PUBLIC HEALTH REPORTS

VOL. 32 JULY 6, 1917 No. 27

VIRULENT SMALLPOX AT DOUGLAS, ARIZ.

Acting Asst. Surg. Edward W. Adamson has reported that an outbreak of smallpox began in Douglas, Ariz., in May. The date of the first case is given as May 21. Up to June 25 there had been reported 46 cases with 10 deaths. The virulence of the infection is shown by the fact that a considerable number of cases were in persons giving a history of previous successful vaccination and possessing what appeared to be good vaccination scars. The disease, however, ran a mild course in most of the cases having vaccination scars.

POLIOMYELITIS REPORTED IN OHIO.

Mr. Jas. E. Bauman, Secretary of the Ohio State Board of Health, reported July 5 that there were 11 cases of poliomyelitis (infantile paralysis) at Martins Ferry and 6 cases in Tease Township, both in Belmont County, Ohio.

OUTBREAK OF DYSENTERY, ARKANSAS.

Passed Asst. Surg. Preble reports that there is an outbreak of what appears to be bacillary dysentery in Mississippi County, Ark. Many fatalities have occurred, but owing to the absence of records of cases and also of the registration of deaths, the extent of the outbreak has not as yet been ascertained. The outbreak seems widely scattered and to have numerous foci. According to unofficial reports and items in the newspapers, there have been many cases also in Poinsett County, Ark., and in Dunklin and Scott Counties, Mo. The local undertakers' records indicate that there were 40 deaths during May and June in the town of Blytheville and the neighboring communities. It is probable that there have been at least 400 cases in Mississippi County. Most of the cases have been in children under 5 years of age.

It is reported locally that similar outbreaks have occurred in past years but have been less severe and caused little attention. The outbreak this year is looked upon as being unusually virulent. The fatality rate appears to be about 7 per cent. The present outbreaks are being investigated.

SEWAGE DISPOSAL UNDER RURAL CONDITIONS.

SOIL POLLUTION AND THE PRACTICAL USE OF THE L. R. S. METHOD FOR EXCRETA DISPOSAL IN THE COUNTRY AND SUBURBS.

By CHAS. T. NESBITT, M. D., Health Officer, Wilmington and New Hanover County, N. C.

In our effort to find a means for the sanitary disposal of human excreta where sewer connections are impossible and where sufficient dilution for sewage in streams can not be found, especial attention has been given to the system known as the L. R. S. method of excreta disposal, as this method promised to give less need for scavenging than any other. Suburban and rural dwellers have been encouraged to install these tanks and especial attention has been given by the department of health to designing and locating tanks for use with privies and with plumbing installations. The construction of many was supervised by an officer of the department. In 1913 we designed for a local contractor a set of L. R. S. tanks to be made of reinforced concrete, and since that time several hundred such tank sets have been constructed and installed in the county, and a great number have been constructed for use in other sections of the South.

Observations made on the use of these tanks during the past four years have led us to believe that the L. R. S. method offers the most satisfactory solution of the rural excreta disposal problem that has yet been devised. When tanks of proper construction and properly located are installed either for privy use or use with plumbing installations, we find that their continued use with proper care gives almost perfect results with our soil. None of the tanks in use have required scavenging except when connecting pipes have become stopped or the tank sets have been used beyond their capacity. Our experience during the past four years has led us to adopt in practice the following standards:

The capacity of the sludge tank is determined on the basis of 3 cubic feet for each user under privy conditions, and 5 cubic feet for each user when the tanks are connected with a plumbing installation.

Waste from baths and kitchen sinks should not be discharged into the sludge or the effluent tank. The waste from the kitchen sink interferes seriously with septicization and the bath waste supplies too much water. A great number of our tanks receive the bath waste and work satisfactorily, but no tank works satisfactorily that receives waste from a kitchen sink. It is our practice to connect the kitchen-sink waste into the drain from the effluent tank.

We have observed the best results in tanks that have a relatively small sludge mat area. Diameters of from 30 to 36 inches at the water line with a depth adjusted to the capacity desired in the cylindrical tanks work best. The effluent tank should be similarly designed and should not be less than one-half the capacity of the sludge tank.

When tanks are used with plumbing installations, the inflow pipe from the house should discharge by vertical drop not less than 2 feet below the water line. The pipe discharging into the effluent tank from the sludge tank should rise vertically from a point not more than 18 inches from the bottom of the tank and should discharge into the effluent tank not less than 18 inches below the water line. The outflow from the effluent tank should rise vertically from a point not more than 12 inches from the bottom of the effluent tank and should discharge near the surface of the ground into a tight line of tile pipe, or other tight conduit, leading to a contact bed located with due regard for the proximity of cisterns and wells and some distance away from the dwelling.

The contact beds that we are using are constructed of loose stones or shells in a ditch 2 feet deep by 18 inches wide, near the surface of which is laid a line of agricultural drain tile that is continuous with the effluent drain. The extent of this bed is determined by the amount of effluent to be treated. Wherever possible we persuade the owner to refrain from covering the bed with earth, leaving it open for the ingress of fresh air.

The tanks must be thoroughly waterproof both inside and out to protect them from seepage from without in, and the bottoms in concrete tanks should be made continuous and in one piece with the sides. If there is seepage of ground water into the tanks, the effect will be that of overloading.

Both privy tanks and tanks used with plumbing installations should be filled with water to the level that is reached when the tank is in full use before beginning to use them. Two or three pails full of fresh horse manure should be placed in the sludge tank.

Tanks used with plumbing installations should be tightly covered and operated without other ventilation than the house stack. Handholes should be located in the inflow pipe at the point of ingress to the sludge tank and in the horizontal pipe connecting the two tanks to facilitate rodding in case of stoppage. These handholes should be supplied with stoppers that can be tightly sealed.

Privy tanks should be constructed so that the seat with its lid shall rest upon the top of the tank itself and the lid should be made to close automatically when not in use and to cover the hole as closely as possible to prevent the ingress of flies. A vent not less than 3 inches in diameter should be carried from the tank through the roof of the privy house, and this vent should be screened to prevent the possibility of flies finding their way down the vent. Privy tanks should be kept filled with water to the level of the outflow at all times and when flies gain access kerosene should be applied to the surface of the mat to prevent fly breeding and feeding. The kerosene should be sprinkled on the mat in order that as little of it as possible

may reach the underside of the mat surface. In all other respects privy tanks are installed in the same manner as tanks for use with plumbing installations.

We have attempted to gain an idea of the extent to which the use of these tanks protects the soil from widespread pollution. The method used was suggested by Prof. Earle B. Phelps, of the United States Public Health Service. The data secured is, of course, inconclusive and applicable only to the soils of this section. We endeavored to make the tests as severe as possible, taking samples of ground water only in such locations as were so saturated that water could be obtained by driving a pipe not more than 15 feet into the ground and attaching the pump to the top. These shallow-driven pumps were pumped only to the extent of determining that a supply of water had been reached and were then permitted to stand two or three days before samples were taken. When the samples were taken only enough water was pumped off to clear the pipes of that which was either put into them to start the pump or that which had remained standing in the pipes since they were last pumped. Half the samples were taken at plants using privy tanks and the remainder at plants using septic tanks with interior plumbing installations. By reference to the table it will be noticed that in all cases the contact beds were within 10 feet of the effluent tank, and none of these plants had been in use less than six months.

Table 1 gives the essential physical data of the plants and Table 2 the data of the test wells and results of examinations. The *B. coli* are reported as positive (+) or negative (0) in the various dilutions.

TABLE 1.—*Description of plants.*

PRIVY TANKS.

Plant No.	Date.	Soil.[1]	Plant in use.	Remarks.
			Mos.	
1	Sept. 18, 1916	S/C	24	Delgado School (boys).
2	do	SC	24	Railroad section house.
3	Dec. 15, 1916	Soft SC	18	Residence.
4	do	S	24+	Kindergarten. Plant overloaded.
5	do	S	24	Delgado School (girls).
6	Dec. 20, 1916	SC	6+	East Wilmington School.
7	Dec. 22, 1916	SC	24	Residence.

SEPTIC TANKS.

