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OCCUPATIONAL DISEASES AND COMPENSATION LAWS.

THE OHIO SUPREME COURT DECIDES THAT THE WORKMEN'S COMPENSATION LAW OF OHIO DOES NOT COVER OCCUPATIONAL DISEASES.

The Supreme Court of Ohio has decided that a workman who was suffering from lead poisoning contracted in the course of his employment was not entitled to compensation under the Ohio law of 1911. That law provided for compensation to employees "injured in the course of employment." The court took the view that the legislature in adopting the law did not intend to cover injuries caused by disease, although the language used might be construed to include such injuries.

Chief Justice Nichols, in the opinion, said:

The premium rates assessed and collected by the administering board * * * have been fixed on a basis of death and injuries by accident solely, to the entire exclusion of injury through disease. It is quite patent that any other construction would necessitate an immediate and striking horizontal elevation of all premium rates, and would in all probability prove a serious menace to the law itself.

Although the present constitution of the State of Ohio authorizes the legislature to provide compensation to workmen for occupational diseases, the opinion states that the present law, which was adopted in 1913, can be construed only as "wholly excluding any compensation for injury by disease, whether occupational or otherwise."

The opinion is published in full in this issue of the Public Health Reports, page 1269.

THE CONTROL OF MOSQUITOES.

WHIRLIGIG BEETLES (*DINEUTES*) AS A POSSIBLE FACTOR.

It has been stated that where "whirligig beetles" (*Dineutes*) are present *Anopheles* larvæ fail to thrive because of the destruction of the larvæ by the beetles. The "whirligigs" are the small, dark, oval, flattened beetles which one sees floating lightly on the surface of woodland pools and sluggish streams, usually congregated in considerable numbers, either resting quietly or performing graceful

complex curves around each other, at times darting around and around and yet seemingly never colliding.

Asst. Surg. R. C. Derivaux investigated the habits of these beetles to ascertain their probable influence in the destruction of *Anopheles* larvæ and the prevention of malaria. He found that when the beetles were placed in receptacles containing clear water in which there were *Anopheles* larvæ the hungry beetles devoured large numbers of the larvæ, but that when fragments of light débris were thrown on the water and allowed to float on the surface the beetles did not devour the larvæ, apparently having difficulty either in locating them or in securing them when located.

The inference would be that in clear water without floating débris the whirligig beetles would be a factor in destroying mosquito larvæ.

The details of the work are given in the report which follows:

A Note on the Predacious Habits of *Dineutes* ("Whirligig Beetles") Toward *Anopheles* Larvæ.

By R. C. DERIVAUX, Assistant Surgeon, United States Public Health Service.

In the course of a sanitary survey conducted in Anne Arundel County, Md., during the summer of 1915, with reference to rural sanitation and malaria, opportunity was afforded to make some observations on the behavior of an aquatic insect enemy of *Anopheles* larvæ, namely, one of the *Dineutes*, family of *Gyrinidæ*, and commonly known as the "whirligig beetle," or "mellow bug."

It has been stated that where *Gyrinidæ* occur, *Anopheles* larvæ fail to thrive because of the marked predacious habits of the former. J. B. Smith is quoted by Howard, Dyar, and Knab¹ as stating that the *Gyrinidæ* or so-called "whirligig beetles" which lie nearly wholly at the surface of the water are great destroyers of mosquito larvæ, and that "no *Anopheles* larva has a chance in any bit of water inhabited by them. Their surface-feeding habit and their tendency to get near the edges make them especially dangerous to *Anopheles*, which fail absolutely to maintain themselves within range of these beetles." D'Emerz de Charmoy, also quoted by Howard, Dyar, and Knab,² conducted studies, and he reports *Dineutes indus* as capable of "quick destruction" of *Anopheles* larvæ, 3 *Dineutes* devouring 50 larvæ in 3 hours, the minimum rate of destruction being 16 per hour. The larvæ of *Gyrinidæ* are also said to be predaceous,³ and Theobald⁴ is of the opinion that "the larvæ of the water beetles of the families *Dytiscidæ*, *Gyrinidæ*, *Hydrophilidæ*, also feed on mosquito larvæ, as do the various aquatic Heteroptera."

¹ Howard, Dyar, and Knab: Mosquitoes of North and Central America and the West Indies. Washington, 1912. Vol. 1, pp. 164-165 and 170.

² Ibid.

³ Ibid.

⁴ Theobald: Monograph of the Culicidæ of the World. London, 1901.- Vol. 1, p. 75.

During the sanitary survey referred to, it was observed that in many instances even where whirligig beetles were numerous, *Anopheles* larvæ were not particularly difficult of detection and capture, and that far from being *Anopheles*-free, a number of areas were found where there was no appreciable influence apparent as far as propagation of *Anopheles* was concerned. Accordingly, it was considered of interest to conduct observations with a view of determining what factors influenced larva destruction by these insects, and to what extent and in what manner such destruction was effected.

A first lot of these beetles was taken in July, 1915, from a clear, sluggish stream, some 10 feet in width, not far from Annapolis. Two specimens were sent to the Bureau of Entomology for determination, and were reported as belonging to the genus *Dineutes*, family *Gyrinidae*.

A second lot, taken from this same area, was kept in a tin container, in the water in which they were captured, and of these three were put into a white china basin, about 20 inches in diameter, filled with clean water. Twenty-two *Anopheles punctipennis* larvæ, varying in size from full grown to small, newly emerged larvæ, were then introduced, at 7 p. m.; early the next morning it was found that all but 2 of the larvæ had disappeared, the two survivors being of the smallest introduced. On the same day, at 6 p. m., the same 3 *Dineutes* were given 22 more larvæ, nearly all small, again in clean water; the following morning but 7 remained.

Three new *Dineutes* which had been given no food since their capture six days previously were placed in the container with 16 large and 6 small *Anopheles* larvæ (*punctipennis* and *quadrimaculatus*); within 15 minutes all of the large and one of the small larvæ had been devoured. Observation of the details of capture and ingestion was found impossible with as many as 3 beetles in the same container, because of the incessant whirling of the insects, with consequent disturbance of the surface of the water, but it was noted that once the larva had been located, its disappearance was effected with astonishing rapidity.

Repetition of the experiment with fresh beetles that had been similarly starved and the same number of larvæ but with the addition to the water of a moderately plentiful supply of surface débris, twigs, etc., gave very different results. Only a few of the larvæ were captured, and these, apparently, accidentally; the shelter afforded by the flotage was seemingly all that was necessary to give adequate protection to the larvæ, the beetles having great difficulty in locating the larvæ when so concealed.

In an artificial container the *Dineutes* swing lazily about on the surface, much as they do in their natural environment, until disturbed by the presence of the observer; upon alarm, they manifest the

greatest excitement, whirling about rapidly, and diving in search of hiding places. They are capable of remaining submerged for lengthy periods, carrying down with them a supply of air under the elytra, from the ends of which a terminal bubble protrudes; no feeding was observed while the insects were submerged. When feeding on the surface, the beetles locate their prey, in these experiments *Anopheles* larvæ, apparently by olfactory or tactile impression, the visual sense for near objects not being seemingly very acute, as frequently larvæ lying directly in the path of the oncoming beetle were missed as the latter swerved aside. Once located, however, the chase is brisk, and, in the absence of protecting flotage, capture is certain, the only chance of escape for the larva lying in diving beneath the surface. The larva is seized between the approximated tibiæ of the anterior extremities and at once ingested without preliminary dismemberment, and no remnants are left. It is of no moment whether the larva is taken head first or not, and the time required for capture and devouring is about 4 seconds. A single beetle, previously kept unfed for five days, was found to be capable of disposing of six *Anopheles* larvæ in as many minutes, in clear water without surface débris and in the absence of other food material.

Dineutes were found to occur in the region in which the survey was made, but seldom in the small pools and the small runs overgrown with vegetation, where *Anopheles* were found to propagate in profusion, but were noted most frequently in the more extensive courses and moving streams. Here the beetles move erratically about over the surface of the water but with decided preference for the open waters where they circulate contentedly until disturbed; no evidences of shore feeding were noted, nor were the beetles observed on waters the surface of which carried much flotage.

