)	4	(6)	(6)
Birmingham	61	11. 8	8	80	10. 0	15	14. 1	14. 2
White	25		3	51		8		
Colored	36	(6)	5	122	(6)	7	(6)	(6)
Boston	178	11. 8	20	57	11. 3	20	14. 6	14. 5
Bridgeport	18	6. 4	3	50	9. 6	0	11. 4	11. 4
Buffalo	131	11. 8	11	45	8. 6	9	13. 6	13. 3
Cambridge	21	9. 6	2	40	9. 2	2	12. 6	12. 2
Camden	29	12. 7	5	87	7. 5	3	14. 8	13. 9
Canton	17	8. 3	1	23	8. 4	3	10. 5	10. 4
Chicago [5]	553	8. 3	52	46	8. 5	63	11. 2	10. 7
Cincinnati	111	12. 7	10	60	12. 7	8	16. 4	15. 9
Cleveland	172	9. 8	10	29	10. 2	27	11. 5	11. 5
Columbus	68	12. 0	5	49	8. 9	3	14. 1	16. 2
Dallas	50	9. 6	7		12. 1	9	11. 8	12. 1
White	30		4			7		
Colored	20	(6)	3		(6)	2	(6)	(6)
Dayton	39	9. 8	2	28	9. 8	2	12. 2	10. 5
Denver	60	10. 7	5	48	15. 7	15	14. 3	14. 9
Des Moines	19	6. 9	0	0	10. 6	1	11. 4	12. 1
Detroit	239	7. 5	24	38	7. 5	35	8. 6	9. 7
Duluth	15	7. 7	1	25	9. 8	2	11. 1	11. 4
El Paso	19	9. 4	5		17. 7	9	16. 4	18. 2
Erie	26	11. 5	1	19	12. 6	3	10. 8	11. 6
Fall River [7] [8]	21	9. 5	3	68	7. 2	1	11. 8	12. 4
Flint	19	6. 0	3	38	8. 3	9	7. 3	9. 5
Fort Worth	24	7. 5	4		11. 1	9	11. 1	11. 4
White	17		2			7		
Colored	7	(6)	2		(6)	2	(6)	(6)
Grand Rapids	23	7. 0	1	15	5. 5	2	9. 3	10. 6
Houston	73	12. 3	11		11. 3	7	11. 4	12. 4
White	47		8			6		
Colored	26	(6)	3		(6)	1	(6)	(6)
Indianapolis	103	14. 5	12	99	12. 3	10	14. 3	15. 1
White	84		9	85		8		
Colored	19	(6)	3	201	(6)	2	(6)	(6)

Footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended August 22, 1931, infant mortality, annual death rate, and comparison with corresponding week of 1930—Continued

City	Week ended Aug. 22, 1931				Corresponding week, 1930		Death rate for the first 34 weeks	
	Total deaths	Death rate	Deaths under 1 year	Infant mortality rate	Death rate	Deaths under 1 year	1931	1930
Jersey City	49	8.0	5	44	7.1	5	12.0	11.7
Kansas City, Kans.	25	10.6	4	82	14.5	0	13.2	11.4
White	22		4	98		0		
Colored	3	(6)	0	0	(6)	0	(6)	(6)
Kansas City, Mo.	64	8.2	6	46	12.1	6	13.7	13.6
Knoxville	16	7.6	2	43	11.8	5	12.8	14.3
White	12		2	48		0		
Colored	4	(6)	0	0	(6)	5	(6)	(6)
Long Beach	23	7.9	0	0	9.8	3	10.0	10.1
Los Angeles	240	9.5	15	44	8.2	12	10.9	11.2
Louisville	83	14.0	11	94	10.0	5	14.7	14.0
White	65		6	59		5		
Colored	18	(6)	5	331	(6)	0	(6)	(6)
Lowell [7]	15	7.8	1	25	15.0	5	12.8	14.0
Lynn	10	5.1	0	0	7.6	0	10.0	11.0
Memphis	78	15.7	11	116	15.2	9	16.8	17.9
White	39		5	83		5		
Colored	39	(6)	6	174	(6)	4	(6)	(6)
Miami	31	14.4	2	51	7.5	1	12.2	11.5
White	20		1	35		1		
Colored	11	(6)	1	88	(6)	0	(6)	(6)
Milwaukee	81	7.2	7	30	7.0	6	9.7	9.8
Minneapolis	80	8.8	2	13	6.4	3	11.7	10.8
Nashville	40	13.4	10	149	13.9	4	17.3	17.1
White	23		5	100		3		
Colored	17	(6)	5	295	(6)	1	(6)	(6)
New Bedford [7]	18	8.3	2	53	6.0	0	12.6	11.4
New Haven	36	11.5	3	57	9.9	2	12.6	13.4
New Orleans	135	15.1	18	99	15.5	25	17.3	17.9
White	83		11	91		15		
Colored	52	(6)	7	114	(6)	10	(6)	(6)
New York	1,310	9.6	107	45	8.0	108	11.7	11.2
Bronx Borough	172	6.7	13	29	5.7	11	8.6	8.2
Brooklyn Borough	466	9.3	36	38	7.6	47	10.7	10.3
Manhattan Borough	501	14.4	47	80	11.3	41	17.7	16.7
Queens Borough	135	6.1	11	30	5.4	5	7.5	7.3
Richmond Borough	36	11.5	0	0	11.5	4	14.0	14.7
Newark, N. J.	75	8.8	4	21	7.8	5	12.0	12.5
Oakland	49	8.7	3	38	10.0	4	10.7	11.1
Oklahoma City	25	6.6	3	41	10.6	6	11.2	10.8
Omaha	36	8.7	4	45	9.2	3	14.2	14.1
Paterson	42	15.8	1	17	8.3	4	13.9	12.5
Peoria	17	8.2	0	0	10.4	1	13.1	12.9
Philadelphia	388	10.3	45	65	10.9	39	13.7	13.0
Pittsburgh	138	10.6	15	52	9.4	8	15.1	14.2
Portland, Oreg.	47	8.0	1	12	10.7	3	11.8	12.6
Providence	50	10.2	2	18	7.4	3	13.2	13.5
Richmond	44	12.4	2	29	12.2	2	16.1	15.4
White	25		1	22		1		
Colored	19	(6)	1	43	(6)	1	(6)	(6)
Rochester	72	11.3	5	46	10.3	8	12.2	11.8
St. Louis	194	12.2	10	34	10.6	21	16.0	14.8
St. Paul	52	9.8	5	52	7.1	2	11.2	10.3
Salt Lake City [8]	32	11.7	3	45	10.7	2	12.4	12.8
San Antonio	48	10.4	5	(6)	16.3	11	15.1	17.6
San Diego	41	13.7	1	20	12.2	1	13.9	14.5
San Francisco	204	16.4	9	60	11.9	4	13.3	13.2
Schenectady	23	12.5	3	88	10.3	2	10.8	11.5
Seattle	68	9.5	1	9	12.4	3	11.6	11.1
Somerville	15	7.4	3	112	8.0	1	9.4	10.1
South Bend	13	6.3	3	75	7.9	1	8.3	9.1
Spokane	18	8.1	2	52	8.6	1	12.5	12.5
Springfield, Mass.	19	6.5	0	0	9.0	4	12.1	12.5
Syracuse	45	11.0	3	36	10.9	7	11.9	12.0
Tacoma	9	4.4	0	0	12.2	2	12.2	12.9
Toledo	57	10.1	2	18	9.3	1	12.3	12.9
Trenton	34	14.3	1	17	13.1	4	17.1	17.1
Utica	22	11.2	4	104	8.7	1	14.5	15.3

Footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended August 22, 1931, infant mortality, annual death rate, and comparison with corresponding week of 1930—Continued

City	Week ended Aug. 22, 1931				Corresponding week, 1930		Death rate for the first 34 weeks	
	Total deaths	Death rate	Deaths under 1 year	Infant mortality rate	Death rate	Deaths under 1 year	1931	1930
Washington, D. C.	128	13.5	9	50	12.2	19	16.2	15.6
White	70		2	16		12		
Colored	58	(6)	7	120	(6)	7	(6)	(6)
Waterbury	19	9.8	5	151	10.4	3	9.8	10.3
Wilmington, Del.[7]	27	13.2	4	86	11.7	1	14.5	14.7
Worcester	27	7.1	1	14	10.7	4	12.6	13.3
Yonkers	28	10.5	3	79	5.8	1	8.9	8.3
Youngstown	26	7.8	3	42	7.9	4	10.6	10.4

[1] Deaths of nonresidents are included. Stillbirths are excluded.
[2] These rates represent annual rates per 1,000 population, as estimated for 1931 and 1930 by the arithmetical method.
[3] Deaths under 1 year of age per 1,000 live births. Cities left blank are not in the registration area for births.
[4] Data for 77 cities.
[5] Deaths for week ended Friday.
[6] For the cities for which deaths are shown by color, the percentage of colored population in 1920 was as follows: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Indianapolis, 11; Kansas City, Kans., 14; Knoxville, 15; Louisville, 17; Memphis, 38; Miami, 31; Nashville, 30; New Orleans, 26; Richmond, 32; and Washington, D. C., 25.
[7] Population Apr. 1, 1930; decreased 1920 to 1930, no estimate made.