8	Dec. 22, 1916	L/SC	6	Soil poorly drained. Samples from near a drainage ditch.
9	Dec. 31, 1916	L/C	9	Nursery farm. Soil heavily manured. Drainage poor.
10	do	L/C	7	Drainage poor.
11	do	L/C	7	Drainage poor. Drainage ditch nearby.
12	Jan. 6, 1917	SC	8	
13	do	SC	8	
14	do	SC	12	Swampy ground and undergrowth.

[1] S=sand; C=clay; L=heavy loam; S/C=sand underlaid with clay; SC=sand and clay.

NOTE.—Distance from effluent tanks to nitrification bed generally 10 feet.

TABLE 2.—*Results of examinations of ground water from test wells driven near nitrification beds of privy tanks.*

Plant No.	Well No.	Distance from contact bed.	Depth.	Bacteria per c. c. on plates incubated at—		B. coli—		
				20°.	38°.	10 c. c.	1 c. c.	0.1 c. c.
		Feet.	*Feet.*					
1	1	0	9	.....	60	0	0	0
	2	10	7	.....	30	0	0	0
	3	20	7	.....	10	0	0	0
2	1	0	8	.....	40	0	0	0
	2	15	8	.....	20	0	0	0
	3	30	8	.....	20	0	0	0
3	1	0	10	183	80	+	+	0
	2	10	10	72	26	0	0	0
	3	20	10	39	8	0	0	0
4	1	0	8	2,200	1,200	+	+	+
	2	10	8	1,700	600	+	+	0
	3	20	8	1,100	450	+	+	0
5	1	0	8	145	85	+	+	0
	2	10	8	120	40	+	0	0
	3	20	8	120	30	+	0	0
6	1	0	11	60	5	0	0	0
	2	10	14	45	3	0	0	0
	3	20	10	60	12	+	0	0
7	1	0	10	80	40	+	0	0
	2	10	10	60	25	0	0	0
	3	20	10	42	15	0	0	0
8	1	0	12	160	90	+	+	+
	2	10	13	36	15	0	0	0
	3	20	13	145	110	+	+	+
9	1	0	10	600	250	+	+	0
	2	10	10	800	350	+	+	0
	3	20	10	600	300	+	+	0
10	1	0	7	200	100	+	+	0
	2	10	7	300	130	+	+	0
	3	20	8	300	80	+	+	0
11	1	0	7	1,200	800	+	+	+
	2	10	7	500	120	+	+	0
	3	20	7	700	150	+	+	0
12	1	0	7	80	15	0	0	0
	2	10	7	60	16	0	0	0
	3	20	7	65	30	0	0	0
13	1	0	10	110	10	+	0	0
	2	10	10	90	60	+	+	0
	3	20	9	150	90	+	0	0
14	1	0	7	250	300	+	+	0
	2	10	7	90	5	0	0	0
	3	20	6	160	120	+	0	0

In presenting the results of this investigation it would be highly desirable to present a detailed investigation of the same sort on ground waters taken from the immediate neighborhood of pit privies. There being no pit privies in the county, such samples are not readily obtainable. We have, however, some striking evidence that the sandy clay soil in this section does not present a filter medium that will protect ground waters from fecal pollution.

There are in this city and in the county a great number of shallow-driven wells. Of these we have examined bacteriologically about seven hundred. The only wells of this kind that we have found free from pollution are those which are located from two to five hundred yards away from any concentrated source of pollution, stables, privies, pig styes, etc. The bacteria counts in water from these wells not so located are extremely high and the presumptive test for colon bacilli gives unfailing positive results. The drilling of

deep wells in the city and near dwellings in the county must be conducted with great care and these wells must find in the course of their descent a perfectly impervious protecting stratum of limestone through which the casing must be carried and into which an outer casing must be imperviously seated, in order to assure a continuous supply of unpolluted water even from these deep sources.

Before the introduction of the use of septic tanks at the rural schools in this county which were supplied with water from shallow-driven pumps, every such pump was found to produce polluted water. Since the introduction of the use of septic tanks at the schools, it has been necessary only to move the driven pump to a new location to obtain a supply of ground water that is free from pollution and that remains free. In two instances shallow-driven wells that were polluted when surface and pit privies were being used at schools and which we could not have removed, cleared up after the installation of the tanks and are now producing unpolluted water.

These facts lead us to deduce that where a concentrated solution of excreta is applied to the soil, as is the case with pit privies and badly kept surface privies, there is more or less widespread pollution of ground water, and wherever the protecting stratum is imperfect there is pollution of the deeper water deposits. The ground water about a dwelling or schoolhouse is very generally polluted in this section irrespective of the presence of privies and stables, as in other soils in other sections of the country. This fact must be taken into consideration in connection with the investigations herewith submitted. It is remarkable that any water samples taken in the locations from which these samples were obtained should prove to be unpolluted in any of the quantities used for investigation.

Perhaps the only deductions that are warranted from this investigation are that the use of these L. R. S. tanks has made no material addition to the normal soil pollution about the buildings, and, in the light of the experience quoted above in connection with unprotected excreta disposal, that the amount of septicization accomplished in them produces an effluent very much less liable to pollute soil than any other process of treatment that it is possible to use with so little expense and trouble. In our experience we have had no reason to regret having encouraged the widespread use of the L. R. S. tanks. There have been, of course, numerous complaints about their action, but these complaints have invariably arisen from the stench which results from leaving privy tanks open, failure to keep the water at the proper level in the tanks, and failure to provide proper ventilation for the tanks. Trouble with tanks used in connection with plumbing installations has invariably arisen from two sources—overcrowding and the admission of kitchen sink waste to the sludge tank.

In a number of instances, contact beds have been badly located, the tendency being to locate the contact bed too near the tank and, as follows, too near the dwelling. This is evidently in order to save the expense of installing a line of tight pipe to convey the effluent to a more favorable place of deposit. Notwithstanding this, no complaints have reached this office in which the contact bed was the source of complaint.

ANOPHELES PUNCTIPENNIS.

A NOTE ON ITS ABILITY TO SERVE AS A HOST FOR PLASMODIUM FALCIPARUM.

By M. Bruin Mitzmain, Technical Assistant, United States Public Health Service.

The susceptibility of *Anopheles punctipennis* Say to infection with the parasites of subtertian malaria has heretofore not been established in studies in connection with malarial investigations by the United States Public Health Service. In a previous intensive study,[1] negative results were obtained, following attempts at transmission through repeated bitings of two human subjects by mosquitoes previously given multiple feedings of blood of gametocyte carrying patients; these experiments also included the dissection of 219 specimens, all of which were negative.

On account of the apparent ease with which *Anopheles punctipennis* could be infected with the parasites of tertian malaria, it might be inferred that this mosquito exhibited a specific predilection similar to that reported for *Anopheles quadrimaculatus* and *Anopheles crucians* by local investigators. In a further series of experiments recently conducted in New Orleans, *Anopheles punctipennis* has proved easily infectible with *Plasmodium falciparum* Welch. Of one series of 16 mosquitoes, given a single feeding, one became infected; in a second group of 36, given a variable number of feedings, 13 infections resulted; in the two groups, 27 per cent of infections were observed. Of 8 examples of *Anopheles quadrimaculatus* used as controls, 4 developed infections.

[1] *Anopheles punctipennis* Say: Its relation to the transmission of malaria. Report of experimental data relative to subtertian malarial fever, by M. Bruin Mitzmain, United States Public Health Reports, Feb. 11, 1916.