From these observations, it is inferred that, although capable of swift destruction of *Anopheles* larvæ under experimental conditions and in the absence of protecting vegetation and flotage, *Dineutes* alone are not of sufficient efficacy as natural enemies to justify considering waters inhabited by them as free of dangerous potentialities as *Anopheles* breeding places; their evident predilection for such waters, or portions of waters, as are not ordinarily selected by *Anopheles* for breeding purposes, together with their obvious difficulty in locating their prey when the latter has recourse to concealment in débris and vegetation, would indicate that, under natural conditions, their influence on *Anopheles* propagation is of but small practical importance.

Indebtedness is acknowledged to Mr. Frederick Knab, Bureau of Entomology, Department of Agriculture, for generic determination of this beetle.

PELLAGRA.

LABORATORY EXAMINATIONS IN CONNECTION WITH THE DISEASE.

By J. R. RIDLON, Passed Assistant Surgeon, United States Public Health Service.

The treatment of pellagra patients by the United States Public-Health Service at Savannah, Ga., has afforded opportunity for certain laboratory examinations of feces, blood, and urine.

FECES.

Several observers have reported on the prevalence of intestinal parasites in pellagra.

Siler and Nichols,¹ summarizing their observations at the Peoria State Hospital during 1909, report that "Stool examinations in 92 cases disclosed the fact that 84.8 per cent of the pellagrins were infected with intestinal protozoa (endamœbæ and flagellates); 36.8 per cent of these protozoal infections were endamœbæ, and while no classification of these endamœbæ was attempted, they were clearly pathogenic in the large majority of these cases, as was evidenced by the symptomatology and by the appearance of the intestines at necropsy." They found further that "of 107 nonpellagra patients, 50.5 per cent were infected with intestinal protozoa, of which 14 per cent were endamœbæ."

From their observations at Peoria during 1910 they report that of 50 nonpellagrous patients, 52 per cent showed endamœbæ and 60 per cent showed flagellates, and of 21 pellagrous patients 76 per cent showed endamœbæ and 76 per cent showed flagellates.

In this series they found both pathogenic and nonpathogenic endamœbæ and considered the flagellates as "mainly *Trichomonas intestinalis*."

During the same year they studied protozoal infection among the patients ("practically all nonpellagrous") at Kankakee and Dunning. At the former place, of 62 patients 58 per cent showed endamœbæ and 77 per cent showed flagellates. At the latter place, of 50 patients, 46 per cent showed endamœbæ and 32 per cent showed flagellates. No attempt was made at either place to classify the endamœbæ. The flagellates were mainly *Trichomonas intestinalis*.

Willetts² examined the feces of 500 unselected insane negro females at the Georgia State Sanitarium, 35 of whom were pellagrins, with the following results.

¹ J. F. Siler and H. J. Nichols in Report of the Pellagra Commission of the State of Illinois, November, 1911, Ch. IV, p. 44.

² From Pellagra, by S. R. Roberts, 1912, p. 77.

	Number examined.	Number of pell-grins.
	500	35
	<i>Per cent.</i>	<i>Per cent.</i>
Infections.....	50	40
Ascaris.....	28.2	8.57
Trichuris.....	40.2	17.14
Strongyloides.....	18.2	25.71
Uncinaria.....	11.8	20.71
Hymenolepis.....	0.2	2.86

Allen ¹ has reported the presence of amœbiasis complicating pellagra and has called attention to the necessity for careful differential diagnosis.

The series here reported is based upon microscopical examinations for intestinal parasites of the feces from 95 pellagrins.

Technic.

The following technic was used:

A small portion of feces was emulsified in a large drop of warm salt solution on a slide and covered with a 22 by 40 mm. cover glass, making a preparation of a suitable thickness to be examined with an oil-immersion objective. All preparations were examined with the low power and 1/12 oil-immersion lenses with daylight illumination, and about three-fourths of the preparations were examined in addition with the use of a dark-field illuminator. This apparatus has been found of great value in studying motile organisms and in counting the flagella of certain intestinal parasites.

Results of Fecal Examinations.

A total of 1,040 microscopical examinations has been made of the feces of 95 pellagrins.

Only 1 specimen was obtained for examination from 14 of the patients. The largest number of examinations of different specimens from one patient was 83.

Of the 14 patients from whom only 1 specimen was examined only 4 were positive for intestinal parasites. It is believed that examinations of additional specimens would have shown a higher percentage of infection, as it was repeatedly found that specimens from patients known to be infected with intestinal parasites were negative in many examinations.

Stools were brought to the laboratory each morning, all having been passed after 6 p. m. on the previous evening, and the great majority after 4 a. m. on the day of examination.

¹ Amœbæ in the Stools of Pellagrins, Allen. Transactions of National Conference on Pellagra at Columbia, S. C., 1909, p. 219.

The great majority were examined within six hours after passage. Stools were noted of every degree of consistency from liquid to solid and varying much in color. The most characteristic stool noted during the acute stages of the diseases was a copious mushy and frothy stool of a pale yellowish color or with a slight grayish shade, the frothiness being due to the presence of bubbles from fermentation.

Results of fecal examinations of pellagra patients for intestinal parasites were as follows:

Table No. 1.

Examinations and infections.	Number.	Per cent.
Total number patients examined.....	95	
Total number patients infected.....	56	58.9
Patients infected with:		
Trichomonas.....	41	43.1
Endamoeba coli.....	22	23.1
Lambliain testinalis.....	18	18.9
Necator americanus.....	10	10.5
Strongyloides stercoralis.....	2	2.1

Degree of infection.—Classed according to the degree of infection with intestinal parasites we find:

Table No. 2.

Examinations and infections.	Number.	Per cent.
Total number of patients examined.....	95	
Total number of patients infected.....	56	58.9
Patients infected with:		
One species.....	28	29.4
Two species.....	20	21.0
Three species.....	7	7.3
Four species.....	1	1.05

Race and sex.—Infections were distributed according to race and sex, as follows:

Table No. 3.

Examinations and infections.	Total number.	White.				Colored.			
		Male.		Female.		Male.		Female.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Patients examined.....	95	53		39		2		1	
Patients infected.....	56	42	79.2	12	30.7	1	50	1	100
Patients infected with:									
One species.....	28	19	35.8	8	20.5	0	0	1	100
Two species.....	20	15	28.3	4	10.2	1	50	0	0
Three species.....	7	7	13.2	0	0	0	0	0	0
Four species.....	1	1	1.8	0	0	0	0	0	0
Trichomonas.....	41	30	56.6	9	23.0	1	50	1	100
Endamoeba coli.....	22	20	37.7	1	2.5	1	50	0	0
Lambliain testinalis.....	18	14	26.4	4	10.2	0	0	0	0
Necator americanus.....	10	9	16.9	1	2.5	0	0	0	0
Strongyloides stercoralis.....	2	1	1.8	1	2.5	0	0	0	0

Trichomonas.—Flagellates of the genus *Trichomonas* were observed more often than any other intestinal parasites, being found in 43.1 per cent of cases.

From the same patient, forms were observed with three or with four anterior flagella, either form being with or without an undulating membrane and with or without an additional trailing flagellum. When present, this trailing flagellum was apparently a continuation of the outer edge of the undulating membrane.

It is undecided whether both of these should be included under the species *Trichomonas hominis* or whether two species are represented.

These organisms were pear shaped and from 12 to 25 microns in length. In stained specimens a nucleus was observed near the anterior end. Flagella were counted with the aid of the dark-field illumination after active motility had ceased.

Although often found in diarrheic stools there is no evidence that they caused any symptoms. Pellagrins not harboring these parasites suffered from periods of diarrhea fully as often as those who were infected.

Endamæba coli.—These endamæbæ were found in 23.1 per cent of patients. Diagnosis depended upon the finding of motile and encysted forms with eight nuclei in all but two cases. In these two cases diagnosis was made from motile forms, with sluggish motility, distinct nuclei, and an absence of ingested erythrocytes. No pathogenic endamæbæ were found.

Lamblia intestinalis was observed in 18.9 per cent of cases, both motile and encysted forms being seen.