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

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Weeks Ended August 29, 1931, and August 30, 1930

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended August 29, 1931, and August 30, 1930

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930
New England States:								
Maine		3	1	2	3	3	0	0
New Hampshire	1	1				2	0	0
Vermont		1			1		0	0
Massachusetts	29	56	4	1	18	47	2	2
Rhode Island		4			18		2	0
Connecticut	3	6		2	3	2	1	1
Middle Atlantic States:								
New York	53	52	[1] 4	[1] 5	96	75	5	8
New Jersey	17	28	1	8	18	19	2	3
Pennsylvania	35	36			69	48	13	17
East North Central States:								
Ohio	32	24	12	9	37	12	4	6
Indiana	10	8	12	9	17	1	5	5
Illinois	52	68		4	25	10	3	5
Michigan	14	23			12	22	2	4
Wisconsin	10	5	10	18	18	44	2	4
West North Central States:								
Minnesota	5	14	1	3	3	2	2	1
Iowa	1	6			2		1	0
Missouri	22	19	3		3	10	3	5
North Dakota	2	4			2		0	0
South Dakota	4	4			1		1	0
Nebraska	5	1		1	3	6	1	0
Kansas	6	11			1	15	0	4
South Atlantic States:								
Delaware		1				1		0
Maryland [2]	13	16	1	7	5	4	2	1
District of Columbia	9	4	2		1	1	0	0
Virginia								
West Virginia	7	9		4	31	1	3	0
North Carolina [3]	42	67	3		10	4	0	0
South Carolina [3]	14	21	144	138	5		0	0
Georgia [3]	23	16	2	4	31	4	0	0
Florida	6	5	1			4	0	0

[1] New York City only.
[2] Week ended Friday.
[3] Typhus fever, 1931, 15 cases: 1 case in North Carolina; 1 case in South Carolina; 5 cases in Georgia; 3 cases in Alabama; and 5 cases in Texas.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended August 29, 1931, and August 30, 1930—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930
East South Central States:								
Kentucky	24				20		2	0
Tennessee	16	10	9	4	3		2	1
Alabama [3]	57	16	6	6	4	27	0	2
Mississippi	50	14					1	1
West South Central States:								
Arkansas	22	1	5	9	2		1	0
Louisiana	24	8	1	6	5	3	0	3
Oklahoma [4]	23	3	12	2		1	0	3
Texas [3]	16	13	3	18	3	2	0	0
Mountain States:								
Montana	5				13	2	0	2
Idaho	1				1		1	0
Wyoming					1		0	0
Colorado	3	12			5	5	0	2
New Mexico		10				10	0	
Arizona		2					2	1
Utah [3]	1		3	4			0	2
Pacific States:								
Washington	3	2			4	6	0	0
Oregon	5	3	10	1	2	8	0	0
California	30	24	15	15	49	44	2	4

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930
New England States:								
Maine	6	5	7	12	0	0	1	5
New Hampshire	4	0	1	1	0	0	0	2
Vermont	5	0	2	2	4	0	0	1
Massachusetts	135	23	65	42	0	0	10	12
Rhode Island	20	1	6	4	0	0	6	8
Connecticut	134	3	9	8	0	0	9	1
Middle Atlantic States:								
New York	612	29	93	42	2	0	62	30
New Jersey	103	1	26	16	0	0	11	19
Pennsylvania	9	7	51	53	0	0	41	55
East North Central States:								
Ohio	18	28	103	50	3	5	29	39
Indiana	3	4	16	10	9	15	17	19
Illinois	38	19	63	60	11	8	43	41
Michigan	76	5	67	41	7	7	14	21
Wisconsin	61	5	14	27	0	2	3	9
West North Central States:								
Minnesota	39	19	16	14	1	1	4	5
Iowa	8	6	8	5	8	6	3	1
Missouri	4	19	16	17	2	1	14	13
North Dakota	0	1	1	5	3	1	10	16
South Dakota	0	9	1	1	1	4	4	2
Nebraska	1	6	6	5	1	4	5	0
Kansas	1	48	18	12	0	7	7	18
South Atlantic States:								
Delaware		0	3	1		0	3	8
Maryland [3]	1	5	12	9	0	0	32	38
District of Columbia	0	0	3	4	0	0	2	[5] 12
Virginia	2							
West Virginia	10	1	13	10	0	7	38	73
North Carolina [3]	4	2	33	45	0	1	32	40
South Carolina [3]	2	0	11	8	0	0	69	48
Georgia [3]	7	0	40	4	7	0	65	35
Florida	0	0	1	5	0	0	1	1

[3] Week ended Friday.
[5] Typhus fever, 1931, 15 cases: 1 case in North Carolina; 1 case in South Carolina; 5 cases in Georgia; 3 cases in Alabama; and 5 cases in Texas.
[4] Figures for 1931 are exclusive of Oklahoma City and Tulsa, and for 1930 are exclusive of Tulsa only.
[5] Includes nonresidents.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended August 29, 1931, and August 30, 1930—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930	Week ended Aug. 29, 1931	Week ended Aug. 30, 1930
East South Central States:								
Kentucky	1	1	19	2	5	3	47	39
Tennessee	1	2	27	21	5	0	79	54
Alabama [1]	0	3	23	1	0	1	39	30
Mississippi	2	4	14	1	3	0	46	27
West South Central States:								
Arkansas	1	8	3	3	9	2	65	38
Louisiana	0	13	16	1	2	0	55	36
Oklahoma [4]	0	8	8	4	4	11	31	43
Texas [1]	1	1	8	9	1	7	14	12
Mountain States:								
Montana	3	0	10	5	2	0	0	1
Idaho	0	0	7	1	0	0	3	0
Wyoming	1	2	0	3	0	0	1	1
Colorado	0	2	15	8	6	1	2	15
New Mexico	1	2	4	1	0	10	6	15
Arizona	0	0	0	1	0	0	5	11
Utah [2]	0	0	2	3	0	0	1	4
Pacific States:								
Washington	0	1	11	9	25	11	7	5
Oregon	1	2	9	7	11	3	6	5
California	6	49	54	27	5	5	19	13

[1] Week ended Friday.
[2] Typhus fever, 1931, 15 cases: 1 case in North Carolina; 1 case in South Carolina; 5 cases in Georgia; 3 cases in Alabama; and 5 crses in Texas.
[4] Figures for 1931 are exclusive of Oklahoma City and Tulsa, and for 1930 are exclusive of Tulsa only.

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 feve	Smallpox	Typhoid fever
June, 1931										
Delaware		6	1		267		0	20	0	1
July, 1931										
Arkansas	1	9		183	12	484	0	9	25	155
California	7	233	58	13	936	11	24	210	43	80
Montana	1	2	3		54		4	22	8	14
Nevada	1	1	1	1	27		0	2	0	3
Oregon	1	10	29	1	44		0	21	49	17
Rhode Island		30	1		378		10	47	0	1
South Dakota		13	3		6		4	22	8	17
Texas	3	69	4	1,054		5	5	83		127
Virginia	6	46	312	60	234	97	9	71	12	251

June, 1931

Delaware:

	Cases
Chicken pox	8
Mumps	18
Whooping cough	26

July, 1931

Actinomycosis:

	Cases
California	2
South Dakota	1

Anthrax:

	Cases
Oregon	1

Chicken pox:

	Cases
Arkansas	16
California	316
Montana	34
Oregon	44
Rhode Island	7
South Dakota	20
Virginia	71

	Cases
Diarrhea and dysentery:	
Virginia	2,377
Dysentery:	
California (amebic)	3
California (bacillary)	17
Food poisoning:	
California	92
German measles:	
California	25
Montana	4
Rhode Island	1
Granuloma, coccidioidal:	
California	1
Hookworm disease:	
Arkansas	3
Impetigo contagiosa:	
Oregon	12
Leprosy:	
California	1
Lethargic encephalitis:	
California	3
Mumps:	
Arkansas	24
California	326
Montana	2
Oregon	83
Rhode Island	56
South Dakota	8
Ophthalmia neonatorum:	
California	2
Montana	1
Paratyphoid fever:	
California	7
Oregon	1
Texas	8
Rabies in animals:	
California	43
Rocky Mountain spotted or tick fever:	
Montana	3
Nevada	2
Oregon	1
Virginia	1
Scabies:	
Oregon	1
Septic sore throat:	
California	10
Montana	8
Oregon	8
Rhode Island	2
Tetanus:	
California	1
Tick paralysis:	
Montana	1
Trachoma:	
Arkansas	3
California	10
Oregon	1
South Dakota	4
Trichinosis:	
California	6
Tularaemia:	
Arkansas	2
California	4
Montana	1
Nevada	5
Virginia	2
Typhus fever:	
Virginia	7
Undulant fever:	
California	12
Montana	1
Oregon	1
Virginia	2
Vincent's angina:	
Oregon	15
Whooping cough:	
Arkansas	42
California	820
Montana	58
Nevada	9
Oregon	56
Rhode Island	43
South Dakota	36
Virginia	489

RECIPROCAL NOTIFICATIONS

Notifications regarding communicable diseases sent during the month of April, 1931, by departments of health of certain States to other State health departments

Disease	California	Connecticut	Florida	Illinois	Kansas	Minnesota	New York	Oregon
Chicken pox							1	
Gonorrhea						2		
Measles							2	
Scarlet fever							2	
Smallpox				1				
Syphilis					7	2		
Tuberculosis	2			1		35		3
Typhoid fever	1	1	1					
Whooping cough							1	

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 96 cities reporting cases used in the following table are situated in all parts of the country and have an estimated aggregate population of more than 33,140,000. The estimated population of the 89 cities reporting deaths is more than 31,595,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended August 22, 1931, and August 23, 1930

	1931	1930	Estimated expectancy
Cases reported			
Diphtheria:			
46 States	559	574	
96 cities	192	210	371
Measles:			
45 States	574	559	
96 cities	185	174	
Meningococcus meningitis:			
46 States	88	94	
96 cities	31	38	
Poliomyelitis:			
46 States	1,135	332	
Scarlet fever:			
46 States	822	617	
96 cities	278	205	228
Smallpox:			
46 States	103	149	
96 cities	7	12	12
Typhoid fever:			
46 States	960	1,009	
96 cities	133	118	160
Deaths reported			
Influenza and pneumonia:			
89 cities	303	283	
Smallpox:			
89 cities	0	0	