The following table summarizes the positive findings, and gives the developmental period in each mosquito:

Date of dissection.	Developmental period—(days).	Stage of development.
Oct. 28, 1916	11	18 oocysts; size 20–22 μ finely pigmented.
Nov. 15, 1916	13	8 oocysts without protoplasmic differentiation; size approximately 25 μ 28 μ.
Nov. 18, 1916	15	Approximately 250 oocysts in all stages preceding the sporoblastic.
Nov. 19, 1916	17	8 oocysts, 2 of which still retaining pigment, remainder granular without sporoblasts.
Nov. 20, 1916	19	Approximately 200 oocysts in all stages up to sporoblastic.
Nov. 25, 1916	24	43 oocysts; size 25–40 μ, mostly with malarial pigment, a few with sporoblasts.
Dec. 3, 1916	31	About 120 oocysts, half of them retaining pigment, only 1 with sporoblasts.
Do	31	Approximately 250 oocysts, of which 50 were quite small (15–20 μ) with malarial pigment; remainder various sizes, but more matured. Few with sporoblasts.
Do	32	30 oocysts in various stages; few, however, with young sporoblasts.
Dec. 24, 1916	37	1 oocyst represented by shrunken capsule, without contents; oocyst apparently full sized and firmly attached to gut wall.
Dec. 25, 1916	53	5 oocysts—4 with contents expelled, 1 with sporoblast development barely commencing (only 4 segments discernible). Remainder of body of oocyst undifferentiated and granular. Size, 30 μ x 33 μ.
Dec. 26, 1916	47	3 oocysts with contents ruptured all torn from gut wall during dissection. No evidence of sporozoites in mounting liquid surrounding the gut wall or in the glands.
Dec. 29, 1916	57	2 ruptured shrunken oocyst membranes on posterior end of mid gut. No indications of sporoblasts or sporozoites.
Jan. 1, 1917	59	1 oocyst, 22–25 μ, containing granules only. And 4 ruptured oocyst capsules still attached to stomach wall. No sporozoites present.

One control specimen of *Anopheles quadrimaculatus* which proved infected was examined on the twelfth day after biting the blood donor. The gut wall was covered by at least 200 oocysts. These were not over 35 μ in size, the majority exhibiting malarial pigment and averaging 20–25 μ in size. No mature oocyst was seen, and the glands were devoid of sporozoites.

The second control *Anopheles quadrimaculatus* found infected was examined 40 days after biting the blood donor. On the gut wall of this specimen were seen 3 oocysts and 3 shrunken capsules devoid of sporozoites or other bodies. The oocysts measured 59 μ to 67 μ in size, with undifferentiated granules lacking evidence of sporoblast development. A prolonged search was made of the mounting fluid surrounding the gut wall, but sporozoites were not found. The six lobes of the salivary glands were likewise uninfected.

Another specimen of *Anopheles quadrimaculatus* was found infected on the fortieth day of development. Here were seen three empty oocyst capsules and three large oocysts, one of which measured 59 by 65 μ and the other two were as much as 67 μ in diameter. The development of these oocysts was apparently abortive, as sporoblasts were absent and sporozoites were not present on stomach wall or in the six gland lobes.

The fourth specimen of this species to be found infected was dissected 54 days after its initial blood meal. The only indication of its infection was the presence of two apparently full-sized oocyst envelopes devoid of contents except for a few sporoblastlike bodies in

one of them. The glands were negative, except for a moderate invasion of sporozoites in the mid lobe of one gland.

Throughout this series no mature forms of oocysts or gland sporozoites were encountered, except in the one instance noted. This is ascribed to the relatively low temperature in which development took place rather than to other factors.

Discussion and summary.

The experimental determination of the rôle of *Anopheles punctipennis* as a potential host for the common forms of malaria has been established, as ascertained by King.[1] No additional findings have been developed whereby previously reported negative results with this anopheline and *Plasmodium falciparum* might be accounted for.

In the present series, 52 specimens of *Anopheles punctipennis* were fed upon the blood of cases of subtertian malaria, and 14 infections resulted. Of 8 specimens of *Anopheles quadrimaculatus*, used as controls under identical conditions, 4 became infected.

Anopheles punctipennis, while highly susceptible to infection with *Plasmodium vivax*, exhibits no especial predilection toward this species; but it has been shown to be a sufficiently receptive host of *Plasmodium falciparum* to be held of sanitary importance.

From the writings of Beyer and his coworkers,[2] Craig,[3] and others, it has been concluded that a specific relation exists between American anophelines and the several varieties of malaria. The transmission of tertian and quartan malaria has been held to be effected by *Anopheles quadrimaculatus*, while to *Anopheles crucians* has been ascribed the incidence of subtertian malaria. Craig concluded that: "The observations noted explain clearly why certain localities suffer more severely than others from certain types of malarial infections. Given a locality in which only *Anopheles crucians* occurred and we could have nothing but estivo-autumnal infections; but if *Anopheles quadrimaculatus* were the only *Anopheles* present, we might have either tertian or quartan infections, but no estivo-autumnal malaria."

The present status of the common American anophelines with reference to their susceptibility to infection with the several species of malarial parasites is as follows:

Anopheles quadrimaculatus may serve as a host for all three parasites of malaria.

Anopheles punctipennis and *Anopheles crucians* are susceptible to infection with *Plasmodium vivax* and *Plasmodium falciparum*.

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[1] King (1916): Experiments on the development of malaria parasites in three American species of anopheles. The Journal of Experimental Medicine, June, 1916, volume 23, No. 6, pp. 703–716.

[2] Beyer, Pothier, Couret, and Lemann (1902): Experimental investigations with malaria in connection with the mesquitoes of New Orleans. New Orleans Medical and Surgical Journal, vol. 50, No. 1, January, 1902.

[3] Craig (1914): The prophylaxis of malaria with special reference to the military service. War Department Bulletin No. 6, August, 1914, pp. 43–44.

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 STATE SUMMARIES.

California Report for the Week Ended June 30, 1917.

The California State Board of Health reported concerning the status of preventable diseases in California for the week ended June 30, 1917, as follows: Of cerebrospinal meningitis, 2 cases occurred in San Francisco, 1 case in Stockton, and 1 in Santa Clara County. One case of poliomyelitis was notified at Los Angeles. Diphtheria increased a little, 34 cases having been notified, 12 of these in Los Angeles, 7 in San Francisco, and 4 in Sacramento. Ten cases of smallpox were reported, 7 in Fresno County, 1 each in Oakland, Los Angeles, and Needles. Eighteen cases of typhoid fever were notified, 1 each in Alameda, Martinez, Glendale, Los Angeles, Placer County, Sacramento, San Diego, Stockton, Santa Barbara, and King City, 3 in Santa Clara County, 5 in San Francisco. Scarlet fever showed a slight increase of cases over the previous week. Cases of measles, mumps, and whooping cough continued to decrease in numbers.

The details of notifiable disease cases reported in the State during the week ended June 23 are as follows:

Cerebrospinal meningitis	4	Pneumonia	31
Chicken pox	74	Scarlet fever	56
Diphtheria	32	Smallpox	4
Dysentery	15	Syphilis	19
Erysipelas	9	Tetanus	1
German measles	26	Trachoma	1
Gonococcus infection	23	Tuberculosis	119
Malaria	2	Typhoid fever	19
Measles	358	Whooping cough	68
Mumps	145		

CEREBROSPINAL MENINGITIS.

Connecticut.

Collaborating Epidemiologist Black reported June 27, 1917, that cases of cerebrospinal meningitis were present in Connecticut as follows: Two cases at Camp Dewey and one case each among the militia at Hartford and Norwich.

State Reports for May, 1917.

Place.	New cases reported.
California:	
Alameda County	1
Contra Costa County	1
Los Angeles County—	
Los Angeles	1
San Francisco County—	
San Francisco	3
Total	6
Indiana:	
Marion County	3
Randolph County	1
St. Joseph County	2
Total	6
Iowa:	
Pate County	2
Polk County	1
Iowa—Continued.	
Pottawattamie County	1
Total	4
New York:	
Albany County	1
Erie County	9
Greene County	1
Niagara County	3
Rensselaer County	1
Schenectady County	1
Steuben County	1
Suffolk County	1
New York City	60
Total	78
Wyoming:	
Campbell County	1

Oregon Report for April, 1917.

During the month of April, 1917, 1 case of cerebrospinal meningitis was reported at Portland, Oreg.

City Reports for Week Ended June 16, 1917.