Necator americanus.—This hookworm infection was observed in 10.5 per cent of cases.

Strongyloides stercoralis.—This infection was observed in two patients, diagnosis being made from the presence of rhabditiform embryos in fresh stools. No symptoms were noted from the infection.

Other observations.—Observations were made in addition to the above-mentioned parasites as follows:

Yeasts were observed in the majority of stools of a liquid or semi-solid consistency, being most prevalent in those which were frothy. They are considered as belonging to the genus *Monilia* from the presence of mycelial elements. It has been possible to isolate some of these yeasts for the purpose of cultural study, and further observations are in progress.

Fine motile spirochætes or treponema-like organisms with from 4 to 12 turns were noted in 18, or 18.9 per cent of patients. Their motility was of a corkscrew character.

Motile spirilla with from 2 to 5 turns were noted in the stools of 26, or 27.3 per cent of patients. They were very active, with short forward and backward excursions and motility of a corkscrew character.

They were easily stained with dilute carbol fuchsin and measured in length from 4 to 12 microns. Attempts at cultivation were negative.

None of the above-mentioned intestinal parasites or other organisms were in any way considered as the etiological agents in pellagra.

BLOOD.

Complement Fixation tests.

Literature.—Bass¹ reports complement fixation tests on 16 pellagrins, using lecithin as antigen. Two of these patients had syphilis, 1 had malaria, and one test was made upon old necropsy blood. Of the remaining 12, 8 gave a positive reaction. He draws no conclusion from this small series.

Fox² examined 30 cases of pellagra, using the Noguchi modification of the Wassermann reaction. Excluding 1 patient, who probably had syphilis, he obtained in 2 cases a positive reaction of moderate intensity and in 5 cases a weakly positive reaction, the rest being negative. He concludes that "cases of pellagra do not often give a positive Wassermann reaction."

Lorenz,³ working with Dr. S. S. Hindman at the Georgia State Sanitarium, reports on the Wassermann examinations of spinal fluid and blood serum of 106 pellagra patients. Of this series 8 cases gave a positive Wassermann with both spinal fluid and blood serum, and gave other evidence of having syphilis complicated with pellagra. In addition, 2 other cases gave weakly positive reactions with blood serum alone, the specimens being taken a few days before death.

The technic consisted in the use of the human or Noguchi hæmolytic system with two antigens, one an alcoholic extract of luetic liver and the other cholesterin-fortified antigen, made from guinea-pig heart according to the Noguchi method.

The conclusion drawn by Lorenz was that the Wassermann is negative with a few exceptions. In his investigation the exceptions were moribund cases which gave weakly positive reactions with blood serum.

Technic.—In the series here reported complement fixation tests were made upon specimens of blood from 55 pellagra patients.

The technic of Noguchi was followed with the modification that the blood corpuscles were sensitized with amboceptor before the second incubation of the actual test.

The following reagents were used:

Antigen—the acetone insoluble fraction of human syphilitic heart.

¹ Complement Fixation with Lecithin as Antigen in Pellagra—Further Observations. C. C. Bass. Transactions of National Conference on Pellagra at Columbia, S. C., 1909, p. 150.

² The Wassermann Reaction (Noguchi Modification) in Pellagra—Report of Thirty Cases. Howard Fox. Transactions of National Conference on Pellagra, 1909, p. 152.

³ The Cerebrospinal Fluid in Pellagra. W. F. Lorenz. Public Health Reports, vol. 29, No. 37, Sept. 11, 1914.

Complement—the fresh blood serum of guinea pigs.

Amboceptor—the serum of rabbits immunized against human erythrocytes.

Blood-corpusele suspension—a 1 per cent suspension of human erythrocytes in normal salt solution.

Patients' serum—active and inactive.

The amounts of antigen, complement, and patients' serum were used as recommended by Noguchi and incubated in the water bath at 37° C. for 30 minutes.

Amboceptor and corpuscles were treated as follows:

The necessary amount of amboceptor paper, allowing two units for each tube, to be used, was immersed in normal salt solution and extracted for 30 minutes, in the proportion of 20 units of amboceptor paper to 2 c. c. of salt solution.

A 10 per cent suspension of washed human corpuscles was made in normal salt solution.

Then 2 c. c. of the amboceptor solution and 1 c. c. of the 10 per cent corpuscle suspension were put in a centrifuge tube and the volume was made up to 10 c. c. with normal salt solution, thus allowing two units of amboceptor to each c. c. of 1 per cent washed corpuscles. This hæmolytic system was incubated in the water bath at 37° C. for 30 minutes alongside the tubes being incubated for complement binding.

The hæmolytic system was then centrifuged and the supernatant fluid pipetted off, leaving the sensitized cells, to which was added salt solution to make a 1 per cent suspension.

One c. c. of this suspension was then added to each tube for the second incubation of the actual test, and the results were read at the end of one hour.

Control tubes without antigen and control tests with known positive and negative sera were always used.

The same technic has been used satisfactorily in making about 600 routine complement fixation tests for syphilis at this hospital.

The patients were tested soon after admission to the hospital and all were typical cases of pellagra with manifestations varying from those of an acute attack to those of a chronic character.

Results.—The complement fixation tests were all negative and no evidence was found that uncomplicated pellagra ever gives a positive Noguchi reaction.

Blood Counts, Hæmoglobin Estimations, and Differential Leucocyte Counts.

Literature.—Lavinder,¹ after reviewing the literature on this subject, remarks that the results reported “seem decidedly discordant, but one may at least conclude that there is a very frequent, usually

¹ Notes on the Hematology of Pellagra. C. H. Lavinder. Transactions of National Conference on Pellagra, Columbia, S. C., 1909, p. 33.

mild, anemia of the secondary type, and if there are qualitative changes in the red cells, they are only such as one would expect. The differential leucocyte counts seem almost too discordant to reconcile in any way, but there would seem a majority opinion of a definite, relative large mononuclear increase."

As a result of his own work on 24 cases he found a secondary anemia, a general absence of leucocytosis in uncomplicated cases, and a relative large mononuclear increase.

Daspit¹ reports on 20 cases, finding a slight decrease in leucocytes and a relative lymphocytosis more marked in the small mononuclears.

Hyde² reports on blood examinations of 9 pellagrins at Peoria, finding a slight grade of anemia, and an increase of large mononuclears in 5 cases.

Ormsby and Singer,³ from the examination of 9 pellagrins, report a relative lymphocytosis and a diminution in the proportion of large mononuclear leucocytes.

Roberts,⁴ in his book on pellagra, states: "The principal change in the corpuscles is an increase in the percentage of the small lymphocytes, and this is usually accompanied by a decrease in the normal per cent of polynuclear cells. This increase in the small lymphocytes is the one characteristic of the blood in pellagra."

Hillman,⁵ in a series of 32 counts, reports an average leucocyte count of 10,403 per cubic millimeter, an average lymphocyte count of 33.99 per cent and an average large mononuclear count of 2.59 per cent. The following is quoted from his summary: "The lymphocytosis is interesting and is probably in accordance with the general cachectic condition of most pellagrins, who are also often the subjects of gastro-intestinal disorders."

It is evident from the observations upon the blood recorded by various workers that in general there is an agreement as to a mild degree of secondary anemia and an occasional unexplained leucocytosis. Reports in regard to differential counts, however, show a marked variance in regard to the number of lymphocytes and large mononuclear leucocytes which is probably mainly due to the personal equation of the counters.

Technic.—In this series observations were made upon the blood of 28 pellagra patients to determine the number of red and white

¹ Some Blood Findings in Twenty Cases of Pellagra in the Insane Asylum of the State of Louisiana. II. Daspit. Reprint from New Orleans Medical and Surgical Journal, vol. 62, March, 1910.

² Pellagra, and Some of Its Problems. J. N. Hyde. Extract from the American Journal of the Medical Sciences, January, 1910.

³ Clinical and Pathological Studies. O. S. Ormsby and H. D. Singer. Report of the Pellagra Commission, State of Illinois, 1911, p. 22.

⁴ Pellagra, by S. R. Roberts, 1912, p. 185.