City reports for week ended August 22, 1931

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence the number of cases of the disease under consideration that may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding weeks of the preceding years. When the reports include several epidemics, or when for other reasons the median is unsatisfactory, the epidemic periods are excluded, and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If the reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1922 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviation from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND								
Maine:								
Portland	0	1	0		0	0	0	1
New Hampshire:								
Concord	0	0	0		0	0	0	0
Nashua	0	0	1		0	1	0	0
Vermont:								
Barre	0	0	0		0	0	0	1
Burlington	1	0	0		0	0	1	0
Massachusetts:								
Boston	7	13	19		0	5	4	8
Fall River	0	1	2		0	4	0	1
Springfield	0	1	0		0	1	4	0
Worcester	0	3	4		0	1	4	1
Rhode Island:								
Pawtucket	0	0	0		0	0	0	0
Providence	0	2	1		0	14	1	1
Connecticut:								
Bridgeport	0	2	1	1	1	1	0	1
Hartford	0	2	1		0	0	1	1
New Haven	0	0	0		0	0	1	0

City reports for week ended August 22, 1931—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MIDDLE ATLANTIC								
New York:								
Buffalo	1	7	3	1	0	0	2	6
New York	14	83	30	6	2	25	12	83
Rochester	1	2	1	----	0	13	0	3
Syracuse	0	1	1	----	0	6	0	1
New Jersey:								
Camden	0	2	1	----	0	1	0	0
Newark	2	6	0	----	0	3	4	3
Trenton	0	0	0	----	0	5	1	0
Pennsylvania:								
Philadelphia	6	26	2	3	1	2	6	19
Pittsburgh	0	9	5	----	1	1	6	10
Reading	0	0	0	----	0	0	0	0
EAST NORTH CENTRAL								
Ohio:								
Cincinnati	0	3	3	----	0	0	0	4
Cleveland	4	15	2	----	0	12	12	9
Columbus	0	2	1	----	0	0	0	1
Toledo	1	3	3	----	0	2	0	2
Indiana:								
Fort Wayne	0	1	2	----	0	0	0	1
Indianapolis	0	2	0	----	0	0	2	9
South Bend	0	0	0	----	0	1	0	1
Terre Haute	----	1	----	----	----	----	----	----
Illinois:								
Chicago	11	50	26	2	3	29	7	16
Springfield	0	0	0	----	0	0	0	0
Michigan:								
Detroit	3	23	6	----	0	2	5	9
Flint	1	1	1	----	0	2	1	0
Grand Rapids	0	0	0	----	0	0	0	0
Wisconsin:								
Kenosha	0	0	0	----	0	1	5	0
Madison	1	1	5	----	----	0	8	----
Milwaukee	10	6	3	----	0	14	11	2
Racine	0	0	0	----	0	0	10	0
Superior	1	0	1	----	0	0	1	0
WEST NORTH CENTRAL								
Minnesota:								
Duluth	2	0	0	----	0	1	0	0
Minneapolis	1	9	4	----	1	0	2	0
St. Paul	----	3	----	----	----	----	----	----
Iowa:								
Davenport	0	1	0	----	----	0	0	----
Des Moines	0	1	0	----	----	0	0	----
Sioux City	1	0	1	----	----	0	0	----
Waterloo	0	0	0	----	----	0	0	----
Missouri:								
Kansas City	0	1	1	----	0	4	2	3
St. Joseph	0	0	0	----	0	0	0	2
St. Louis	2	13	7	----	----	0	1	4
North Dakota:								
Fargo	0	1	0	----	0	0	0	0
Grand Forks	0	0	0	----	----	0	0	----
South Dakota:								
Aberdeen	3	0	0	----	----	0	0	----
Nebraska:								
Omaha	0	2	2	----	0	2	1	2
Kansas:								
Topeka	0	0	0	----	0	0	5	0
Wichita	3	0	0	----	0	0	1	0
SOUTH ATLANTIC								
Delaware:								
Wilmington	1	0	0	----	0	0	4	2
Maryland:								
Baltimore	4	11	5	1	1	2	2	10
Cumberland	0	0	0	----	0	0	0	1
Frederick	0	0	0	----	0	0	0	0

City reports for week ended August 22, 1931—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC—continued								
District of Columbia:								
Washington	6	6	1	1	1	1	0	3
Virginia:								
Lynchburg	0	1	0		0	0	1	0
Norfolk	0	1	0		0	0	0	2
Richmond	0	5	0		0	0	0	2
Roanoke	0	1	0		0	2	0	2
West Virginia:								0
Charleston	0	0	0		0	0	0	0
Wheeling	0	0	0		0	0	0	2
North Carolina:								
Raleigh	0	0	0		0	0	0	0
Wilmington	0	0	1		0	0	0	0
Winston-Salem	0	1	1		0	4	5	1
South Carolina:								
Charleston	0	0	0	5	0	1	0	0
Columbia	0	1	1		0	0	0	2
Greenville	0	0	0		0	0	0	0
Georgia:								
Atlanta	0	2	3	1	1	0	0	6
Brunswick	0	0	0		0	0	0	1
Savannah	0	0	0	1	0	0	0	2
Florida:								
Miami	0	1	1		0	0	1	0
Tampa	0	0	0		0	0	0	0
EAST SOUTH CENTRAL								
Kentucky:								
Covington	0	0	0		0	0	0	0
Tennessee:								
Memphis	1	1	1		0	1	0	3
Nashville	0	1	1		0	2	0	2
Alabama:								
Birmingham	0	2	3	1	0	1	0	2
Mobile	0	0	0		0	0	0	2
Montgomery	0	0	1	1		0	0	
WEST SOUTH CENTRAL								
Arkansas:								
Fort Smith	0	0	2			0	0	
Little Rock	0	0	0		0	0	0	2
Louisiana:								
New Orleans	0	5	12		0	0	0	5
Shreveport	1	0	0		0	0	0	0
Oklahoma:								
Muskogee	0	0	3		0	0	0	0
Oklahoma City	1	0	3	3	0	0	0	0
Tulsa	0	1	0			0	0	
Texas:								
Dallas	0	4	2		0	1	0	1
Fort Worth	0	0	2		0	0	0	0
Galveston	0	0	0		0	0	0	0
Houston	0	0	1		0	1	0	7
San Antonio	0	2	3		0	0	0	2
MOUNTAIN								
Montana:								
Billings	0	0	0		0	5	0	0
Great Falls	1	0	0		0	1	0	0
Helena	0	0	0		0	0	0	0
Missoula	0	0	0		0	1	0	0
Idaho:								
Boise	0	1	0		0	1	0	1
Colorado:								
Denver	5	6	5		0	0	0	4
Pueblo	1	1	0		0	0	0	0
New Mexico:								
Albuquerque	0	0	0		0	0	0	1
Utah:								
Salt Lake City	4	1	0		0	0	1	0
Nevada:								
Reno	0	0	0		0	0	0	0

City reports for week ended August 22, 1931—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
PACIFIC								
Washington:								
Seattle	2	2	1	1		1	2	
Spokane	0	1	0	3		0	0	
Tacoma	0	1	0		0	0	2	0
Oregon:								
Portland	4	3	2		0	0	0	1
Salem	0	0	0	1	0	0	1	0
California:								
Los Angeles	3	19	12	4	3	8	6	15
Sacramento	0	0	0		0	0	0	3
San Francisco	2	6	5	1	0	2	2	4

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine:											
Portland	0	0	0	0	0	0	1	1	0	8	16
New Hampshire:											
Concord	0	0	0	0	0	0	0	0	0	0	5
Nashua	0	0	0	0	0	0	0	0	0	0	
Vermont:											
Barre	0	0	0	0	0	0	0	0	0	2	4
Burlington	1	0	0	0	0	0	0	0	0	0	10
Massachusetts:											
Boston	15	21	0	0	0	7	3	0	0	34	178
Fall River	0	2	0	0	0	1	1	0	0	2	21
Springfield	1	1	0	0	0	1	0	1	1	2	20
Worcester	2	6	0	0	0	5	0	0	0	12	27
Rhode Island:											
Pawtucket	0	0	0	0	0	0	0	0	0	0	7
Providence	2	8	0	0	0	2	1	0	0	9	50
Connecticut:											
Bridgeport	2	1	0	0	0	1	0	0	0	0	18
Hartford	1	2	0	0	0	5	1	0	0	5	45
New Haven	1	0	0	0	0	1	1	0	0	0	36
MIDDLE ATLANTIC											
New York:											
Buffalo	5	4	0	0	0	7	1	1	1	11	129
New York	23	33	0	0	0	103	34	19	3	167	1,310
Rochester	2	7	0	0	0	0	0	1	0	4	68
Syracuse	1	8	0	0	0	2	0	0	0	14	45
New Jersey:											
Camden	0	0	0	0	0	2	0	1	0	3	29
Newark	3	1	0	0	0	6	2	1	0	136	78
Trenton	1	0	0	0	0	2	0	0	0	0	34
Pennsylvania:											
Philadelphia	14	21	0	0	0	32	8	4	0	106	388
Pittsburgh	7	9	0	0	0	6	2	3	1	49	138
Reading	0	0	0	0	0	0	0	1	0	2	19
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	4	16	0	0	0	9	2	0	0	10	111
Cleveland	9	14	0	0	0	17	3	0	0	78	172
Columbus	2	1	0	0	0	5	0	2	0	1	68
Toledo	2	3	1	0	0	4	2	0	0	21	57
Indiana:											
Fort Wayne	0	1	0	0	0	3	0	0	0	1	17
Indianapolis	2	1	0	0	0	2	1	2	1	20	
South Bend	1	0	0	0	0	0	0	0	0	1	13
Terre Haute	0		0				0				