Place.	Cases.	Deaths.
Atlantic City, N. J.	1	
Baltimore, Md.	6	4
Berkeley, Cal.	1	
Binghamton, N. Y.	1	
Boston, Mass.	2	1
Bridgeport, Conn.		1
Canton, Ohio		1
Chicago, Ill.	13	7
Cincinnati, Ohio	1	2
Cleveland, Ohio	8	4
Dayton, Ohio		1
Detroit, Mich.	5	1
Dubuque, Iowa	2	2
Duluth, Minn.	1	
Dunkirk, N. Y.		1
Elizabeth, N. J.	2	
Erie, Pa.	1	
Galveston, Tex.		1
Hartford, Conn.	2	
Indianapolis, Ind.	1	
Lawrence, Mass.	1	
Lexington, Ky.	1	1
Los Angeles, Cal.	2	
Milwaukee, Wis.	2	
Minneapolis, Minn.	2	
Newark, N. J.	8	3
New York, N. Y.	11	3
Niagara Falls, N. Y.		1
Omaha, Nebr.	1	1
Philadelphia, Pa.	12	5
Pittsburgh, Pa.	4	2
Pittsfield, Mass.	2	
Richmond, Va.		1
Rochester, N. Y.	1	
St. Louis, Mo.	3	1
Salt Lake City, Utah		1
San Diego, Cal.	2	
South Bethlehem, Pa.	1	
Springfield, Mass.	1	
Toledo, Ohio	2	2
Washington, D. C.	1	1

DIPHTHERIA.

Massachusetts—Lowell.

Collaborating Epidemiologist Kelley reported that during the period from June 1 to 27, 1917, 52 cases of diphtheria were notified at Lowell, Mass. During the month of May 47 cases were reported in the same city.

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 1094.

DYSENTERY.

Arkansas—Mississippi County—Bacillary Dysentery.

Passed Asst. Surg. Preble reported June 30, 1917, the occurrence of a disease outbreak, regarded as bacillary dysentery, mainly among children, in Mississippi County, Ark. The same affection has been reported present in nearby counties in Arkansas and Missouri.

ERYSIPELAS.

City Reports for Week Ended June 16, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alameda, Cal.	1		Kansas City, Mo.	2	
Ann Arbor, Mich.	1		Lawrence, Mass.		1
Baltimore, Md.	6	1	Los Angeles, Cal.	3	1
Boston, Mass.		1	Melrose, Mass.		1
Buffalo, N. Y.	4	2	Milwaukee, Wis.	4	
Butler, Pa.	1		Newark, N. J.	5	
Chicago, Ill.	21	4	New York, N. Y.		10
Cincinnati, Ohio.	1		Niagara Falls, N. Y.	2	
Cleveland, Ohio.	2		Philadelphia, Pa.	7	
Clinton, Mass.		1	Pittsburgh, Pa.	15	2
Detroit, Mich.	1	3	Providence, R. I.		1
Duluth, Minn.	2		Reading, Pa.	1	
Elgin, Ill.	1		Richmond, Va.		1
Erie, Pa.	2		Rochester, N. Y.	1	
Flint, Mich.	1		St. Louis, Mo.	13	4
Fort Worth, Tex.		1	San Diego, Cal.	1	
Harrisburg, Pa.	1		San Francisco, Cal.	1	
Hartford, Conn.	2		Syracuse, N. Y.		1
Jersey City, N. J.	2		Troy, N. Y.		2
Kalamazoo, Mich.	1				

LEPROSY.

City Report for Week Ended June 16, 1917.

During the week ended June 16, 1917, one case of leprosy was reported in New York, N. Y.

MALARIA.

California Report for May, 1917.

Place.	New cases reported.	Place.	New cases reported.
California:		California—Continued.	
Alameda County—		San Joaquin County—	
Berkeley	1	Stockton	1
Butte County	1	Shasta County	3
Fresno County—		Redding	2
Reedley	1	Sierra County	1
Glenn County—		Sutter County	1
Orland	2	Trinity County	1
Los Angeles County—		Tulare County	5
Los Angeles	2	Tuolumne County	1
Nevada County	1	Yolo County	6
Placer County—		Yuba County	2
Rocklin	1		
San Francisco County—		Total	33
San Francisco	1		

City Reports for Week Ended June 16, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Berkeley, Cal.	1		Memphis, Tenn.		1
Birmingham, Ala.	12		Morristown, N. J.	1	
Boston, Mass.	3		New Orleans, La.	2	
East Orange, N. J.	1		Richmond, Va.		1
Los Angeles, Cal.	1				

MEASLES.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 1094.

PELLAGRA.

California Report for May, 1917.

During the month of May, 1917, three cases of pellagra were reported in California; one case each in San Bernardino County, outside of San Bernardino, one case in San Bernardino, and one case in San Diego.

City Reports for Week Ended June 16, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Birmingham, Ala.	9	5	Nashville, Tenn.		3
Charleston, S. C.		1	New Orleans, La.	1	2
Chelsea, Mass.	1		Norfolk, Va.		1
El Paso, Tex.		1	Savannah, Ga.		1
Fort Worth, Tex.		1	Somerville, Mass.	1	
Lynchburg, Va.		1	Taunton Mass.	1	
Memphis, Tenn.		1	Washington, D. C.	1	
Mobile, Ala.		2	Wilmington, N. C.	2	

PLAGUE.

California—Alameda County—Plague-Infected Squirrels Found.

Passed Asst. Surg. Williams reported that during the period from June 13 to 23, 1917, eight plague-infected ground squirrels were found in Township 2, within a radius of 6 miles to the east and northeast

PLAGUE—Continued.

of Altamont, Alameda County, Cal. One of the infected squirrels was found on the Amelia Webber ranch, one on the Annie Owen ranch, one on Flynn Brothers ranch, three on the Frank Floyd ranch, one on the John Egan ranch, and one on the M. J. Crocker ranch.

California—San Benito County—Plague-Infected Squirrel Found.

Passed Asst. Surg. Williams reported that on June 19, 1917, a plague-infected ground squirrel was found on the B. D. Sindel ranch, 3 miles southeast of Paicines, San Benito County, Cal.

PNEUMONIA.

City Reports for Week Ended June 16, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.	4	7	Lowell, Mass.	1	
Binghamton, N. Y.	2		Lynn, Mass.	2	
Boston, Mass.	25	8	Malden, Mass.	1	
Braddock, Pa.	4		Manchester, N. H.	2	2
Brockton, Mass.	1		Medford, Mass.	1	
Chelsea, Mass.	3	2	Melrose, Mass.	2	1
Chicago, Ill.	110	68	Newark, N. J.	32	3
Chicopee, Mass.	1		New Bedford, Mass.	3	2
Cleveland, Ohio	22	23	Pasadena, Cal.	2	
Dayton, Ohio	3	2	Philadelphia, Pa.	59	26
Detroit, Mich.	8	16	Pittsburgh, Pa.	14	16
Dubuque, Iowa	1	1	Pittsfield, Mass.	1	
Duluth, Minn.	5	1	Reno, Nev.	1	
Fall River, Mass.	3	1	Rochester, N. Y.	12	3
Fitchburg, Mass.	1	1	San Diego, Cal.	1	1
Flint, Mich.	5	3	San Francisco, Cal.	3	3
Haverhill, Mass.	1		Saginaw, Mich.	1	
Jackson, Mich.	1		Sandusky, Ohio	2	2
Kalamazoo, Mich.	6		Schenectady, N. Y.	4	
Kansas City, Mo.	1	10	South Bethlehem, Pa.	1	
Lawrence, Mass.	1		Springfield, Mass.	5	4
Los Angeles, Cal.	7	8	Worcester, Mass.	4	

POLIOMYELITIS (INFANTILE PARALYSIS).

Ohio—Belmont County.

The State Board of Health of Ohio reported July 5, 1917, the occurrence of 17 cases of poliomyelitis in Belmont County, Ohio; 11 of them at Martins Ferry and 6 in Tease Township.

State Reports for May, 1917.

Place.	New cases reported.	Place.	New cases reported.
California:		New York:	
Santa Cruz County—		Dutchess County	1
Santa Cruz	1	Erie County	1
Tulare County	1	Fulton County	1
Total	2	Saratoga County	1
Indiana:		Ulster County	1
Jackson County	1	Westchester County	1
Iowa:		New York City	10
Carroll County	1	Total	16
Fayette County	1		
Total	2		

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.

Oregon Report for April, 1917.

During the month of April, 1917, one case of poliomyelitis was reported in Clackamas County, and one case in Portland, Oreg.

City Reports for Week Ended June 16, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Braddock, Pa.	1		Los Angeles, Cal.	2	1
Buffalo, N. Y.	1		Newark, N. J.	1	
Chicago, Ill.	1		New York, N. Y.	6	
Cincinnati, Ohio	1		Portsmouth, N. H.	1	
La Crosse, Wis.	1		Springfield, Mass.	1	1
Lima, Ohio	1	1	Trenton, N. J.	1	

RABIES IN ANIMALS.