⁵ Some Hematological Findings in Pellagra. O. S. Hillman. Reprint from the American Journal of the Medical Sciences, April, 1913, No. 4, Vol. CXLV, p. 507.

cells per cubic millimeter, the differential leucocyte count, the hæmoglobin content, the color index and the appearance of cells in stained specimens.

The red cells were counted with a Thoma-Zeiss apparatus with a dilution of 1 to 200 and counting 180 small squares in each of two drops.

The white cells were counted with a Thoma-Zeiss apparatus using a dilution of 1 to 20 and counting 9 square millimeters.

The hæmoglobin estimations were made with a Tallqvist hæmoglobin scale.

The differential leucocyte counts were made from slides stained with Leischmann's stain, from 200 to 500 leucocytes being counted in the central portion of the smear.

Results.—The following results were obtained from blood counts of 28 pellagra patients:

The largest number of red cells per cubic millimeter was 5,840,000 and the smallest number 2,960,000. The average number was 4,720,000.

The largest number of leucocytes per cubic millimeter was 14,200 and the smallest number 4,200. The average number was 8,027.

Differential counts: Polymorphonuclear neutrophiles varied from 54 to 82 per cent, with an average of 68.2 per cent.

Lymphocytes varied from 9 to 34 per cent, with an average of, 20.9 per cent.

Large mononuclear leucocytes varied from 3 to 14 per cent, with an average of 8.5 per cent.

Eosinophiles varied from 0 to 12 per cent, with an average of 2.2 per cent.

The average percentage of basophiles was 0.07.

The average percentage of hæmoglobin was 77.

The average color index was 0.81.

There was no noteworthy departure from the normal in the size, shape, or staining of the red corpuscles.

Conclusions.—These figures do not show any marked variation from normal beyond a mild degree of secondary anemia. No constant or characteristic change was noted which would be of material help in the diagnosis of this disease.

Acknowledgment is due to Drs. B. H. Sanchez, Q. Taylor, and William B. McWhorter for assistance in blood examinations.

URINE.

Observations were made upon the urine in regard to reaction specific gravity, and the presence of albumin, sugar, and indican.

Reaction.

Marie¹ reports that in 100 cases the urine was 76 times slightly acid, 14 times neutral, and 10 times alkaline, and states that Calderini, in an examination of 33 cases, found 21 per cent of the urines strongly acid, 57 per cent of slight acidity, 12 per cent neutral, and 9 per cent alkaline.

In this series the urines of 100 pellagra patients were tested with litmus and found acid in 96 instances and alkaline in 4 instances.

Specific Gravity, Albumin, and Sugar.

The average specific gravity of these urines was 1,018.3.

Albumin not to exceed a slight amount was found in 9 instances.

All examinations for sugar were negative.

Indican.

The presence of indican in the urine of pellagrins has been noted as of common occurrence.

Thus Lavinder and Babcock² state: "We have found indican almost constantly in the urine, and albuminuria has not been rare in our experience. J. J. Watson examining the urine of 12 patients 180 times, found indican present 175 times."

Ormsby and Singer,³ referring to urine examination, state: "No constant changes have been found with the exception of a very marked indican reaction which was present in all and can probably be correlated with the intestinal putrefaction."

Myers and Fine,⁴ in a series of urine examinations, find "The absolute amounts of the ethereal sulphates appear to be increased in a few instances; this is especially pronounced in the cases of anacidity, in which very large amounts of indican were eliminated."

In the series here reported the urines of 57 patients were tested for indican a total of 2,524 times on different days. Results were positive for indican in 55, or 96.4 per cent of patients.

Technic.—A few cubic centimeters of Obermayer's reagent were mixed with an equal quantity of urine and allowed to stand for five minutes. Then chloroform was added in the proportion of 2½ c. c. to 10 c. c. of the above mixture, and the resulting mixture poured slowly backward and forward from one tube to another.

Indican, when present, becomes absorbed by the chloroform, which becomes of a more or less deep shade of blue.

According to the color resulting, which varied from a light to a very deep blue, the positive results were graded as 4 +, 3 +, 2 +, and 1 +.

¹ Pellagra. A. Marie. Translated by C. H. Lavinder and J. W. Babcock, 1910, p. 215.

² *Ibid.*, p. 218.

³ In Report of the Pellagra Commission of the State of Illinois, Nov., 1911, p. 23.

⁴ Metabolism in Pellagra. V. C. Myers and M. S. Fine. Reprinted from the American Journal of the Medical Sciences, May, 1913, p. 705.

A 4 + reaction equals a full strength reaction, a 3 + reaction equals three-fourths of a full reaction, a 2 + reaction equals one-half of a full reaction, and a 1 + reaction equals one-fourth of a full reaction.

The total number of 2,069 positive tests was graded as follows:

Number 4 + reactions.....	1,437
Number 3 + reactions.....	194
Number 2 + reactions.....	231
Number 1 + reactions.....	207

Results.—The following table gives in detail the results of indican tests:

Table No. 4.

Patient—	Number of days in h-s-pital.	Number of tests.	Number positive.	Number negative.	Number 4+.	Number 3+.	Number 2+.	Number 1+.
No. 62.....	46	8	8	0	8	0	0	0
No. 68.....	82	36	36	0	36	0	0	0
No. 124.....	31	22	17	5	11	0	0	3
No. 137.....	121	48	47	1	47	0	0	0
No. 150.....	73	54	51	3	42	5	3	1
No. 151.....	40	33	26	7	23	1	0	2
No. 167.....	56	47	42	5	35	2	1	4
No. 168.....	40	33	15	18	3	0	8	4
No. 169.....	23	17	14	3	6	1	5	2
No. 170.....	6	2	2	0	2	0	0	0
No. 171.....	49	42	41	1	39	?	0	0
No. 173.....	46	37	37	0	34	2	0	1
No. 175.....	158	73	73	0	66	6	0	1
No. 177.....	26	20	11	9	4	0	2	5
No. 178.....	38	32	23	9	2	4	8	9
No. 179.....	178	110	110	0	109	1	0	0
No. 181.....	15	11	11	0	11	0	0	0
No. 182.....	55	46	46	0	44	2	0	0
No. 183.....	127	91	91	0	83	6	2	0
No. 186.....	147	117	47	70	33	1	3	10
No. 187.....	27	27	27	0	17	5	5	0
No. 188.....	208	155	147	9	131	10	4	2
No. 189.....	115	83	33	50	26	4	2	1
No. 190.....	39	28	24	4	0	1	9	14
No. 191.....	71	54	51	3	39	6	5	1
No. 192.....	66	55	54	1	10	8	22	14
No. 194.....	186	153	123	30	82	18	11	12
No. 195.....	4	3	3	0	3	0	0	0
No. 196.....	80	65	62	3	45	9	5	3
No. 198.....	13	12	12	0	7	2	2	1
No. 199.....	61	51	48	3	33	5	7	3
No. 201.....	102	81	78	3	67	9	2	0
No. 202.....	91	78	70	8	55	6	6	3
No. 203.....	31	17	7	10	0	0	5	2
No. 204.....	105	84	60	24	15	7	21	17
No. 205.....	80	80	45	35	33	7	4	1
No. 201.....	21	19	15	4	8	3	3	1
No. 207.....	20	24	11	13	0	0	3	8
No. 208.....	192	154	135	19	49	10	40	36
No. 209.....	26	21	12	9	4	3	1	4
No. 210.....	18	12	8	4	3	1	1	3
No. 211.....	20	23	12	11	11	0	0	1
No. 212.....	12	8	6	2	2	2	1	1
No. 213.....	39	34	34	0	33	1	0	0
No. 214.....	77	54	53	1	36	9	6	2
No. 215.....	45	35	11	24	2	1	1	7
No. 216.....	20	14	8	6	5	2	0	1
No. 218.....	42	32	20	3	14	12	1	3
No. 219.....	20	22	0	22	0	0	0	0
No. 220.....	16	11	0	11	0	0	0	0
No. 221.....	20	21	14	7	4	2	3	5
No. 222.....	57	37	36	1	19	8	8	1
No. 223.....	56	29	27	2	8	3	8	8
No. 224.....	44	22	22	0	13	7	1	1
No. 225.....	66	25	25	0	25	0	0	0
No. 226.....	29	16	14	2	0	0	6	8
No. 227.....	14	4	4	0	0	0	3	1
Total.....	3,501	2,524	2,069	455	1,437	194	231	207

A study of this table shows that more than four-fifths of the tests were positive.