City reports for week ended August 22, 1931—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
EAST NORTH CENTRAL—CON.											
Illinois:											
Chicago	24	24	1	0	0	36	5	6	0	152	553
Springfield	0	0	0	0	0	0	1	2	0	0	17
Michigan:											
Detroit	21	20	1	0	0	21	4	6	0	158	239
Flint	3	1	0	0	0	2	0	0	0	0	19
Grand Rapids	3	6	0	0	0	0	0	0	0	3	23
Wisconsin:											
Kenosha	0	2	0	0	0	0	0	0	0	1	6
Madison	1	0	0	0	----	----	0	1	----	2	----
Milwaukee	4	6	0	0	0	5	1	0	0	57	81
Racine	1	1	0	0	0	0	0	0	0	12	13
Superior	1	0	0	0	0	0	0	0	0	0	5
WEST NORTH CENTRAL											
Minnesota:											
Duluth	3	1	0	0	0	0	1	0	0	1	15
Minneapolis	10	7	1	2	0	3	1	2	0	6	80
St. Paul	6	----	0	----	----	----	1	----	----	----	----
Iowa:											
Davenport	0	0	1	0	----	----	0	0	----	0	----
Des Moines	2	2	1	1	----	----	0	0	----	0	19
Sioux City	0	0	0	0	----	----	0	1	----	5	----
Waterloo	0	0	0	0	----	----	0	1	----	0	----
Missouri:											
Kansas City	2	1	0	0	0	5	2	1	1	3	64
St. Joseph	0	0	0	0	0	0	1	0	0	4	22
St. Louis	8	1	1	0	0	15	7	4	0	37	194
North Dakota:											
Fargo	1	0	0	0	0	0	0	0	0	9	7
Grand Forks	1	0	0	0	----	----	0	0	----	0	----
South Dakota:											
Aberdeen	0	0	0	0	----	----	0	0	----	1	----
Nebraska:											
Omaha	1	0	1	1	0	3	1	1	0	1	36
Kansas:											
Topeka	1	0	0	0	0	1	0	0	0	2	13
Wichita	1	0	0	0	0	1	1	0	0	0	16
SOUTH ATLANTIC											
Delaware:											
Wilmington	0	0	0	0	0	1	0	0	0	3	27
Maryland:											
Baltimore	4	4	0	0	0	12	8	7	0	84	13
Cumberland	0	0	0	0	0	0	1	2	0	0	16
Frederick	0	1	0	0	0	0	0	0	0	0	5
District of Columbia:											
Washington	4	6	0	0	0	11	4	2	0	10	128
Virginia:											
Lynchburg	0	0	0	0	0	0	1	5	2	0	8
Norfolk	1	3	1	0	0	3	1	1	0	1	----
Richmond	2	4	0	0	0	3	2	2	0	0	36
Roanoke	0	0	0	0	0	1	1	0	0	0	15
West Virginia:											
Charleston	0	0	0	0	0	0	1	1	0	0	5
Wheeling	0	0	0	0	0	0	0	1	0	0	15
North Carolina:											
Raleigh	0	0	0	0	0	0	0	0	0	1	22
Wilmington	0	0	0	0	0	0	1	0	0	5	----
Winston-Salem	1	0	0	0	0	0	2	0	1	19	12
South Carolina:											
Charleston	0	0	0	0	0	1	2	3	0	0	20
Columbia	0	0	0	0	0	0	1	1	0	0	21
Greenville	0	0	0	0	0	0	0	0	0	0	----
Georgia:											
Atlanta	3	3	1	2	0	8	4	1	0	2	90
Brunswick	0	0	0	0	0	0	0	0	0	0	4
Savannah	0	0	0	0	0	4	0	2	0	0	29

City reports for week ended August 22, 1931—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
SOUTH ATLANTIC—continued											
Florida:											
Miami	0	0	0	0	0	2	0	0	0	0	315
Tampa	0	0	0	0	0	1	0	1	0	0	1
EAST SOUTH CENTRAL											
Kentucky:											
Covington	0	0	1	0	0	2	0	0	0	0	18
Tennessee:											
Memphis	1	1	1	0	0	5	10	1	1	26	78
Nashville	0	0	0	0	0	2	6	2	0	3	40
Alabama:											
Birmingham	2	2	0	0	0	5	5	4	2	6	61
Mobile	0	0	0	0	0	2	0	0	0	0	24
Montgomery	1	0	0	0	----	----	1	5	----	0	----
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	0	0	0	0	----	----	0	0	----	0	----
Little Rock	0	0	0	0	0	4	2	0	0	0	8
Louisiana:											
New Orleans	2	5	0	0	0	24	4	19	[1]3	2	135
Shreveport	0	0	0	0	0	1	2	0	2	3	39
Oklahoma:											
Muskogee	0	0	0	0	0	0	0	1	0	0	----
Oklahoma City	1	3	0	0	0	0	3	1	0	0	25
Tulsa	0	1	0	0	----	----	2	2	----	0	----
Texas:											
Dallas	3	2	1	0	0	2	3	4	2	11	50
Fort Worth	1	4	0	0	0	0	1	0	0	0	24
Galveston	0	0	0	0	0	0	0	0	0	0	7
Houston	1	0	0	0	0	3	1	2	0	3	73
San Antonio	0	1	0	0	0	6	1	2	2	0	48
MOUNTAIN											
Montana:											
Billings	0	0	0	0	0	0	0	0	0	0	3
Great Falls	0	0	0	0	0	1	0	0	0	0	8
Helena	0	0	0	0	0	0	0	0	0	0	5
Missoula	0	0	0	0	0	0	0	0	0	0	10
Idaho:											
Boise	0	2	0	0	0	1	0	0	0	0	9
Colorado:											
Denver	3	3	0	0	0	6	1	0	1	13	63
Pueblo	0	0	0	0	0	0	1	0	0	0	----
New Mexico:											
Albuquerque	0	0	0	0	0	3	0	0	0	2	10
Utah:											
Salt Lake City	1	0	0	0	0	1	2	1	1	2	32
Nevada:											
Reno	0	0	0	0	0	0	0	0	0	0	7
PACIFIC											
Washington:											
Seattle	2	5	0	1	----	----	1	1	----	11	----
Spokane	1	0	0	0	----	----	1	0	----	0	----
Tacoma	1	3	1	1	0	0	0	1	1	3	9
Oregon:											
Portland	2	3	3	5	0	2	1	2	0	0	47
Salem	0	1	0	0	0	0	0	0	0	0	----
California:											
Los Angeles	8	5	1	0	0	20	3	0	0	9	240
Sacramento	1	0	0	0	0	2	0	1	1	1	21
San Francisco	5	3	1	0	0	12	2	1	0	22	153

[1] Out of town.

City reports for week ended August 22, 1931—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Maine:									
Portland	0	0	0	0	0	0	1	3	0
Massachusetts:									
Boston	1	1	1	0	0	0	2	36	4
Fall River	0	0	0	0	0	0	1	2	0
Springfield	0	0	0	0	0	0	0	5	1
Rhode Island:									
Pawtucket	0	0	0	0	0	0	0	1	0
Providence	0	0	0	0	0	0	0	19	2
Connecticut:									
Bridgeport	0	0	0	0	0	0	0	7	0
Hartford	0	0	0	0	0	0	0	30	2
New Haven	0	0	0	0	0	0	0	10	0
MIDDLE ATLANTIC									
New York:									
Buffalo	1	1	0	0	0	0	1	4	0
New York	5	2	1	0	0	0	9	422	46
Rochester	0	0	0	0	0	0	0	2	0
Syracuse	0	0	0	0	0	0	3	1	0
New Jersey:									
Newark	1	0	0	0	0	0	1	7	0
Pennsylvania:									
Philadelphia	5	2	0	0	0	0	1	0	0
Pittsburgh	1	0	1	0	0	0	1	0	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	0	1	0	0	0	0	1	0	0
Cleveland	1	1	11	0	0	0	1	7	1
Indiana:									
Indianapolis	2	2	0	0	0	0	0	0	0
South Bend	0	0	0	0	0	0	0	3	0
Illinois:									
Chicago	5	1	0	0	1	2	2	10	2
Springfield	0	0	0	0	0	0	0	1	0
Michigan:									
Detroit	1	0	1	0	0	0	1	12	0
Flint	0	1	0	0	0	0	0	1	0
Grand Rapids	0	0	0	0	0	0	0	2	0
Wisconsin:									
Madison	0	0	0	0	0	0	0	3	0
Milwaukee	0	0	0	0	0	0	0	1	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth	0	0	0	0	0	0	0	11	2
Minneapolis	0	0	0	0	0	0	0	2	0
Missouri:									
St. Louis	2	2	0	0	0	0	0	2	0
SOUTH ATLANTIC									
Maryland:									
Baltimore	0	0	0	0	0	0	0	2	0
District of Columbia:									
Washington	0	0	0	0	1	3	0	0	0
Virginia:									
Richmond	0	0	0	0	0	0	1	1	0
West Virginia:									
Charleston	0	0	0	0	0	0	0	1	0
Wheeling	0	0	0	0	0	0	0	2	0
South Carolina:									
Charleston	0	0	0	0	4	0	0	0	0
Georgia: [1]									
Atlanta	1	1	0	0	0	0	0	0	0

[1] Typhus fever: 1 case at Savannah, Ga.

City reports for week ended August 22, 1931—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST SOUTH CENTRAL									
Tennessee:									
Memphis	0	1	0	1	0	1	1	0	0
Nashville	0	1	0	0	0	0	0	0	0
Alabama:									
Mobile	0	0	0	0	0	1	0	0	0
Montgomery	0	0	0	0	1	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
For Smith	1	0	0	0	0	0	0	0	0
Little Rock	0	1	0	0	0	1	0	0	0
Louisiana:									
New Orleans	1	0	0	0	0	0	0	0	0
Shreveport	0	0	0	0	0	1	0	0	0
MOUNTAIN									
New Mexico:									
Albuquerque	0	0	0	0	0	0	0	1	0
PACIFIC									
Washington:									
Seattle	2	0	0	0	0	0	1	2	0
California:									
Sacramento	1	1	0	0	0	0	0	0	0
San Francisco	0	0	0	0	2	0	0	0	0

The following tables give the rates per 100,000 population for 98 cities for the 5-week period ended August 22, 1931, compared with those for a like period ended August 23, 1930. The population figures used in computing the rates are estimated midyear populations for 1930 and 1931, respectively, derived from the 1930 census. The 98 cities reporting cases have an estimated aggregate population of more than 33,000,000. The 91 cities reporting deaths have more than 31,500,000 estimated population.