City Report for Week Ended June 16, 1917.

During the week ended June 16, 1917, one case of rabies in animals was reported in Detroit, Mich.

ROCKY MOUNTAIN SPOTTED FEVER.

Nevada.

During the period from June 1 to 20, 1917, cases of Rocky Mountain spotted fever were notified in Humboldt County, Nev., as follows: One case each at Winnemucca, Rebel Creek, and Whiskey Creek.

Wyoming Report for May, 1917.

During the month of May, 1917, one case of Rocky Mountain spotted fever was reported in Gillette County, one case in Carbon County, one case in Sweetwater County, three cases in Natrona County, and two cases in Washakie County, Wyo.

Oregon Report for April, 1917.

During the month of April, 1917, one case of Rocky Mountain spotted fever was reported in Grant County and one case in Jefferson County, Oreg.

SCARLET FEVER.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 1094.

SMALLPOX.

Arizona—Douglas—Virulent Smallpox.

Acting Asst. Surg. Adamson reported that during the period from May 21 to June 25, 1917, 46 cases of smallpox, with 10 deaths, were notified at Douglas, Ariz.

SMALLPOX—Continued.

Illinois—Cairo.

Acting Asst. Surg. Barrows reported that during the week ended June 23, 1917, two cases of smallpox were notified at Cairo, Ill., making a total of 31 cases reported since January 1, 1917.

Minnesota.

Collaborating Epidemiologist Bracken reported that during the week ended June 30, 1917, three new foci of smallpox infection were reported in Minnesota, cases of the disease having been notified as follows: Bigstone County, Ortonville, 1; Renville County, Franklin, 1; Stevens County, Donnely Township, 1.

State Reports for May, 1917.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within seven years preceding attack.	Number last vaccinated more than seven years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
California:						
Alameda County	1				1	
Alameda	1				1	
Imperial County	3				3	
El Centro	1				1	
Los Angeles County—						
Pomona	4				4	
Marin County—						
Sausalito	1				1	
San Bernardino County	1				1	
San Bernardino	1					1
Santa Clara County	1					1
Shasta County—						
Redding	1				1	
Solano County—						
Vallejo	1				1	
Total	16				14	2
New York:						
Albany County	8				5	3
Chautauqua County	3				3	
Dutchess County	2			1	1	
Erie County	1					1
Montgomery County	2				1	1
Nassau County	1			1		
Tioga County	1				1	
Washington County	13			1	6	6
Westchester County	1		1			
New York City	1					1
Total	33		1	3	17	12

SMALLPOX—Continued.

Miscellaneous State Reports.

Place.	Cases.	Deaths.
Indiana (May 1-31):		
Blackford County	1	
Boone County	1	
Clay County		1
Elkhart County	4	
Fountain County	4	
Gibson County	1	
Grant County	19	
Greene County	4	
Hancock County	1	1
Hendricks County	5	
Howard County	3	
Huntington County	1	
Jackson County	34	
Jay County	1	
Knox County	12	
Lagrange County	4	
Lake County	14	
Laporte County	4	
Lawrence County	2	
Madison County	15	
Marion County	61	1
Morgan County	2	
Parke County	16	
Pulaski County	7	
Ripley County	4	
Sullivan County	6	
Tippecanoe County	29	
Tipton County	3	
Vanderburg County	27	
Vermilion County	21	
Vigo County	50	
Warren County	1	
Warrick County	2	
Wells County	1	
Total	360	3
Iowa (May 1-31):		
Adair County	1	
Appanoose County	2	
Audubon County	2	
Benton County	1	
Blackhawk County	1	
Calhoun County	9	
Carroll County	6	
Cedar County	6	
Cerro Gordo County	7	
Cherokee County	3	
Crawford County	3	
Dallas County	3	
Des Moines County	10	
Franklin County	1	
Fremont County	2	
Guthrie County	1	
Hamilton County	1	
Harrison County	1	
Henry County	2	
Jefferson County	1	
Iowa (May 1-31)—Continued.		
Johnson County	1	
Lee County	7	
Linn County	2	
Mahaska County	5	
Mills County	2	
Mitchell County	1	
Monona County	1	
Osceola County	1	
Page County	1	
Plymouth County	1	
Polk County	4	
Pottawattamie County	60	
Ringgold County	3	1
Sac County	1	
Scott County	15	
Shelby County	1	
Sioux County	3	
Tama County	1	
Van Buren County	15	
Wapello County	31	
Webster County	17	
Winneshiek County	2	
Woodbury County	4	
Wright County	2	
Total	244	1
Nevada (May 1-31):		
Humboldt County	1	
North Dakota (May 1-31):		
Bowman County	2	
Burke County	1	
Foster County	3	
Golden Valley County	7	
Grand Forks County	2	
Griggs County	1	
Hettinger County	1	
McKenzie County	1	
Morton County	3	
Mountrail County	10	
Nelson County	1	
Pembina County	1	
Ramsey County	4	
Richland County	1	
Stutsman County	1	
Wells County	3	
Williams County	1	
Total	43	
Wyoming (May 1-31):		
Campbell County	1	
Sweetwater County	2	
Albany County	1	
Total	4	

Oregon Report for April, 1917.

During the month of April, 1917, 23 cases of smallpox were reported in Clatsop County, Oreg., and 4 cases in Portland, Oreg.

SMALLPOX—Continued.

City Reports for Week Ended June 16, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio	13		Indianapolis, Ind	9	
Alameda, Cal	1		Kansas City, Mo	18	
Albany, N. Y	1		Little Rock, Ark	8	
Alton, Ill	3		Memphis, Tenn	13	
Ann Arbor, Mich	1		Milwaukee, Wis	3	
Braddock, Pa	1		Minneapolis, Minn	30	
Butte, Mont	2		New Britain, Conn	7	
Cairo, Ill	2		New Castle, Pa	2	
Canton, Ohio	2		New Orleans, La	3	
Chicago, Ill	9		New York, N. Y	2	
Cincinnati, Ohio	1		Oklahoma City, Okla	9	
Cleveland, Ohio	10		Omaha, Nebr	5	
Coffeyville, Kans	1		Pittsburgh, Pa	1	
Columbus, Ohio	2		Quincy, Ill	8	
Dayton, Ohio	1		Roanoke, Va	1	
Denver, Colo	1		Rock Island, Ill	1	
Detroit, Mich	8		St. Louis, Mo	11	
Dubuque, Iowa	1		Salt Lake City, Utah	5	
Duluth, Minn	3	4	Sioux City, Iowa	10	
Elgin, Ill	1		Springfield, Ill	4	
Erie, Pa	3		Steubenville, Ohio	2	
Evansville, Ind	2		Tacoma, Wash	4	
Flint, Mich	3		Terre Haute, Ind	2	
Fort Wayne, Ind	3		Worcester, Mass	1	
Grand Rapids, Mich	2				

TETANUS.

City Reports for Week Ended June 16, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Boston, Mass	4	2	Pittsburgh, Pa		1
Charleston, S. C		1	Richmond, Va		2
Cleveland, Ohio	1		Springfield, Mass		1

TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 1094.

TYPHOID FEVER.

State Reports for May, 1917.

Place.	New cases reported.	Place.	New cases reported.
California:		California—Continued.	
Alameda County—		Kings County—	
Alameda	1	Hanford	1
Hayward	1	Los Angeles County	3
Oakland	12	Alhambra	1
Colusa County	1	El Monte	1
Contra Costa County—		Long Beach	1
Pittsburg	1	Los Angeles	8
Richmond	2	Monrovia	2
Fresno County—		Pasadena	4
Reedley	1	Watts	1
Imperial County	1	Monterey County	1
El Centro	3	Orange County	1
Kern County—		Fullerton	1
Bakersfield	2	Placer County—	
Delano	1	Auburn	1

TYPHOID FEVER—Continued.

State Reports for May, 1917—Continued.