In connection with the frequent occurrence of indicanuria in pellagra it is of interest to note that this condition is reported as of frequent occurrence in sprue, a disease having in many respects a striking clinical resemblance to pellagra.

Achlorhydria has been reported as an accompaniment of indicanuria and in many pellagra patients there is reported to be found a total or partial absence of free hydrochloric acid in the stomach contents. We have no data in the present series to form an opinion in regard to the possible relation of these two conditions.

Only two patients showed a total absence of indican, one being tested 22 times and the other 11 times.

Patient No. 219, tested 22 times, was classed as a moderately severe case with predominating nervous symptoms. Skin symptoms had practically disappeared upon entrance to the hospital. He had a red and fissured tongue and burning in the stomach with flatulence. He had no diarrhea. The most troubling symptoms were dizziness, pains in the legs, and burning in the feet.

Patient No. 220, tested 11 times, was a boy of 16 with scaling dermatitis involving the hands, feet, and legs. He had no gastrointestinal symptoms and only slight nervous symptoms.

All patients improved under treatment with the exception of one (No. 195), who died, and two (Nos. 62 and 124), who were discharged not improved.

No. 62 showed eight 4+ tests of a total of eight. No. 124 showed eleven 4+, three 2+, and three 1+ of a total of twenty-two tests.

In order to judge of the effect of convalescence from the disease upon the presence or absence of indicanuria all the patients were selected who showed improvement or apparent recovery under treatment and upon whom at least 20 tests were performed.

Table No. 5 gives the numbers of these patients, with the results of the first 10 tests performed in comparison with the last 10 tests.

Table No. 5.

Patient -	First 10 tests.					Last 10 tests.				
	Number 4+.	Number 3+.	Number 2+.	Number 1+.	Number negative.	Number 4+.	Number 3+.	Number 2+.	Number 1+.	Number negative.
No. 68.	15	0	0	0	0	10	0	0	0	0
No. 137.	10	0	0	0	0	9	0	0	0	1
No. 150.	10	0	0	0	0	7	0	0	0	9
No. 151.	10	0	0	0	0	7	0	0	0	1
No. 167.	8	0	0	0	2	10	0	0	0	0
No. 168.	1	0	0	0	9	0	0	2	0	8
No. 171.	7	2	0	0	1	10	0	0	0	0
No. 173.	10	0	0	0	0	10	0	0	0	0
No. 175.	10	0	0	0	0	4	6	0	0	4
No. 177.	3	0	0	2	5	0	0	2	3	5
No. 178.	2	3	0	0	0	0	0	4	1	5
No. 179.	10	0	0	0	0	10	0	0	0	0
No. 182.	10	0	0	0	0	10	0	0	0	0
No. 183.	9	1	0	0	0	5	4	1	0	10
No. 186.	9	0	1	0	0	0	0	0	0	0
No. 187.	9	1	0	0	0	1	4	5	0	0
No. 188.	10	0	0	0	0	10	0	0	0	0
No. 189.	6	0	0	0	4	0	0	0	0	10
No. 190.	0	1	5	2	2	0	0	1	0	9
No. 191.	9	1	0	0	0	10	0	0	0	0
No. 192.	6	2	2	0	0	0	0	2	0	8
No. 194.	4	0	0	0	6	0	0	0	4	6
No. 196.	0	1	3	3	3	9	0	1	0	0
No. 199.	6	1	1	2	0	4	1	2	1	2
No. 201.	6	0	1	0	3	10	0	0	0	0
No. 202.	3	1	1	1	4	9	1	0	0	0
No. 204.	4	2	4	0	0	0	0	1	5	4
No. 205.	4	2	3	0	1	10	0	0	0	2
No. 207.	0	0	2	0	8	0	0	1	7	0
No. 208.	4	0	2	4	0	5	2	2	0	5
No. 209.	4	2	0	0	4	0	1	1	3	5
No. 211.	4	0	0	0	6	7	0	0	1	2
No. 213.	10	0	0	0	0	10	0	0	0	0
No. 214.	7	0	3	0	0	9	0	0	0	1
No. 215.	0	0	0	2	8	2	0	0	1	7
No. 218.	8	2	0	0	0	1	3	0	3	3
No. 221.	0	0	2	4	4	4	2	1	1	2
No. 222.	4	4	0	1	1	3	3	0	4	0
No. 223.	6	1	0	3	0	0	0	5	5	0
No. 224.	7	1	1	1	0	4	6	0	0	0
No. 225.	10	0	0	0	0	10	0	0	0	0
Total.	250	28	31	30	71	205	33	31	51	90

This table shows that of the 410 first tests 339 were positive, while of the last 410 tests only 320 were positive, and of the first 339 positive only 8.8 per cent were 1+, while of the last 320 positive 15.9 per cent were 1+.

This would indicate that as convalescence is established the presence of indicanuria becomes lessened.

The presence of indicanuria in 96.4 per cent of these patients would suggest this symptom as a possible aid in diagnosis in doubtful cases provided repeated tests were made.

PLAGUE-PREVENTION WORK.

CALIFORNIA.

The following reports of plague-prevention work in California were received from Surg. Boggess, of the United States Public Health Service, in charge of the work:

WEEK ENDED APR. 22, 1916.

SAN FRANCISCO, CAL.

RAT PROOFING.

New buildings:	
Inspections of work under construction.	173
Basements concreted (square feet, 26,451).....	22
Floors concreted (square feet, 14,475)....	12
Yards, passageways, etc. (square feet, 27,320).....	67
Total area concrete laid (square feet) ..	68,246
Class A, B, and C (fireproof) buildings:	
Inspections made.....	149
Roof and basement ventilators, etc., screened.....	565
Wire screening used (square feet).....	2,940
Openings around pipes, etc., closed with cement.....	1,565
Sidewalk lens lights replaced.....	1,660
Old buildings:	
Inspections made.....	419
Wooden floors removed.....	58
Yards and passageways, planking removed.....	32
New foundation walls installed (cubic feet).....	5,380
Concrete floors installed (square feet, 28,324).....	24
Basements concreted (square feet, 9,460).....	18
Yards and passageways, etc., concreted (square feet, 21,171).....	73
Total area of concrete laid (square feet) ..	58,855
Floors rat proofed with wire cloth (square feet, 1,500).....	1
Buildings razed.....	38
New garbage cans stamped "Approved"....	500
Nuisances abated.....	325

OPERATIONS ON THE WATER FRONT.

Vessels inspected for rat guards.....	18
Reinspections made on vessels.....	16
New rat guards procured.....	12
Defective rat guards repaired.....	10
Rats trapped on wharves and water front..	45
Rats trapped on vessels.....	104
Traps set on wharves and water front.....	135
Traps set on vessels.....	216
Vessels trapped on.....	15
Poisons placed on water front (pieces).....	3,600
Poisons placed within Panama-Pacific International Exposition ground (pieces)....	46,000
Bait used on water front and vessels, bacon (pounds).....	6
Bread used in poisoning water front (loaves).	9
Poison used on water front (pounds).....	3

RATS COLLECTED AND EXAMINED FOR PLAGUE.

San Francisco:	
Collected.....	514
Examined.....	463
Found infected.....	Nero.

RATS COLLECTED AND EXAMINED FOR PLAGUE—Continued.

Oakland:	
Collected.....	18
Examined.....	18
Found infected.....	None.

RATS IDENTIFIED.

Mus norvegicus.....	215
Mus rattus.....	94
Mus alexandrinus.....	143
Mus musculus.....	62

SQUIRRELS COLLECTED AND EXAMINED FOR PLAGUE.

County.	Collected.	Examined.	Infected.
Alameda.....	112	112	1
Contra Costa.....	612	612	0
Monterey.....	388	388	3
Merced.....	126	126	0
San Benito.....	229	229	1
Santa Clara.....	86	86	0
San Mateo.....	25	25	0
Santa Cruz.....	12	12	0
Total.....	1,590	1,590	5

OTHER ANIMALS COLLECTED AND EXAMINED.