Summary of weekly reports from cities, July 19 to Aug. 22, 1931.—Annual rates per 100,000 population compared with rates for the corresponding period of 1930 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	July 25, 1931	July 26, 1930	Aug. 1, 1931	Aug. 2, 1930	Aug. 8, 1931	Aug. 9, 1930	Aug. 15, 1931	Aug. 16, 1930	Aug. 22, 1931	Aug. 23, 1930
98 cities	33	37	35	38	31	37	[2] 33	31	[3] 30	33
New England	50	24	53	36	65	34	41	44	67	44
Middle Atlantic	34	33	31	34	26	32	26	22	19	27
East North Central	39	49	38	48	31	48	[4] 30	36	[5] 28	40
West North Central	33	35	17	35	29	29	36	27	[6] 32	25
South Atlantic	28	38	32	40	26	18	[7] 44	38	24	40
East South Central	12	24	12	6	41	18	[8] 19	30	35	12
West South Central	24	31	61	35	64	49	[9] 48	49	68	63
Mountain	35	70	35	35	26	18	78	18	44	44
Pacific	16	28	47	45	18	57	[10] 39	30	35	22

See footnotes at end of table.

Summary of weekly reports from cities, July 19 to Aug. 22, 1931.—Annual rates per 100,000 population compared with rates for the corresponding period of 1930.[1]— Continued.

MEASLES CASE RATES

	Week ended—									
	July 25, 1931	July 26, 1930	Aug. 1, 1931	Aug. 2, 1930	Aug. 8, 1931	Aug. 9, 1930	Aug. 15, 1931	Aug. 16, 1930	Aug. 22, 1931	Aug. 23, 1930
98 cities	133	105	93	67	60	49	[2] 39	32	[3] 29	28
New England	269	191	132	106	135	99	79	65	63	65
Middle Atlantic	111	144	84	87	57	61	32	39	25	31
East North Central	214	59	153	33	87	27	[4] 62	19	[5] 37	21
West North Central	34	64	27	43	15	52	11	31	[6] 15	19
South Atlantic	83	50	47	60	34	24	[7] 10	24	20	20
East South Central	105	54	47	36	12	18	[8] 25	18	23	6
West South Central	14	7	10	10	3	10	[9] 0	7	7	0
Mountain	174	176	269	159	70	115	61	44	70	26
Pacific	125	164	57	105	43	63	[10] 52	43	22	40

SCARLET FEVER CASE RATES

98 cities	53	49	47	38	46	31	[2] 34	30	[3] 44	32
New England	111	73	82	60	43	46	53	56	99	51
Middle Atlantic	56	34	52	21	51	20	31	17	38	25
East North Central	69	76	52	50	60	45	[4] 48	39	[5] 57	35
West North Central	29	31	31	48	19	27	23	29	[6] 21	35
South Atlantic	38	40	41	44	38	20	[7] 22	28	36	30
East South Central	6	48	35	6	41	12	[8] 44	48	17	30
West South Central	44	45	20	52	41	35	[9] 17	31	27	35
Mountain	0	26	61	62	61	70	26	44	44	38
Pacific	12	38	16	34	22	38	[10] 13	32	31	28

SMALLPOX CASE RATES

98 cities	3	7	2	4	3	3	[2] 1	3	[3] 1	2
New England	0	0	0	0	0	0	0	0	0	0
Middle Atlantic	0	0	0	0	0	0	0	0	0	0
East North Central	2	8	1	2	2	6	[4] 8	3	[5] 0	0
West North Central	10	21	11	12	13	6	8	6	[6] 6	8
South Atlantic	0	2	2	4	2	2	[7] 2	0	4	2
East South Central	6	18	6	0	0	0	[8] 0	6	0	0
West South Central	0	3	3	14	0	7	[9] 0	3	0	7
Mountain	0	18	0	0	9	0	9	0	0	0
Pacific	20	22	8	22	14	4	[10] 3	12	4	10

TYPHOID FEVER CASE RATES

98 cities	16	18	27	18	22	17	[2] 22	20	[3] 21	19
New England	10	7	12	7	14	5	26	5	5	17
Middle Atlantic	8	7	13	5	16	10	14	14	14	13
East North Central	5	13	11	12	10	11	[4] 7	10	[5] 11	9
West North Central	19	48	31	23	19	19	13	29	[6] 21	21
South Atlantic	69	42	77	52	53	66	[7] 78	44	55	60
East South Central	47	66	64	108	29	60	[8] 75	132	70	78
West South Central	10	38	169	42	95	14	[9] 45	42	91	24
Mountain	0	18	17	26	44	35	44	26	9	26
Pacific	27	10	4	16	14	10	[10] 10	12	8	6

See footnotes at end of table.

Summary of weekly reports from cities, July 19 to Aug. 22, 1931.—Annual rates per 100,000 population compared with rates for the corresponding period of 1930.[1]— Continued.

INFLUENZA DEATH RATES

	Week ended—									
	July 25, 1931	July 26, 1930	Aug. 1, 1931	Aug. 2, 1930	Aug. 8, 1931	Aug. 9, 1930	Aug. 15, 1931	Aug. 16, 1930	Aug. 22, 1931	Aug. 23, 1930
91 cities	1	2	3	1	2	3	[11] 3	1	[3] 2	3
New England	0	0	2	0	2	0	0	0	2	0
Middle Atlantic	1	1	4	0	3	2	3	2	2	3
East North Central	2	3	2	1	1	1	[4] 2	0	[5] 2	1
West North Central	0	3	0	0	0	3	3	3	[6] 3	0
South Atlantic	2	4	6	6	0	10	[7] 4	0	6	8
East South Central	0	0	13	0	13	0	[8] 7	0	0	0
West South Central	3	11	0	0	3	0	7	0	0	4
Mountain	0	0	0	0	0	18	17	0	0	9
Pacific	2	2	7	2	5	5	[10] 3	0	7	7

PNEUMONIA DEATH RATES

91 cities	44	56	48	52	48	52	[11] 46	53	[3] 48	45
New England	31	44	41	41	34	46	29	41	36	56
Middle Atlantic	55	68	59	59	52	56	56	68	56	53
East North Central	32	38	30	43	35	47	[4] 37	27	[5] 32	27
West North Central	53	57	47	48	56	45	44	27	[6] 38	36
South Atlantic	43	86	65	66	79	72	[7] 56	74	63	52
East South Central	44	91	50	52	63	45	[8] 55	52	57	65
West South Central	52	71	59	75	62	53	52	85	59	57
Mountain	17	79	44	62	44	70	44	123	44	53
Pacific	43	7	36	35	38	35	[10] 17	40	53	40

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1931, and 1930, respectively.
[3] South Bend and Terre Haute, Ind., Raleigh, N. C., Covington, Ky., Fort Smith, Ark., and San Francisco, Calif., not included.
[4] Terre Haute, Ind., and St. Paul, Minn., not included.
[5] South Bend and Terre Haute, Ind., not included.
[6] Terre Haute, Ind., not included.
[7] St. Paul, Minn., not included.
[8] Raleigh, N. C., not included.
[9] Covington, Ky., not included.
[10] Fort Smith, Ark., not included.
[11] San Francisco, Calif., not included.
[12] South Bend and Terre Haute, Ind., Raleigh, N. C., Covington, Ky., and San Francisco, Calif., not included.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—Week ended August 15, 1931.—The Department of Pensions and National Health of Canada reports cases of certain communicable diseases for the week ended August 15, 1931, as follows:

	Dysentery	Lethargic encephalitis	Poliomyelitis	Smallpox	Typhoid fever
Prince Edward Island [1]					
Nova Scotia					1
New Brunswick					1
Quebec [1]					
Ontario		2	9	2	35
Manitoba					3
Saskatchewan	3		1	6	1
Alberta [1]					
British Columbia			5	3	2
Total	3	2	15	11	43

[1] No case of any disease included in the table was reported during the week.

Quebec Province—Communicable diseases—Week ended August 15, 1931.—The Bureau of Health of the Province of Quebec, Canada, reports cases of certain communicable diseases for the week ended August 15, 1931, as follows:

Disease	Cases	Disease	Cases
Chicken pox	12	Poliomyelitis	17
Diphtheria	10	Scarlet fever	23
Erysipelas	3	Tuberculosis	49
Measles	7	Typhoid fever	28
Ophthalmia neonatorum	1	Whooping cough	34

CUBA

Habana—Communicable diseases—Four weeks ended July 18, 1931.—During the four weeks ended July 18, 1931, certain communicable diseases were reported in Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Chicken pox	3		Scarlet fever	2	
Diphtheria	7	5	Tuberculosis	22	3
Malaria [1]	7		Typhoid fever [1]	29	9
Measles	57	4			

[1] Many of these cases are from the island of Cuba, outside of Habana.