Place.	New cases reported.
California—Continued.	
Sacramento County—	
Sacramento	1
San Diego County—	
San Diego	1
San Francisco	9
San Joaquin County—	
Lodi	1
Stockton	2
Santa Clara County—	
San Jose	1
Santa Clara	1
Tehama County—	
Corning	1
Yolo County	1
Total	70
Indiana:	
Cass County	1
Clark County	6
Delaware County	3
Elkhart County	3
Fayette County	1
Howard County	3
Huntington County	5
Jennings County	1
Lake County	17
Marion County	5
Owen County	4
Ripley County	2
St. Joseph County	6
Sullivan County	1
Tipton County	1
Vanderburg County	5
Warrick County	3
Washington County	3
Wells County	1
Total	71
Nevada:	
Humboldt County	2
New York:	
Albany County	10
Allegany County	4
Cattaraugus County	1
Cayuga County	2
Chautauqua County	1
Clinton County	4
New York—Continued.	
Columbia County	2
Dutchess County	2
Erie County	17
Greene County	2
Herkimer County	1
Jefferson County	5
Madison County	1
Monroe County	5
Montgomery County	1
Niagara County	3
Oneida County	4
Onondaga County	6
Ontario County	4
Orange County	4
Orleans County	1
Rensselaer County	3
St. Lawrence County	2
Saratoga County	4
Schenectady County	4
Schoharie County	1
Suffolk County	1
Sullivan County	1
Tioga County	1
Ulster County	1
Wayne County	1
Westchester County	3
Yates County	1
New York City	106
	209
North Dakota:	
Cass County	2
McIntosh County	4
Pembina County	3
Ransom County	1
Richland County	9
Stutsman County	2
Ward County	3
Total	24
Wyoming:	
Washakie County	3
Uinta County	5
Fremont County	1
Albany County	1
Total	10

Oregon Report for April, 1917.

During the month of April, 1917, one case of typhoid fever was reported in each of Clatsop, Jackson, and Wallowa Counties, Oreg.

City Reports for Week Ended June 16, 1917.

Place.	Cases.	Deaths.
Austin, Tex		1
Baltimore, Md	5	1
Beaver Falls, Pa	1	
Birmingham, Ala	16	1
Boston, Mass	3	
Buffalo, N. Y	4	2
Camden, N. J	1	
Charleston, S. C	7	2
Chicago, Ill	1	1
Cincinnati, Ohio	1	
Cleveland, Ohio	3	
Columbus, Ohio	2	1
Danville, Ill	1	
Detroit, Mich	3	1
Duluth, Minn	2	
El Paso, Tex		2
Everett, Mass	1	
Everett, Wash	2	

TYPHOID FEVER—Continued.

City Reports for Week Ended June 16, 1917—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Fall River, Mass.	6		Pasadena, Cal.	1	
Flint, Mich.	1		Passaic, N. J.	1	
Fort Worth, Tex.	2		Philadelphia, Pa.	29	1
Galesburg, Ill.	2		Pittsburgh, Pa.	1	
Galveston, Tex.	1		Providence, R. I.	3	
Hagerstown, Md.	2		Quincy, Ill.	1	1
Hamilton, N. Y.	1	1	Reno, Nev.	1	
Indianapolis, Ind.	2		Roanoke, Va.	1	
Johnstown, Pa.	1		Rutland, Vt.	2	
Lancaster, Pa.	1		St. Louis, Mo.	5	
Lynchburg, Va.	12		Salt Lake City, Utah.	6	
Marinette, Wis.	1		San Francisco, Cal.	1	
Memphis, Tenn.	2	1	Sacramento, Cal.	1	
Mobile, Ala.	2	1	Savannah, Ga.	2	
Nashville, Tenn.	5		South Bend, Ind.	2	
Newark, N. J.	2	1	Springfield, Mass.		1
New Castle, Pa.	2		Superior, Wis.	3	
New Haven, Conn.	1		Toledo, Ohio.	1	
New Orleans, La.	5	3	Trenton, N. J.	2	
New York, N. Y.	24	4	Washington, D. C.	6	1
Norristown, Pa.	1	1	Wilmington, Del.	1	
Oakland, Cal.	1		Winston-Salem, N. C.	7	
Orange, N. J.		1			

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

State Reports for May, 1917.

State.	Cases reported.			State.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.		Diphtheria.	Measles.	Scarlet fever.
California	228	4,041	422	New York	1,696	11,446	1,779
Indiana	197	3,908	443	North Dakota	23	224	48
Iowa	32		194	Wyoming	1	356	65
Nevada		43	8				

Oregon Report for April, 1917.

During the month of April, 1917, 9 cases of diphtheria, 688 cases of measles, and 112 cases of scarlet fever were reported in Oregon.

City Reports for Week Ended June 16, 1917.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md.	589,621	177	3	1	233	3	10	1	49	27
Boston, Mass.	756,476	227	91	8	236	2	23		72	24
Chicago, Ill.	2,497,722	651	96	24	755	5	307	11	227	67
Cleveland, Ohio.	674,073	195	36	2	85		17		36	18
Detroit, Mich.	571,784	189	98	11	36	3	63	3	27	25
Los Angeles, Cal.	503,812		6	2	142	1	5		23	21
New York, N. Y.	5,602,841	1,301	241	29	1,089	26	116	2	363	179
Philadelphia, Pa.	1,709,518	497	58	10	280	3	33		96	70
Pittsburgh, Pa.	579,090	138	16	2	213	2	16		21	8
St. Louis, Mo.	757,309	200	67	4	95		74		48	28