Merced County.....	10 rabbits.
San Benito County.....	3 rabbits.
Monterey County.....	1 rabbit.
Total.....	14 rabbits.

One rabbit from Monterey County found to be infected with *B. tularensis*, shot Apr. 12.

RANCHES INSPECTED AND HUNTED OVER.

Alameda County.....	27
Contra Costa County.....	48
Monterey County.....	31
San Benito County.....	28
San Mateo County.....	8
Santa Clara County.....	37
Merced County.....	15
Santa Cruz County.....	1
Total.....	195

PLAGUE-INFECTED SQUIRRELS.

Monterey County:	
Shot Apr. 12, 1916—	
Otto Olsen ranch, 7 miles southwest of Soledad, sec. 30, T. 18 S., R. 6 E....	2
Johnson Ranch, 15 miles south of Salinas, rancho Los Tularecitos, T. 17 S., R. 3 E.....	1
Contra Costa County:	
Shot Apr. 13, 1916, Griffiths ranch, 8 miles southwest of Antioch, NE. $\frac{1}{4}$ sec. 31, T. 2 N., R. 1 E.....	1
San Benito County:	
Shot Apr. 10, 1916, H. Waters ranch, 3 miles south of Mulberry, NW. $\frac{1}{4}$ sec. 28, T. 15 S., R. 7 E.....	1

WEEK ENDED APR. 29, 1916.

SAN FRANCISCO, CAL.

RAT PROOFING.

New buildings:	
Inspections of work under construction..	157
Basements concreted (square feet, 22,135).....	23
Floors concreted (square feet, 20,770).....	15
Yards, passageways, etc. (square feet, 10,401).....	50
Total area of concrete laid (square feet).....	53,306
Class A, B, and C (fireproof) buildings:	
Inspections made.....	146
Roof and basement ventilators, etc., screened.....	650
Wire screening used (square feet).....	3,420
Openings around pipes, etc., closed with cement.....	1,505
Sidewalk lens lights replaced.....	500
Old buildings:	
Inspections made.....	469
Wooden floors removed.....	56
Yards and passageways, planking removed.....	3

SAN FRANCISCO, CAL.—Continued.

RAT PROOFING—continued.

Old buildings—Continued.	
New foundation walls installed (cubic feet).....	7,745
Concrete floors installed (square feet, 10,880).....	22
Basements concreted (square feet, 39,120).....	44
Yards and passageways, etc., concreted (square feet, 15,049).....	69
Total area concrete laid (square feet).....	65,049
Floors rat proofed with wire cloth (square feet, 3,145).....	4
Buildings razed.....	30
New garbage cans stamped approved.....	362
Nuisances abated.....	284
OPERATIONS ON THE WATER FRONT.	
Vessels inspected for rat guards.....	19
Reinspections made on vessels.....	23
New rat guards procured.....	15
Defective rat guards repaired.....	13
Vessels on which cargo was inspected.....	1

Amount of cargo inspected and description of same.	Condition.	Rat evidence.
Steamer Queen from Seattle: 582 cases salmon, milk, apples, cheese, baking powder, and candy	O. K.....	None.
600 sacks flour, bran.....	O. K.....	None.

Rats trapped on wharves and water front.....	38
Rats trapped on vessels.....	55
Traps set on wharves and water front.....	135
Traps set on vessels.....	235
Vessels trapped on.....	14
Poisons placed on water front (pieces).....	3,600
Poisons placed within Panama Pacific International Exposition grounds (pieces).....	41,500
Bait used on water front and vessels, bacon (pounds).....	6
Bread used in poisoning water front (loaves).....	9
Poison used on water front (pounds).....	3
RATS COLLECTED AND EXAMINED FOR PLAGUE.	
San Francisco:	
Collected.....	461
Examined.....	409
Found infected.....	None.
Oakland:	
Collected.....	28
Examined.....	28
Found infected.....	None.
RATS IDENTIFIED.	
Mus norvegicus.....	258
Mus musculus.....	35
Mus alexandrinus.....	104
Mus rattus.....	64
Rabbits collected and examined for plague.....	33
Found infected.....	None.

SQUIRRELS COLLECTED AND EXAMINED FOR PLAGUE.

County.	Collected.	Examined.	Infected.
Monterey.....	505	505	3
Merced.....	418	418	(¹)
Contra Costa.....	661	661	1
San Benito.....	324	324	2
Alameda.....	186	186	(¹)
Stanislaus.....	169	169	(¹)
Santa Clara.....	105	105	1
Santa Cruz.....	65	65	(¹)
San Mateo.....	42	42	(¹)
Total.....	2,475	2,475	7

¹ None.

PLAGUE-INFECTED SQUIRRELS.

Monterey County:

Shot Apr. 13, 1916. Peach Tree ranch (San Lorenzo rancho), 13 miles northeast of San Lucas.....	1
Johnson ranch, known as Ford ranch, 10 miles northeast of Salinas (found dead).....	1
Shot Apr. 18, 1916. J. Girard ranch, 18 miles south of Salinas, Sec. 32, T. 17 S., R. 3 E.....	1

PLAGUE-INFECTED SQUIRRELS—Continued.

San Benito County:	
Shot Apr. 18, 1916. H. Kruse ranch, 4 miles south of Mulberry, Sec. 34, T. 15 S., R. 7 E.....	1
Shot Apr. 20, 1916. D. J. Watson ranch, 3½ miles south of Hollister, rancho San Justo, T. 13 S., R. 5 E.....	1
Contra Costa County:	
Shot Apr. 20, 1916. Tom Silva ranch (Moraga grant), 4 miles southwest of Lafayette.....	1
Santa Clara County:	
Shot Apr. 22, 1916. J. Heinlen ranch in southwest part of Teresa rancho grant, 1½ miles west of Coyote.....	1

RANCHES INSPECTED AND HUNTED OVER.

Alameda County.....	39
Contra Costa County.....	62
Monterey County.....	34
Merced County.....	41
Santa Clara County.....	40
Stanislaus County.....	44
San Benito County.....	30
San Mateo County.....	15
Santa Cruz County.....	11
Total.....	316

RECORD OF PLAGUE INFECTION.

Places in California	Date of last case of human plague.	Date of last case of rat plague.	Date of last case of squirrel plague.	Total number of rodents found infected since May, 1907.
Cities:				
San Francisco.....	Jan. 30, 1908	Oct. 23, 1908	(1)	398 rats.
Oakland.....	Aug. 9, 1911	Dec. 1, 1908	(1)	126 rats.
Berkeley.....	Aug. 28, 1907	(1)	(1)	(1)
Los Angeles.....	Aug. 11, 1908	(1)	Aug. 21, 1908	1 squirrel.
Counties:				
Alameda (exclusive of Oakland and Berkeley).....	Sept. 24, 1909	Oct. 17, 1909 ²	July 12, 1915	287 squirrels, 1 wood rat.
Contra Costa.....	July 13, 1915	(1)	Apr. 20, 1916	1,600 squirrels.
Fresno.....	(1)	(1)	Oct. 27, 1911	1 squirrel.
Merced.....	(1)	(1)	July 12, 1911	5 squirrels.
Monterey.....	(1)	(1)	Apr. 18, 1916	33 squirrels.
San Benito.....	June 4, 1913	(1)	Apr. 20, 1916	54 squirrels.
San Joaquin.....	Sept. 18, 1911	(1)	Aug. 26, 1911	18 squirrels.
Santa Clara.....	Aug. 31, 1910	(1)	Apr. 22, 1916	27 squirrels.
Santa Luis Obispo.....	(1)	(1)	Jan. 29, 1910	1 squirrel.
Santa Cruz.....	(1)	(1)	May 17, 1910	3 squirrels.
Stanislaus.....	(1)	(1)	June 2, 1911	13 squirrels.

¹ None.² Wood rat.

The work is being carried on in the following-named counties: Alameda, Contra Costa, San Francisco, Stanislaus, San Benito, Monterey, Santa Clara, San Mateo, Santa Cruz, Merced, Lassen, and Modoc.