JAMAICA

Communicable diseases—Four weeks ended July 18, 1931.—During the four weeks ended July 18, 1931, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the island of Jamaica outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chicken pox		7	Puerperal fever		3
Diphtheria	1	1	Scarlet fever	3	16
Dysentery	1	5	Tuberculosis	36	74
Erysipelas		3	Typhoid fever	11	82
Leprosy	1	1			

MEXICO

Tampico—Communicable diseases—July, 1931.—During the month of July, 1931, certain communicable diseases were reported in Tampico, Mexico, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Diphtheria	2		Measles	11	3
Dysentery	12	4	Paratyphoid fever	1	1
Enteritis (various)		69	Tuberculosis	39	33
Influenza	9	3	Typhoid fever	8	6
Malaria	171	22	Whooping cough	39	

PORTO RICO

San Juan—Communicable diseases—Four weeks ended July 18, 1931.—During the four weeks ended July 18, 1931, cases of certain communicable diseases were reported in San Juan, Porto Rico, as follows:

Disease	Cases	Disease	Cases
Diphtheria	6	Tetanus	4
Malaria	49	Whooping cough	10
Ophthalmia neonatorum	1		

TRINIDAD

Port of Spain—Vital statistics—June, 1930, 1931.—The following statistics for the month of June, 1930 and 1931, are taken from a report issued by the public health department of Port of Spain, Trinidad:

	June, 1930	June, 1931		June, 1930	June, 1931
Number of births	150	160	Deaths under 1 year	18	20
Birth rate per 1,000 population	27.1	28.3	Deaths under 1 year per 1,000 births	120	125
Number of deaths	110	93			
Death rate per 1,000 population	19.9	16.5			

YUGOSLAVIA

Communicable diseases—June, 1931.—During the month of June, 1931, certain communicable diseases were reported in Yugoslavia, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	52	6	Paratyphoid fever	5	-------
Cerebrospinal meningitis	19	9	Puerperal fever	3	3
Diphtheria and croup	439	55	Rabies	1	1
Dysentery	93	13	Scarlet fever	442	34
Erysipelas	153	6	Tetanus	45	26
Lethargic encephalitis	3	3	Typhoid fever	148	19
Measles	1,004	9	Typhus fever	3	-------

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

From medical officers of the Public Health Service, American consuls, International Office of Public Hygiene, Pan American Sanitary Bureau, health section of the League of Nations, and other sources. The reports contained in the following tables 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		Feb. 8–Mar 7, 1931	Mar. 8–Apr. 4, 1931	Apr. 5–May 2, 1931	May 3–30, 1931	Week ended— June, 1931 6	13	20	27	July, 1931 4	11	18	25	August, 1931 1	8	15	22	29
Ceylon: Colombo	C		1		1	1								1	1	1		
	D				1	1								1	1	1		
China:																		
Canton	C			1	2			1										
	D				1													
Shanghai	C										1				1	5		
Swatow	C						3	1	6	7								
Tientsin	C				1		2	8										
	D				1			1										
India	C	11,544	8,968	11,462	13,604	3,932	4,657	4,687	4,725	4,737	5,002							
	D	6,131	4,550	5,767	7,270	2,146	2,656	2,704	2,831	2,677	2,848							
Bombay	C			2							1	11	11	9	18	6		
	D			1								6	10	4	9	7		
Calcutta	C	170	436	310	265	94	74	50	74	72	62	55	48	42	27	20		
	D	112	256	176	149	57	47	26	38	35	34	58	28	10	7	7		
Karikal	C	9	12	19	12													
	D	8	12	14	7													
Madras	C	72	20	26	52	3	6			2	2			1		2		
	D	29	10	13	17		4											
Moulmein	C											1						
	D											1						
Negapatam	D	3																
Rangoon	C				2		2		2		1	2	1		1	1		
	D				1		1		1			1			1	1		
Tuticorin	C	1																
Vizagapatam	C								1									
India (French):																		
Chandernagor	C	5	7	6	4		1	2		1	1	1	2	1	4	2		
	D	5	6	5	4		1	2			1			1	4	2		
Pondicherry	C	100	100	24	17	1	1	1			1	1	1	1		1		
	D	34	18	4	7	1	1	1			1	1	1	1		1		
India (Portuguese)	C								1		2							
	D										1							

Indo-China (see also table below):																			
Cochin-China—Rachgia	C													P					
Pnompenh	C	9		2		1					1	4			1				
	D	5	1	1	2	1					1	1			1				
Saigon and Cholon	C	4	5	27	104	18	16	14	13	8	3	3							
	D	4	5	22	76	9	14	9	9	3	2	2							
Iraq:																			
Abulkhasib	C																6		
	D																5		
Amara	C																2	22	
	D																1	21	
Amara Province	C																	6	
	D																	5	
Basra	C													3	9	263	272	148	
	D													2	8	140	137	76	
Basra Province	C																5	14	
	D																2	10	
Muntafiq Province	C																	10	
	D																	8	
Suqelshuyukh	C																	2	
	D																	2	
Persia: Rafsanjan [1]	C				36														
	D				14														
Philippine Islands: [2] Provinces—																			
Capiz	C	186	48	29	17	4													
	D	146	41	24	15	4													
Cebu	C														1	1	1		
	D														1	1	1		
Iloilo	C	95	7			8	7	5	6	24	3								
	D	65	4			6	5	6	4	22	3								
Masbate	C		21																
	D		9																
Negros, Occidental	C	4							2										
	D	4							1										
Pampanga	C				1														
Siam	C	1	10	16	14		1	3		1	1			1					
	D		2	4	5		1	1			1								
Ayudhaya District	C		1																
Bangkok	C	2	3	3	3				1	1				3					
	D	1	2	2	1				1					2					
Bismulok Province	C		8																
	D		2																
On vessel:																			
S. S. Arankola at Rangoon from Calcutta	C				1														
S. S. City of Eastborne, at Calcutta from Cocanada	C					1													
S. S. Tairea, at Penang from Calcutta	C						1												
S. S. Bandar Shalpour, at Bushire, Persia, from Basra	C													1					
	D													1					
S. S. Kohistan, at Basra from Bushire, Persia	C													2					

[1] From May 3 to 25, 1931, 152 cases of cholera with 75 deaths were reported in Rafsanjan and vicinity, Karman district, Persia.
[2] Figures for cholera in the Philippine Islands are subject to correction.

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

CHOLERA—Continued

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

Place		January, 1931	February, 1931	March, 1931	April, 1931	May, 1931			June, 1931			July, 1931			Aug. 1–10, 1931
						1–10	11–20	21–31	1–10	11–20	21–30	1–10	11–20	21–31	
Indo-China (French) (see also table above):															
Cambodia [1]	C	62	125	79	58	----	44	40	83	96	----	72	82	87	12
Cochin-China [1]	C	24	29	105	62	1	52	75	71	69	----	66	30	47	39

PLAGUE

Place		Feb. 8–Mar. 7, 1931	Mar. 8–Apr. 4, 1931	Apr. 5–May 2, 1931	Week ended—															
					May, 1931				June, 1931				July, 1931				August, 1931			
					9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22
Algeria:																				
Algiers	C	1	1	----	----	----	----	----	----	----	----	----	----	----	----	2	----	----	----	----
	D	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Bone	C	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----
Constantine, vicinity of	C	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Philippeville	C	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----
	D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----
Argentina:																				
Cordoba Province	C	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Entre Rios Province—Diamante	C	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Jujuy Province—Palpala	C	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
San Juan Province	C	----	----	----	----	----	----	----	----	----	----	----	----	P	P	----	----	----	----	----
Santa Fe	C	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Belgian Congo	C	----	2	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----
	D	----	2	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----
British East Africa (see also table below):																				
Tanganyika	C	22	8	18	17	5	7	17	4	7	5	1	----	----	----	----	----	----	----	----
	D	4	1	21	11	2	8	9	2	4	1	3	----	----	----	----	----	----	----	----
Uganda	C	15	19	35	11	33	31	63	----	91	106	101	95	132	----	----	----	----	----	----
	D	15	19	32	11	26	28	61	----	87	100	99	94	129	----	----	----	----	----	----

Ceylon: Colombo	C	11	8	4	1	1		1		1		1				1	4	1	1	
	D	13	7	3	1	1		1		1		1				1	4	1	1	
Plague-infected rats		3	4	1			5										1	3	4	
China: Amoy [2]	C				1															
	D				1															
Dutch East Indies:																				
Batavia and West Java	C	141	84	74	18	12	14	15	15	25	11	15	21	18	19					
	D	128	80	71	18	12	14	15	15	25	11	15	21	18	19					
East Java and Madura	C	1	4	1	1															
	D	1	4	1	1															
Java and Madura	D	376	277	243	47	41	46	42	41	58	48	45	59	55	52					
Egypt:																				
Alexandria	C	2	1								3	1	1	1	2	9	4	3	1	
	D										3	1	1			4	1	2		
Plague-infected rats		1																		
Assiout	C	41	13	32	4	5	8	1	4		5	2								
	D	11	6	17	2	4	1					1								
Beni-Suef	C			12	3		2													
	D			3	1		2													
Beheira	C																1		1	
Cairo	C		1																	
Dakahlia	C														1			2		
Deirout	C	16		3	7	1		2	3											
	D	4		1	2	2			1											
Gharbieh	C									1										
	D									1										
Girga	C		86	44	1	1		5					1							
	D		24	22	1	1														
Kena	C		5	3			1													
	D		2	1			1													
Manfalut	C	15	17																	
	D	5	3																	
Minieh	C		3	1	5		1		3				10		2					
	D		2		2		1		1				2		1	1				
Port Said	C									1	1	1	1	1	2	1	2			
	D						1				1	1	1						2	
Tanta	C																			
Hawaii Territory:																				
Hawaii—Hamakua—Plague-infected rats							1													
Maui Island—Kula District	C																	1		
	D																	1		
India	C	5,457	9,139	6,142	434	139	130	49	39	24	9	16	30	29						
	D	3,661	7,037	5,199	385	143	131	33	25	14	2	10	15	13						
Bassein	C	1		1			1						1			1		1		
	D	1		1			1						1			2		1		
Bombay	C	1	4	11	5	1	1	1					1							
	D	1	3	11	4	1	1													
Plague-infected rats		32	70	137	26	30	17	21	10	10	10	7	11	16	9	12	8	13	17	
Burma	C														7	9				
	D														5	5				

[1] Reports incomplete.
[2] On July 27, 1931, 1,250 cases of plague were reported in Chiobo and Changchow, China, since April.