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended June 16, 1917—Continued.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 300,000 to 500,000 inhabitants:										
Buffalo, N. Y.	468,558	207	27	.....	55	2	10	5	46	28
Cincinnati, Ohio	410,476	121	13	2	43	.....	4	.....	25	14
Jersey City, N. J.	306,345	82	8	2	62	1	19	.....	13	6
Milwaukee, Wis.	436,535	120	12	2	118	.....	59	1	20	7
Minneapolis, Minn.	363,454	.....	20	.....	40	.....	15	.....	.....	.....
Newark, N. J.	408,894	114	16	2	59	1	16	.....	44	12
New Orleans, La.	371,747	.....	7	.....	2	.....	2	.....	30	21
San Francisco, Cal.	463,516	121	9	2	63	.....	12	.....	18	9
Washington, D. C.	363,980	97	9	.....	160	.....	4	.....	22	5
From 200,000 to 300,000 inhabitants:										
Columbus, Ohio	214,878	66	17	.....	6	.....	8	.....	7	5
Denver, Colo.	260,800	.....	6	.....	38	.....	8	.....	.....	12
Indianapolis, Ind.	271,708	.....	23	.....	129	.....	10	.....	30	.....
Kansas City, Mo.	297,847	84	5	.....	23	.....	14	1	1	10
Portland, Oreg.	296,463	44	9	1	10	.....	11	.....	12	3
Providence, R. I.	254,960	70	11	2	14	.....	3	.....	59	4
Rochester, N. Y.	256,417	76	5	1	189	3	16	1	16	7
From 100,000 to 200,000 inhabitants:										
Albany, N. Y.	104,199	.....	3	.....	30	.....	6	.....	8	.....
Birmingham, Ala.	181,762	88	.....	.....	46	3	1	.....	21	10
Bridgeport, Conn.	121,579	29	6	.....	18	.....	4	.....	3	2
Camden, N. J.	106,233	.....	.....	.....	16	.....	2	.....	3	.....
Dayton, Ohio	127,224	38	2	.....	42	.....	16	.....	4	2
Fall River, Mass.	128,366	31	3	.....	76	2	1	.....	11	.....
Fort Worth, Tex.	104,562	21	.....	.....	.....	.....	1	.....	.....	2
Grand Rapids, Mich.	128,291	36	1	.....	61	.....	2	.....	12	2
Hartford, Conn.	110,900	45	9	1	22	.....	3	.....	3	2
Lawrence, Mass.	100,560	21	1	.....	.....	.....	1	.....	6	5
Lowell, Mass.	113,245	28	6	.....	6	.....	2	.....	2	2
Lynn, Mass.	102,425	22	2	.....	3	.....	3	.....	4	2
Memphis, Tenn.	148,995	41	1	.....	2	.....	1	.....	15	7
Nashville, Tenn.	117,057	27	1	.....	.....	.....	1	.....	5	3
New Bedford, Mass.	118,158	33	4	.....	50	.....	.....	.....	9	4
New Haven, Conn.	149,685	.....	3	.....	120	1	.....	.....	5	.....
Oakland, Cal.	198,604	53	.....	.....	12	.....	7	.....	8	3
Omaha, Nebr.	165,470	49	1	.....	58	.....	24	.....	.....	6
Reading, Pa.	109,381	26	.....	.....	9	.....	7	.....	5	1
Richmond, Va.	156,687	41	.....	.....	.....	.....	.....	.....	4	8
Salt Lake City, Utah	117,399	19	1	.....	5	.....	15	.....	.....	.....
Springfield, Mass.	105,942	36	18	4	44	1	10	.....	7	.....
Syracuse, N. Y.	155,624	49	2	.....	39	.....	11	.....	3	4
Tacoma, Wash.	112,770	.....	1	.....	.....	.....	1	.....	.....	.....
Toledo, Ohio	191,554	74	8	1	46	.....	24	2	1	4
Trenton, N. J.	111,593	36	2	.....	7	.....	1	.....	8	4
Worcester, Mass.	163,314	33	6	.....	18	.....	4	.....	7	1
From 50,000 to 100,000 inhabitants:										
Akron, Ohio	85,625	.....	24	.....	11	.....	.....	.....	.....	.....
Allentown, Pa.	63,505	20	1	.....	.....	.....	4	.....	8	.....
Altoona, Pa.	58,659	.....	4	.....	4	.....	.....	.....	1	.....
Atlantic City, N. J.	57,660	.....	.....	.....	42	.....	.....	.....	5	.....
Bayonne, N. J.	69,893	.....	.....	.....	.....	.....	4	.....	.....	.....
Berkeley, Cal.	57,653	14	.....	.....	1	.....	1	.....	.....	.....
Binghamton, N. Y.	53,973	11	1	.....	49	1	3	.....	2	.....
Brockton, Mass.	67,449	10	4	.....	2	.....	7	.....	.....	.....
Canton, Ohio	60,852	17	2	.....	4	.....	1	.....	1	3
Charleston, S. C.	60,734	29	3	.....	2	1	.....	.....	.....	4
Covington, Ky.	57,144	12	1	.....	.....	.....	.....	.....	1	1
Duluth, Minn.	94,495	25	5	1	32	1	2	.....	3	1
Elizabeth, N. J.	86,690	23	1	.....	.....	.....	4	.....	6	4
El Paso, Tex.	63,705	63	.....	.....	7	3	1	.....	.....	8
Erie, Pa.	75,195	.....	.....	.....	9	.....	.....	.....	6	22
Evansville, Ind.	76,078	15	3	.....	7	.....	2	.....	1	1
Flint, Mich.	54,772	12	5	.....	20	.....	17	1	.....	.....
Fort Wayne, Ind.	76,183	12	4	.....	27	.....	4	.....	1	2
Harrisburg, Pa.	72,015	18	2	.....	18	.....	1	.....	.....	2
Hoboken, N. J.	77,214	15	4	.....	24	.....	2	.....	2	2
Johnstown, Pa.	68,529	25	2	.....	25	.....	.....	.....	3	1
Kansas City, Kans.	99,437	.....	.....	.....	6	.....	1	.....	6	.....

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended June 16, 1917—Continued.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 50,000 to 100,000 inhabitants—Continued.										
Lancaster, Pa.	50,853	.....	1	.....	25	.....	2	.....	3	.....
Little Rock, Ark.	57,343	11	.....	.....	4	.....	.....	.....	.....	.....
Malden, Mass.	51,155	8	9	.....	41	.....	1	.....	1	.....
Manchester, N. H.	78,283	28	.....	.....	5	.....	.....	.....	2	2
Mobile, Ala.	58,221	21	1	.....	5	1	.....	.....	.....	2
New Britain, Conn.	53,794	12	.....	.....	1	.....	2	.....	.....	3
Norfolk, Va.	89,612	.....	.....	.....	4	.....	.....	.....	4	6
Oklahoma City, Okla.	92,943	13	1	.....	1	.....	1	.....	.....	.....
Passaic, N. J.	71,744	16	6	.....	3	.....	.....	.....	4	3
Pawtucket, R. I.	59,411	12	4	.....	.....	.....	2	.....	.....	.....
Portland, Me.	63,867	15	2	.....	23	.....	1	1	.....	2
Rockford, Ill.	55,185	16	1	.....	35	.....	2	.....	.....	.....
Sacramento, Cal.	66,895	19	1	.....	7	.....	.....	.....	5	4
Saginaw, Mich.	55,642	26	.....	.....	2	.....	4	.....	2	.....
San Diego, Cal.	53,330	21	.....	.....	67	.....	.....	.....	1	1
Savannah, Ga.	68,805	23	1	.....	10	.....	.....	.....	4	2
Schenectady, N. Y.	99,519	17	1	.....	40	.....	2	.....	2	4
Sioux City, Iowa.	57,078	1	.....	.....	.....	.....	4	.....	.....	.....
Somerville, Mass.	87,039	18	4	.....	20	.....	1	.....	6	4
South Bend, Ind.	68,946	24	1	.....	26	.....	8	.....	.....	3
Springfield, Ill.	61,120	14	.....	.....	9	.....	2	.....	.....	1
Terre Haute, Ind.	66,083	17	1	.....	6	.....	.....	.....	.....	3
Troy, N. Y.	77,916	.....	2	1	19	.....	4	.....	4	13
Wichita, Kans.	70,722	.....	.....	.....	1	.....	4	.....	2	.....
Wilkes-Barre, Pa.	76,776	12	.....	.....	63	.....	3	.....	3	.....
Wilmington, Del.	94,265	28	3	.....	7	.....	2	.....	2	.....
York, Pa.	51,656	.....	1	.....	.....	.....	.....	.....	2	.....
From 25,000 to 50,000 inhabitants:										
Alameda, Cal.	27,732	3	.....	.....	.....	.....	3	.....	.....	.....
Auburn, N. Y.	37,385	9	1	.....	3	.....	.....	.....	.....	2
Austin, Tex.	34,814	14	1	.....	.....	.....	.....	.....	1	4
Brookline, Mass.	32,730	.....	2	.....	8	.....	.....	.....	2	.....
Butler, Pa.	27,632	5	1	.....	1	.....	.....	.....	.....	.....
Butte, Mont.	43,425	1	1	.....	4	.....	9	.....	.....	.....
Chelsea, Mass.	46,192	16	4	.....	8	.....	1	.....	5	1
Chicopee, Mass.	29,319	4	1	.....	1	.....	.....	.....	1	.....
Cumberland, Md.	26,074	6	.....	.....	6	.....	.....	.....	4	1
Danville, Ill.	32,261	6	.....	.....	6	.....	1	.....	.....	.....
Dubuque, Iowa.	39,873	.....	1	1	1	.....	2	.....	1	1
East Chicago, Ind.	28,743	3	.....	.....	11	.....	2	.....	.....	2
East Orange, N. J.	42,458	4	.....	.....	40	.....	6	.....	3	.....
Elgin, Ill.	28,203	7	.....	.....	1	.....	.....	.....	2	.....
Everett, Mass.	39,233	6	1	.....	4	.....	.....	.....	1	.....
Everett, Wash.	35,486	6	.....	.....	3	.....	2	.....	.....	2
Fitchburg, Mass.	41,781	8	9	.....	20	.....	.....	.....	.....	.....
Galveston, Tex.	41,863	16	.....	.....	.....	.....	.....	.....	.....	2
Hagerstown, Md.	25,679	.....	.....	.....	1	.....	.....	.....	.....	.....
Hamilton, Ohio.	40,496	6	1	.....	.....	.....	2	.....	.....	1
Haverhill, Mass.	48,477	11	2	.....	4	.....	1	.....	5	.....
Jackson, Mich.	35,368	13	1	.....	39	.....	1	.....	2	.....
Kalamazoo, Mich.	48,886	12	1	.....	90	.....	.....	.....	2	1
Kenosha, Wis.	31,576	8	2	.....	41	.....	2	1	1	1
Kingston, N. Y.	26,771	4	.....	.....	4	.....	.....	.....	.....	.....
Knoxville, Tenn.	38,676	.....	.....	.....	1	.....	.....	.....	3	.....
La Crosse, Wis.	31,677	3	6	.....	.....	.....	1	.....	2	.....
Lexington, Ky.	41,097	18	.....	.....	8	.....	1	.....	.....	2
Lima, Ohio.	35,384	9	.....	.....	4	.....	.....	1	.....	.....
Lincoln, Nebr.	46,515	13	1	.....	14	.....	2	.....	.....	.....
Long Beach, Cal.	27,587	5	.....	.....	8	.....	.....	.....	.....	.....
Lorain, Ohio.	36,964	.....	.....	.....	1	.....	2	.....	1	.....
Lynchburg, Va.	32,940	18	.....	.....	18	.....	1	.....	.....	6
Madison, Wis.	30,699	.....	.....	.....	3	.....	4	.....	.....	.....
McKeesport, Pa.	47,521	7	1	.....	1	.....	.....	.....	.....	.....
Medford, Mass.	26,234	4	2	.....	11	.....	.....	.....	1	1
Montclair, N. J.	26,318	6	1	.....	4	.....	.....	.....	3	.....
Nashua, N. H.	27,327	9	.....	.....	8	.....	.....	.....	.....	.....
Newburgh, N. Y.	29,603	7	1	1	3	.....	1	.....	1	.....
New Castle, Pa.	41,133	.....	1	.....	1	.....	4	.....	.....	.....
Newport, R. I.	30,108	10	.....	.....	2	.....	.....	.....	.....	.....