LOUISIANA—NEW ORLEANS—PLAGUE ERADICATION.

The following report of plague-eradication work at New Orleans for the week ended May 6, 1916, was received from Surg. Creel, of the United States Public Health Service, in charge of the work:

OUTGOING QUARANTINE.		BUILDINGS RAT PROOFED.	
Vessels fumigated with sulphur.....	13	By elevation.....	178
Vessels fumigated with cyanide gas.....	13	By marginal concrete wall.....	157
Sulphur used (pounds).....	730	By concrete floor and wall.....	153
Cyanide used in cyanide-gas fumigation.....	709	By minor repairs.....	369
Sulphuric acid used in cyanide-gas fumigation (pints).....	1,048	Total buildings rat proofed.....	857
Clean bills of health issued.....	30	Concrete laid (square yards).....	5,612
Foul bills of health issued.....	3	Premises, planking and shed flooring removed.....	96
FIELD OPERATIONS.		Buildings demolished.....	170
Rodents trapped.....	8,303	Total buildings rat proofed to date (abated).....	114,008
Premises inspected.....	7,934	LABORATORY OPERATIONS.	
Notices served.....	662	Rodents received, by species:	
Garbage cans installed.....	33	Mus rattus.....	156
		Mus norvegicus.....	1,349

LABORATORY OPERATIONS—continued.

Rodents received, by species—Continued.	
Mus alexandrinus.....	161
Mus musculus.....	6,605
Wood rats.....	80
Musk rats.....	4
Putrid (included in enumeration of species).....	144
Total rodents received at laboratory.....	8,355
Rodents examined.....	2,205
Number of rats suspected of plague.....	127
Plague rats confirmed.....	None.
Last case of human plague, Sept. 8, 1915.	

LABORATORY OPERATIONS—continued.

Last case of rodent plague, Apr. 7, 1916.	
Total number of rodents captured to May 6.	705,672
Total number of rodents examined to May 6.....	<u>351,765</u>
Total cases of rodent plague to May 6, by species:	
Mus musculus.....	6
Mus rattus.....	18
Mus alexandrinus.....	13
Mus norvegicus.....	<u>250</u>
Total rodent cases to May 6, 1916.....	287

WASHINGTON—SEATTLE—PLAGUE ERADICATION.

The following report of plague-eradication work at Seattle for the week ended April 29, 1916, was received from Surg. Lloyd, of the United States Public Health Service, in charge of the work:

RAT PROOFING.

New buildings inspected.....	53
New buildings reinspected.....	17
Basements concreted, new buildings (square feet, 11,250).....	10
Floors concreted, new buildings (square feet, 9,170).....	7
Yards, etc., concreted, new buildings (square feet, 4,160).....	5
Sidewalks concreted (square feet).....	14,175
Total concrete laid, new structures (square feet).....	38,755
New buildings elevated.....	4
New premises rat proofed, concrete.....	17
Old buildings inspected.....	5
Premises rat proofed, concrete, old buildings.....	3
Floors concreted, old buildings (square feet, 5,750).....	3
Wooden floors removed, old buildings.....	3
Buildings razed.....	3

LABORATORY AND RODENT OPERATIONS.

Dead rodents received.....	10
Rodents trapped and killed.....	316
Rodents recovered after fumigation.....	95
Total.....	421
Rodents examined for plague infection.....	269
Rodents proven plague infected.....	None.
Poison distributed (pounds).....	20
Bodies examined for plague infection.....	5
Bodies found plague infected.....	None.

CLASSIFICATION OF RODENTS.

Mus rattus.....	78
Mus alexandrinus.....	94
Mus norvegicus.....	183
Mus musculus.....	64
Gopher.....	1
Mountain beaver.....	1

WATER FRONT.

Vessels inspected and histories recorded....	17
Vessels fumigated.....	2

WATER FRONT—continued.

Sulphur used, pounds.....	2,000
New rat guards installed.....	16
Defective rat guards repaired.....	22
Fumigation certificates issued.....	2
Port sanitary statements issued.....	46
The usual day and night patrol was maintained to enforce rat guarding and fending.	

MISCELLANEOUS WORK.

Rat-proofing notices sent to contractors, new buildings.....	14
Letters sent in re rat complaints.....	8
Inspection of medicine chests, fishing vessels.....	9

RODENTS EXAMINED IN EVERETT.

Mus norvegicus trapped.....	56
Mus norvegicus found dead.....	1
Mus musculus trapped.....	5
Total.....	62
Rodents examined for plague infection.....	58
Rodents proven plague infected.....	None.

RAT-PROOFING OPERATIONS IN EVERETT.

New buildings inspected.....	5
New buildings, concrete foundations.....	3
New buildings elevated 18 inches.....	2
New buildings, floors concreted (square feet, 13,340).....	2
New buildings, yards concreted (square feet, 560).....	1
Total concrete laid, new buildings (square feet).....	13,900
Old buildings, planked yards removed.....	3
Old buildings, yards concreted (square feet, 1,526).....	3

RODENTS EXAMINED IN TACOMA.

Mus norvegicus trapped.....	68
Mus norvegicus found dead.....	13
Mus rattus trapped.....	2
Mus alexandrinus trapped.....	2
Total.....	85
Rodents examined for plague infection.....	85
Rodents proven plague infected.....	None.

¹ Indicates the number of rodents the tissues of which were inoculated into guinea pigs. Most of them showed on necropsy only evidence of recent inflammatory process; practically none presented gross lesions characteristic of plague infection.

HAWAII—PLAGUE PREVENTION.

The following reports of plague-prevention work in Hawaii were received from Surg. Trotter, of the United States Public Health Service:

Honolulu.

WEEK ENDED APR. 22, 1916.

Total rats and mongoose taken.....	407	Classification of rats killed by sulphur dioxide:	
Rats trapped.....	403	Mus norvegicus.....	1
Mongoose taken.....	3	Average number of traps set daily.....	984
Rats killed by sulphur dioxide.....	1	Cost per rat destroyed.....	19½ cts.
Rats found dead.....	1	Last case rat plague, Aiea, 9 miles from Honolulu,	
Examined macroscopically.....	353	Apr. 12, 1910.	
Showing plague infection.....	None.	Last case human plague, Honolulu, July 12, 1910.	
Classification of rats trapped:		Last case rat plague, Paauhau, Hawaii, Jan. 18, 1916.	
Mus alexandrinus.....	153	Last case human plague, Paauhau Plantation,	
Mus musculus.....	124	Hawaii, Dec. 16, 1915.	
Mus norvegicus.....	97		
Mus rattus.....	29		

Hilo.

WEEK ENDED APR. 15, 1916.

Rats and mongoose taken.....	2,529	Classification of rats trapped and found	
Rats trapped.....	2,478	dead—Continued.	
Rats found dead.....	3	Mus rattus.....	721
Mongoose taken.....	248	Mus musculus.....	987
Rats and mongoose examined microscopically.....	2,529	Last case of rat plague, Paauhau Sugar Co., Jan. 18,	
Rats and mongoose plague infected.....	None.	1916.	
Classification of rats trapped and found dead:		Last case of human plague, Paauhau Sugar Co.,	
Mus norvegicus.....	411	Dec. 16, 1915.	
Mus alexandrinus.....	362		

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.

CEREBROSPINAL MENINGITIS.

City Reports for Week Ended Apr. 29, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Boston, Mass.....	1	1	Milwaukee, Wis.....	1	1
Bridgeport, Conn.....	2	.....	Newark, N. J.....	3	3
Chicago, Ill.....	3	1	New York, N. Y.....	5	3
Cleveland, Ohio.....	1	1	Omaha, Neb.....	.....	1
Detroit, Mich.....	.....	2	St. Louis, Mo.....	3	1
Elizabeth, N. J.....	1	1	Springfield, Ill.....	.....	1
Haverhill, Mass.....	1	1	Wilmington, Del.....	4	1
Jersey City, N. J.....	1	1	Worcester, Mass.....	1	.....
Lowell, Mass.....	1	.....		

DIPHTHERIA.

Alabama—Tuscaloosa.