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

PLAGUE—Continued

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

Place		Feb. 8–Mar. 7, 1931	Mar. 8–Apr. 4, 1931	Apr. 5–May 2, 1931	Week ended— May, 1931				June, 1931				July, 1931				August, 1931			
					9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22
India—Continued.																				
Calcutta	C			2																
	D			2																
Madras Presidency	C	74	23	3	1	1				1	5		1	2						
	D	46	21	2		1				1				1						
Rangoon	C		1	1	1			1		1					2		1			
	D		1	1	1			1		1					1		1			
Plague-infected rats		8	7	4	1	1	3	2		3			1	2	2	1	1		1	
Indo-China (see also table below): Pnompenh.	C	1							1		1									
	D	4	6	4					1		1									
Iraq:																				
Baghdad	C	3	8	23	7	10	4	2	10	6	1	6	1	1	1				1	
	D	2	5	8	3	4	2		1	4	1	3	1		1					
Maudhan	C							2												
Madagascar (see also table below): Tamatave.	C																1			
Nigeria: Lagos	C			5																
	D			5																
Plague-infected rats				6																
Peru (see table below).																				
Senegal (see table below).																				
Siam	C	18	31	1	1			1	1											
	D	14	7	1	1			1	1											
Bangkok	C	6	29																	
	D	5	6																	
Nagara Rajsima	C	7	1																	
	D	6																		
Spain: Hospitalet—Barcelona Province	C																			5
	D																			2
Syria: Beirut	C	1												1		1				
Tripolitania	C	1																		
Tunisia: Tunis	C	14	10	16	7		8	1		8	2	1								
	D	7	4	8	3					1										
Union of South Africa:																				
Cape Province	C			3																
Orange Free State	C	1	6	2			1	1												
	D	1	1	2				2												

Place		Feb., 1931	Mar., 1931	Apr., 1931	May, 1931	June, 1931	July, 1931
British East Africa (see also table above):							
Kenya	C	21	7	345	245	154	441
Indo-China (see also table above)	C	-------	4	11	-------	2	1
	D	2	-------	2	-------	2	1
Madagascar (see also table above):							
Ambositra Province	C	92	70	30	19	15	-------
	D	88	66	29	18	15	-------
Antisirabe Province	C	84	83	48	7	8	-------
	D	79	74	47	7	8	-------
Miarinarivo Province	C	31	19	6	2	-------	-------
	D	29	19	6	2	-------	-------
Moramanga Province	C	7	1	-------	2	-------	-------
	D	7	1	-------	2	-------	-------
Tananarive Province	C	145	90	41	18	2	-------
	D	139	81	40	18	1	-------
Peru	C	12	8	8	2	5	2
	D	6	2	1	-------	1	-------
Senegal:							
Baol [1]	C	-------	-------	-------	4	-------	27
	D	-------	-------	-------	3	-------	13
Dakar [1]	C	-------	-------	2	63	64	95
	D	-------	-------	1	49	56	73
Louga [1]	C	-------	14	1	5	4	3
	D	-------	6	-------	2	2	1
Rufisque [1]	C	2	-------	-------	1	2	34
Thies [1]	C	-------	-------	-------	-------	12	16
	D	-------	-------	-------	-------	3	7
Tivaouane [1]	C	-------	-------	4	19	3	3
	D	-------	-------	-------	11	2	2

SMALLPOX

Place		Feb. 8–Mar. 7, 1931	Mar. 8–Apr. 4, 1931	Apr. 5–May 2, 1931	Week ended— May, 1931				June, 1931				July, 1931				August, 1931		
					9	16	23	30	6	13	20	27	4	11	18	25	1	8	15
Algeria:																			
Algiers	C	1	2	2	-------	-------	1	-------	-------	7	1	-------	-------	-------	1	-------	-------	-------	-------
Constantine	C	-------	1	-------	1	-------	-------	-------	-------	-------	-------	-------	1	-------	-------	-------	-------	-------	-------
Arabia: Aden	C	1	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
Belgian Congo	C	-------	-------	-------	-------	7	10	30	27	15	-------	-------	-------	-------	-------	-------	-------	-------	-------
Belgium	C	1	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
Bolivia.[2]																			
Brazil: Porto Alegre (alastrim)	C	7	49	53	2	4	7	6	2	3	-------	-------	9	10	9	13	-------	-------	-------
	D	1	1	-------	-------	-------	-------	-------	1	-------	-------	-------	-------	1	-------	-------	-------	-------	-------
British East Africa: Tanganyika	C	91	8	-------	-------	13	-------	-------	-------	-------	1	6	37	83	-------	-------	-------	-------	-------
	D	13	3	-------	-------	-------	-------	-------	-------	-------	-------	-------	7	5	-------	-------	-------	-------	-------
British South Africa:																			
Northern Rhodesia	C	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	21	-------	-------	-------	-------	-------
Southern Rhodesia	C	-------	-------	-------	-------	-------	-------	-------	-------	1	-------	-------	-------	2	-------	-------	-------	-------	-------

[1] Reports incomplete.
[2] An epidemic of smallpox was reported on May 13 with 716 cases and 314 deaths since the middle of April, 1931, in Mendez Province, Bolivia.

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

SMALLPOX—Continued

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

Place		Feb. 8–Mar. 7, 1931	Mar. 8–Apr. 4, 1931	Apr. 5–May 2, 1931	Week ended— May, 1931				June, 1931				July, 1931				August, 1931		
					9	16	23	30	6	13	20	27	4	11	18	25	1	8	15
Canada:																			
Alberta	C	1												1					
British Columbia	C	8													2	2			3
Manitoba	C	1			4														
Winnipeg	C	1																	
Nova Scotia	C		1																
Ontario	C	29	9	17	17	5		3		4	3	14	3	6	12	1		2	2
Kingston	C	1		5															
North Bay	C	1																	
Ottawa	C	1									1								
Sault Ste. Marie	C	2		4		1													
Toronto	C		2	4	1						1								
Quebec	C												1						
Saskatchewan	C	63	58	46	7	15	18	8	7	16	18	13		13	10	19		10	6
Regina	C	1	2	2	2														
Canary Islands: Las Palmas	C		1																
Chile:																			
Antofagasta	C												1						
Chanaral	C							1											
China:																			
Amoy	C		1	2	2	1	1	2	1	2		1	1	1			1		
	D		1	1	1		1	1	1	1		1	1	1			1		
Canton	C	3	7	4			1	2			1		1			1			
Foochow	C	P	P	P				P		P						P			
Hankow	C	8	3	3	1	1	1	2	1	1	1	1	1						
Hong Kong	C	9	2	3				1											
	D	3	2	1	1			1											
Manchuria—																			
Harbin (see also table below)	C	4	2		1	1		1											
Kwantung—Dairen	C		2	2	1			1	1										
Nanking	C	P	P	P	P	P	P												
Shanghai—																			
Foreigners only	C	16	6	17	1	4	1	1	2	6	2	1	2	1					
Including natives	D	14	10	18	1		3	3	1	5	4	3	2	1	2	1			
Swatow	D	13	26	2															
Tientsin	C				2									2	1				

Chosen (see table below).																			
Colombia: Cali	D				1														
Dutch East Indies:																			
Batavia and West Java	C	2	1			1	1												
	D	1																	
East Java and Madura	C							1											
Finland	C			1															
France (see table below).																			
Great Britain:																			
England and Wales	C	745	795	744	186	166	111	107	83	94	62	48	56	45	50	36	26	25	19
Bradford	C	1	2	6	1	3	1	3			5								
Leeds	C		1	2	1		1												
London	C	98	147	227	66	44	37	36	25	50	31	16	21	9	12	12	6	12	4
London and Great Towns	C	683	544	558	139	108	84	72	57	84	49	38	53	33	34	32	22	20	17
	D	1		2					1				1						
Sheffield	C	32	10	7															
Stoke-on-Trent	C	1																	
Greece (see table below).																			
Honduras:																			
Amapala	C	1																	
Ocotopeque and Gracias districts	C	P																	
Puerto Castilla	C	3																	
Tegucigalpa	C			1															
Tela	C			1															
India	C	12,222	11,791	14,265	3,422	2,836	2,477	2,668	2,170	1,856	1,622	1,665	1,492	1,376					
	D	2,660	2,261	2,923	709	572	538	530	465	474	376	389	404	363					
Bassein	C							1											
Bombay	C	6	10	8	2		6	1		2	1	3		1	3	2	1		1
	D	3	4	5	1	1	1	1		1	1	3		1	3	2	1		
Calcutta	C	251	382	287	24	30	19	16	14	19	14		11	6	2	2	4	4	
	D	188	203	224	18	25	17	15	12	18	11		9	4	3	2		4	
Cochin	C	59	46	39	3													1	1
	D	3																	
Karachi	C	4	4	6							2						1		
	D		2								1								
Madras	C	8	22	19	1	3	3	1			1	1		2			1		
	D	1	3	5		1	5					1							
Negapatam	C			3							2	1							
Rangoon	C	4	3	11	7	5		1		1	4	1	2		1		2		1
	D		1	1	2	1	1	1		1		1	1				1		
Vizagapatam	C	8	2	10			5	1	2	1		3	2		2	1		3	
	D	2	1	2			1			1		1	1					3	
India (French):																			
Chandernagor	C	12	14	10	3		4				1		2		1				
	D	1	2	7	3		2						2						
Karikal	C	19	3	4	1	1	1	1	1	2		3	1	1	1	1	1		1
	D	18		3	1	1	1	1	1	2		3	1	1	1	1	1		1
Pondicherry Province	C	19	14	6	1	2	7	1	3	2	1	1	4	1		23	11		
	D	19	14	9	1	2	7	1	3	2	1	1	4	1		23	11		
India (Portuguese)	C	14	8	21			3												
	D	3	3	6			1												