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended June 16, 1917—Continued.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 100,000 inhabitants—Continued.										
Newton, Mass	43,715	7	1		20				2	1
Niagara Falls, N. Y	37,353	16	4		31		2		2	
Norristown, Pa	31,401	7			2					
Ogden, Utah	31,404	6	1		3		3			
Orange, N. J	33,080	6			4		7		1	
Pasadena, Cal	46,450	10			4				1	1
Perth Amboy, N. J	41,185	10	1		2				3	
Pittsfield, Mass	38,629	7	1		42		1		2	1
Portsmouth, Va	39,651	14			5		5			
Quincy, Ill	36,798	13			3					
Quincy, Mass	38,136	6	2		2		3			2
Racine, Wis	46,486	6							3	
Roanoke, Va	43,284	13	3		5				1	1
Rock Island, Ill	28,926	11			5		2			
Steubenville, Ohio	27,445	8								
Superior, Wis	46,226	5	3							
Taunton, Mass	36,283	8					2			
Topeka, Kans	48,726	8			6		2			
Waltham, Mass	30,570				19				1	1
Watertown, N. Y	29,894				9					
West Hoboken, N. J	43,139	5	1		9		5		3	
Wheeling, W. Va	43,377	12			3					
Wilmington, N. C	29,892	17			3		1			1
Winston-Salem, N. C	31,155	15			3		1		4	3
Zanesville, Ohio	30,863				2		2			
From 10,000 to 25,000 inhabitants:										
Alton, Ill	22,874	3	2		3				1	1
Ann Arbor, Mich	15,010	8			40		1		4	
Beaver Falls, Pa	13,532		1				1			
Berlin, N. H	13,599	4							1	
Braddock, Pa	21,685		1		7		1		3	
Cairo, Ill	15,794	6			1					
Clinton, Mass	[1] 13,075	4			9					
Coffeyville, Kans	17,518				1				1	
Concord, N. H	22,669	14	2		40					
Dunkirk, N. Y	20,743				11				1	
Galesburg, Ill	24,276	7	2		32					
Harrison, N. J	16,950				9				2	
Kearny, N. J	23,539	6			12				1	
Kokomo, Ind	20,930	2	2		1					
Long Branch, N. J	15,395	1			2				6	
Marinette, Wis	[1] 14,610	4					2			1
Melrose, Mass	17,445	4	3		6				2	
Morristown, N. J	13,284	4								
Muscatine, Iowa	17,500						1			
Nanticoke, Pa	23,126	3								
Newburyport, Mass	15,243	4			5		1			1
New London, Conn	20,985	6			2					
North Adams, Mass	[1] 22,019	7			45					
Northampton, Mass	19,926	5			5		2		6	3
Plainfield, N. J	23,805	4							1	
Portsmouth, N. H	11,666		1		2		2			
Reno, Nev	14,889		1				1			
Rocky Mount, N. C	12,067	7			3					
Rutland, Vt	14,831	6			2		1			2
Sandusky, Ohio	20,193	8			6					
Saratoga Springs, N. Y	13,821	1							2	
South Bethlehem, Pa	24,204				3		1			
Washington, Pa	21,618		1		16		1			
Woburn, Mass	15,969	4								

[1] Population Apr. 15, 1910; no estimate made.

FOREIGN.

CORRECTION.

The report of epidemic prevalence of cerebrospinal meningitis at Chihuahua, Mexico, appearing in the Public Health Reports, June 22, 1917, page 1000, has been officially stated to be erroneous.

CUBA.

Communicable Diseases—Habana.

Communicable diseases have been notified at Habana as follows:

Disease.	June 1-10, 1917.		Remaining under treatment June 10, 1917.
	New cases.	Deaths.	
Diphtheria	7	1	15
Leprosy			10
Malaria	6		34
Measles	31		36
Paratyphoid fever			3
Typhoid fever	14		49
Varicella			4

CHOLERA, PLAGUE, SMALLPOX, AND TYPHUS FEVER.

Reports Received During the Week Ended July 6, 1917.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Rangoon	Apr. 29-May 5	5	3	

PLAGUE.

Ceylon:				
Colombo	May 6-12	4		
China:				
Amoy	Apr. 29-May 5			Present and in vicinity.
Egypt				Jan. 1-May 17, 1917: Cases, 231; deaths, 116.
Suez	May 12-17	4	2	
Provinces—				
Fayoum	May 11-17	12	6	
Girgeh	May 17		1	
Minieh	May 12-15	2	2	
Siout	May 12	3	1	
India:				
Madras Presidency	May 6-12	53	38	
Rangoon	Apr. 29-May 5	23	21	

[1] From medical officers of the Public Health Service, American consuls and other sources. For reports received from Dec. 30, 1916, to June 29, 1917, see Public Health Reports for June 29, 1917. The tables of epidemic disease are terminated semiannually and new tables begun.

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

Report Received During the Week Ended July 6, 1917—Continued.

SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
Australia:				
New South Wales				Apr. 27–May 10, 1917: Cases, 6.
Brewarrina	Apr. 27–May 10	4		
Quambone	do	2		
Queensland—				
Thursday Island Quarantine Station.	May 9	1		From s. s. St. Albans from Kobe via Hongkong. Vessel proceeded to Townsville, Brisbane, and Sydney, in quarantine.
Canada:				
Manitoba—				
Winnipeg	June 10–16	1		
Nova Scotia—				
Port Hawkesbury	June 17–23			Present in district.
Ceylon:				
Colombo	May 6–12	1		
China:				
Amoy	Apr. 29–May 5			Present and in vicinity.
Chungking	May 6–12			Present.
Harbin	Apr. 23–May 6	7		On Chinese Eastern Railway.
Hongkong	May 6–12	1	1	
Manchuria Station	Apr. 23–29	1		Do.
Mukden	May 20–26			Present.
Shanghai	May 14–20	2	7	
Tsitshar Station	Apr. 16–22	1		On Chinese Eastern Railway. At another station on railway, 1 case.
Tsingtao	May 22–29	4		
Egypt:				
Alexandria	Apr. 30–May 27	20	6	
India:				
Madras	May 6–12	11	9	
Rangoon	Apr. 29–May 5		1	
Portugal:				
Lisbon	May 13–26	4		
Russia:				
Riga	Mar. 11–May 5	2		Jan. 1–31, 1917: Cases, 7.
Vladivostok	Mar. 15–21	11	4	
Turkey in Asia:				
Trebizond	Feb. 25–Apr. 13		15	
Union of South Africa:				
Johannesburg	Mar. 12–24	4		

TYPHUS FEVER.

China:				
Tsingtao	May 20–29	1		
Egypt:				
Alexandria	Apr. 30–May 27	830	232	
Russia:				
Riga				Jan. 1–31, 1917: Cases, 1.
Vladivostok	Mar. 29–Apr. 4	2		