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

SMALLPOX—Continued

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

Place		Feb. 8–Mar. 7, 1931	Mar. 8–Apr. 4, 1931	Apr. 5–May 2, 1931	Week ended— May, 1931				June, 1931				July, 1931				August, 1931		
					9	16	23	30	6	13	20	27	4	11	18	25	1	8	15
Indo-China (see also table below):																			
Pnompenh	C		1				1		2										
	D						1												
Saigon and Cholon	C	4	8	1		1		1					1			2	1	1	
	D	1	8	1		1							1				1		
Iraq:																			
Baghdad	C	9		2			1	2		1									
	D							2											
Basra	C							2		1									
Mosul Liwa	C	5													1				
	D	1																	
Ivory Coast (see table below).																			
Japan:																			
Kobe	C	2																	
Nagoya	C														1				
Mexico (see also table below):																			
Jalisco (State)—Guadalajara	D		1	1	1		1			1			1	1		1			2
Mexico City and surrounding territory	C	23	33	43	4	10	10	21	5	4	16		12	5	4	1	8	2	
	D	8	22	14	4	3	2	2	4	3	6		4	3	1		1	1	
Monterrey	C								1										
Torreon	C			1		1					1	2							
	D			2							1	1							
Vera Cruz	C	3	2	2	1														
Morocco (see table below).																			
Nigeria: Lagos	C		2																
Poland	C	1						3	1	1		1		17		1			
Portugal: Lisbon	C	40	52	56	19	14	16	18	5	17	12	14	15	12	18		17	12	8
Rumania (see table below).																			
Siam	C	2		1			3	3			4	1		1					
	D							1				1			1				
Spain	C	P	P												7				
Straits Settlements	C	2	4	10				2										1	
	D	1	1	5				2											
Sudan (Anglo-Egyptian)	C	97	8	3		3		3		1									
	D	10	2					2											

Sudan (French) (see table below).																						
Syria (see table below).																						
Tunisia: Tunis	C		4																			
Turkey (see table below).																						
Union of Socialist Soviet Republics (see table below).																						
Union of South Africa:																						
Cape Province	C	P	P	P	P	P																
Orange Free State	C	P	P	P	P	P	P	P	P	P	P	P	P	P	P							
Transvaal	C	P	P								P		P		P							
Upper Volta	C	18	3	3	1	2		85	11		1		1									
	D		1					1														
On vessel:																						
S. S. Clan Mactoggart at Suez	C	2																				
S. S. Clan Buchanan at Suez	C	2																				
S. S. Rotterdam at Naples from Venice	C		1																			
S. S. Clan McTavish at Manila from Chittagong	C			1																		
S. S. Clan MacBrayne at Cochin	C	1																				
S. S. Chilka at Rangoon	C	1																				
S. S. Taif (pilgrim ship) at Suakin from Jeddah	C			1																		
S. S. Talodi at Suakin	C					1																

Place		Jan., 1931	Feb., 1931	Mar., 1931	Apr., 1931	May, 1931	June, 1931
China: Harbin (see also table above)	C			7		13	10
Chosen	C	1		11		1	4
	D	1		3			
France	C	4	16	15	6	54	
Greece	C		4			3	1
Mexico (see also table above)	D		3		1	1	2
Morocco	C		4	6	7	49	48
Rumania	C			1		1	

Place		Jan., 1931	Feb., 1931	Mar., 1931	Apr., 1931	May, 1931	June, 1931
Turkey	C	63	37	1		9	1
	D	7	6				
Union of Socialist Soviet Republics:							
Territories in Asia	C	194	532				
Ukraine	C	44	23				
Other territories in Europe	C	896	1,577				
Railroads, etc	C	43	77				

Place		December, 1930	January, 1931	February, 1931	March, 1931	April, 1931			May, 1931			June, 1931			July, 1931		
						1-10	11-20	21-30	1-10	11-20	21-31	1-10	11-20	21-30	1-10	11-20	21-31
Indo-China (see also table above)	C	61	141	168	264	100	42			17	41	30	16	1			7
Ivory Coast	C	9															
Sudan (French)	C	139			4												
	D	20															
Syria: Beirut	C		1										1				

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

TYPHUS FEVER

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

Place		Feb. 8–Mar. 7, 1931	Mar. 8–Apr. 4, 1931	Apr. 5–May 2, 1931	Week ended— May, 1931				June, 1931				July, 1931				August, 1931			
					9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22
Algeria:																				
Algiers	C	2	3	3	3		1	3	4	4		1			1					
Constantine Department	C	4	3	9	8	3	5	6	6	3	1	16	2		1		3			
Oran	C	1		1				2	2									1		
Australia, Western	C		1	1	1															
Bulgaria	C	5	9	30		5	8	3	11	10	6	3								
	D		2	3		1		3	2	1	1	2								
Chile: Valparaiso	D	1																		
China:																				
Canton	C		1																	
Manchuria—Harbin	C	5	3	8								16								
Shanghai	C														1					
Tientsin	C			2																
Chosen (see table below).																				
Czechoslovakia (see table below).																				
Egypt:																				
Alexandria	C			1					1	1		1								
Beheira Province	C			4																
	D			2																
Eritrea: Asmara	C		1																	
Great Britain: Scotland—																				
Fife County	C							1												
Greece (see table below).																				
Guatemala [1] (see table below).																				
Iraq: Baghdad	C	5	2		2															
	D	1			2															
Irish Free State:																				
Cork County—																				
Schull	C													1						
Skibbereen	C									1		1	1							
Kerry County—																				
Dingle	C					1														
Listowel	C											1								

Limerick County—																				
Limerick	C												2				1			
Michelstown	C												1							
Mayo County—																				
Belmullet	C				1															
Westport	C																			1
Union of Socialist Soviet Republics (see table below).																				
Japan	C											1								
Latvia (see table below).																				
Lithuania (see table below).																				
Mexico (see also table below):																				
Durango	D															1				
Mexico City, including municipalities in Federal District	C	35	216	170	16	27	17	15	7	12	27		28	9	7	9	7	6		
	D	16	84	56	9	7	7	10	4	4	11		4	3	2	3	5	3		
San Luis Potosi	D	5	5	3			1	1						1	3					1
Morocco	C	28	7	13		13	29			31	42	28	37	20	24	21		2		
	D	1		1		2	2			2	3	1	4	4						
Palestine	C	3	5	5	2	1	1			2	3		2				3	3		4
Panama Canal Zone—Balboa	C					1	1													
Paraguay: Asuncion	D	1	1																	
Poland	C	189	287	538	92	81	58	67		48	33	16	9	17	13	14	10	4		
	D	19	15	28	6	4	5	3		2	1	1	2	1	1	1	1			
Rumania	C	152	214	70	63	52	54		42	16	12	10	2	2	7					
	D	24	16	8	10	5	3		4	7	2		2	2	1					
Syria	C					1	3													
Tunisia:																				
Sbeitla, vicinity of	C		20	12																
	D		7																	
Sfax	C		2																	
Tunis	C	18	14	13	12	9	8			64	9		1			1				
	D				1	2				4										
Turkey (see table below).																				
Union of Socialist Soviet Republics (see table below).																				
Union of South Africa:																				
Cape Province	C	P	1	P	P	P	P	P	P	P	P		P	P	P					
Municipality of East London	C		P								1									
Natal	C	P	1	P	P		P	P	P	P	P				P					
Orange Free State	C	P	P	P		P	P	P	P	P	P		P	P	12					
Transvaal	C	P	P	P	P	P	P	P	P	P	P		P	P	P					
Yugoslavia (see table below).																				

[1] On Feb. 27, 1931, the Director General of Public Health of Guatemala reported an unusual outbreak of typhus fever in a small village in Guatemala.

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

TYPHUS FEVER—Continued

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

Place		Jan., 1931	Feb., 1931	Mar., 1931	Apr., 1931	May, 1931	June, 1931
Chosen: Seoul	C	46	124	3	4		6
	D	9	8		1		1
Czechoslovakia	C	60	26		5	11	2
Greece	C	10	17	8	22	6	9
	D	2	2	1	3		
Guatemala	C						33
	D						15
Latvia	C		12				
Lithuania	C	26	3	99	34	10	13
	D	3	1	3	5		2
Mexico (see also table above)	D	66	83				
Turkey	C	17	18	15		3	3
Union of Socialist Soviet Republics:							
Territories in Asia	C	234	260				
Ukraine	C	410	419				
Other territories in Europe	C	1,425	1,373				
Railroads, etc	C	136	158				
Yugoslavia	C	20	12	10	43	14	2
	D	2		1	5		

YELLOW FEVER

Place		Feb. 8–Mar. 7, 1931	Mar. 8–Apr. 4, 1931	Apr. 5–May 2, 1931	May 3–30, 1931	Week ended— June, 1931 6	13	20	27	July, 1931 4	11	18	25	August, 1931 1	8	15	22
Brazil:																	
Alagoas State	C															1	
	D															1	
Bahia State	C		1														
Ceara State	C		2	2	1	1											1
	D			2	1												1
Minas Geraes State	C		2	5	2												
	D		1	2	1												
Rio de Janeiro State	C	1	2		2												
	D	1	2														
Cambucy	C	2	1														
	D	1															
Padua	C	1															
Sergipe State	C						1										

British Cameroons: Mamfe	C				3	1		1									
	D				2												
Colombia—Magdalena Province—near Cienaga	C											4					
Gold Coast:																	
Akuse	C									2							
	D									1							
Dagomba District	C													2			
Kintampo	C											1					
	D											1					
Tamale	C										2						
	D										2						
Wale Wale	C													1			
	D													1			
Ivory Coast:																	
Bobo Dioulasso	C										1						
	D										1						
Grand Bassam	C													4			
Kong Circle	C											4					
Seguela	C																P
Nigeria: Abakaliki	C														1		
	D														1		
Senegal: Podor (Hinterland)	C																1
	D																1
Sudan (French)	C											4	P				
Upper Volta:																	
Banfora	C												2				
	D												1				
Quagadougou	C																1

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