Assistant Epidemiologist Harrington reported, May 15, that there had been reported during the week 49 carriers of diphtheria bacilli at the University of Alabama, making a total to May 13 of 253 carriers; that of these, 30 had shown clinical symptoms and constituted clinical cases of diphtheria. Cultures from the entire student body have been made. Carriers are released upon two successive negative cultures. Clinical cases and carriers have been kept in quarantine at the university. Detailed precautions are reported to have been taken to prevent the spread of the infection.

See also Diphtheria, measles, scarlet fever, and tuberculosis, p. 1256.

ERYSIPELAS.

City Reports for Week Ended Apr. 29, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio.....	1	.....	Malden, Mass.....	.....	1
Ann Arbor, Mich.....	1	.....	Milwaukee, Wis.....	3	1
Atlanta, Ga.....	.....	1	Newark, N. J.....	12	.....
Binghamton, N. Y.....	1	.....	New Castle, Pa.....	2	.....
Boston, Mass.....	.....	1	New York, N. Y.....	.....	17
Bridgeport, Conn.....	3	.....	Omaha, Nebr.....	4	.....
Buffalo, N. Y.....	5	.....	Passaic, N. J.....	.....	1
Chicago, Ill.....	38	3	Philadelphia, Pa.....	18	3
Cincinnati, Ohio.....	2	.....	Pittsburgh, Pa.....	13	.....
Cleveland, Ohio.....	5	1	Reading, Pa.....	3	.....
Concord, N. H.....	1	.....	Rochester, N. Y.....	1	.....
Detroit, Mich.....	10	2	Sacramento, Cal.....	1	.....
Duluth, Minn.....	1	.....	St. Louis, Mo.....	10	.....
Erie, Pa.....	2	.....	Schenectady, N. Y.....	1	.....
Hartford, Conn.....	3	.....	Toledo, Ohio.....	.....	1
Johnstown, Pa.....	1	.....	Wichita, Kans.....	1	.....
Los Angeles, Cal.....	2	.....	Williamsport, Pa.....	1	.....

LEPROSY.

Louisiana—New Orleans.

During the week ended April 29, 1916, one case of leprosy was notified at New Orleans, La.

MALARIA.

City Reports for Week Ended Apr. 29, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Birmingham, Ala.....	1	.....	New Orleans, La.....	2	.....
Boston, Mass.....	1	.....	Richmond, Va.....	1	.....
Little Rock, Ark.....	1	.....	York, Pa.....	1	.....
Newark, N. J.....	1	.....		

MEASLES.

Washington—Seattle.

Surgeon Lloyd reported that during the week ended April 29, 1916, 387 cases of measles, with 1 death, were notified in the city of Seattle, Wash., making a total of 1,829 cases of the disease, with 4 deaths, reported at that place since the beginning of the epidemic February 15, 1916.

See also Diphtheria, measles, scarlet fever, and tuberculosis, p. 1256.

PELLAGRA.

City Reports for Week Ended Apr. 29, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Atlanta, Ga.....	1	Mobile, Ala.....	1	.....
Birmingham, Ala.....	1	New Orleans, La.....	1	1
Cambridge, Mass.....	1	.....	New York, N. Y.....	1	.....
Chattanooga, Tenn.....	1	Saratoga Springs, N. Y.....	4	.....
Galveston, Tex.....	1	Worcester, Mass.....	2	.....

PNEUMONIA.

City Reports for Week Ended Apr. 29, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Auburn, N. Y.	3	2	New Castle, Pa.	6	
Binghamton, N. Y.	5	2	Newport, Ky.	1	1
Braddock, Pa.	3		Norfolk, Va.	2	2
Chicago, Ill.	218	84	North Adams, Mass.	1	
Cleveland, Ohio.	44	38	Oakland, Cal.	3	
Detroit, Mich.	19	15	Philadelphia, Pa.	65	30
Duluth, Minn.	1		Pittsburgh, Pa.	22	19
Grand Rapids, Mich.	9	3	Reading, Pa.	2	
Harrisburg, Pa.	1	5	Rochester, N. Y.	2	2
Harrison, N. J.	1		Sacramento, Cal.	1	
Johnstown, Pa.	1	2	Salt Lake City, Utah.	1	1
Kalamazoo, Mich.	4	1	Schenectady, N. Y.	3	2
Kansas City, Kans.	7	7	Springfield, Ohio.	1	1
Lancaster, Pa.	2		Stockton, Cal.	2	
Lincoln, Nebr.	1		Stockton, Cal.	2	1
Los Angeles, Cal.	13	10	Toledo, Ohio.	2	4
Manchester, N. H.	3	3	York, Pa.	3	
Newark, N. J.	38	5			

POLIOMYELITIS (INFANTILE PARALYSIS).

City Reports for Week Ended Apr. 29, 1916.

During the week ended April 29, 1916, poliomyelitis was reported in cities as follows: Chicago, Ill., 3 cases and 1 death; Newark, N. J., 1 case; New Orleans, La., 1 case; New York, N. Y., 2 deaths.

RABIES.

Washington—Seattle—Rabies in Animals.

Surg. Lloyd reported that during the month of April, 1916, 2 cases of rabies in dogs were reported in Seattle, Wash., making totals of 475 cases in dogs, 8 cases in cattle, 4 in cats, 2 in horses, and 1 in a hog, since the disease first appeared in Seattle.

ROCKY MOUNTAIN SPOTTED FEVER.

Montana—Musselshell County.

Dr. W. F. Cogswell, secretary of the State Board of Health of Montana, reported by telegraph, May 16, 1916, that during the week ended May 13, 1916, one case of Rocky Mountain spotted fever was notified in Musselshell County, Mont.

SCARLET FEVER.

See Diphtheria, measles, scarlet fever, and tuberculosis, p. 1256.

SMALLPOX.

Porto Rico.

Surg. King reported that during the two weeks' period ended May 12, 1916, cases of smallpox were notified in Porto Rico as follows: Arecibo 4, Arroyo 1, Carolina 1, Catano 1, Gurabo 7, Humacao 1, Loiza 39, Rio Piedras 4, San Juan 70, San Lorenzo 5, Trujillo Alto 39.

Washington—Seattle.

Surg. Lloyd reported by telegraph, May 16, 1916, that 10 cases of smallpox had been notified in Seattle, Wash., 8 of these coming from one focus of infection.

City Reports for Week Ended Apr. 29, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Butte, Mont.		1	New Orleans, La.	13	
Charleston, S. C.	1		Oakland, Cal.	1	
Davenport, Iowa	13		Roanoke, Va.	1	
Detroit, Mich.	21		Rock Island, Ill.	11	
Dubuque, Iowa.	1		St. Louis, Mo.	3	
Duluth, Minn.	6		St. Paul, Minn.	6	
El Paso, Tex.	3	1	Springfield, Ill.	24	
Evansville, Ind.	9		Superior, Wis.	1	
Kansas City, Mo.	9		Syracuse, N. Y.	1	
Lincoln, Nebr.	2		Toledo, Ohio	11	
Madison, Wis.	1		Wichita, Kans.	2	
Muscatine, Iowa.	3		Wilmington, Del.	8	

TETANUS.

City Reports for Week Ended Apr. 29, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Atlanta, Ga.		1	Galveston, Tex.		1
Baltimore, Md.		2	Lawrence, Mass.	1	
Camden, N. J.	1		New York, N. Y.		1
Erie, Pa.	1				

TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis. page 1253.

TYPHOID FEVER.

City Reports for Week Ended Apr. 29, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alameda, Cal.	2		New London, Conn.	1	
Auburn, N. Y.	1	1	New Orleans, La.	7	
Baltimore, Md.	5	1	New York, N. Y.	13	1
Beaver Falls, Pa.	1		Niagara Falls, N. Y.	2	
Binghamton, N. Y.	2	1	North Adams, Mass.	1	
Birmingham, Ala.	2		Oakland, Cal.	1	1
Boston, Mass.	5		Oklahoma, Okla.	1	
Brockton, Mass.	1		Passaic, N. J.	1	
Buffalo, N. Y.	4	1	Philadelphia, Pa.	6	3
Cambridge, Mass.	2		Pittsburgh, Pa.	2	
Canton, Ohio.	2		Portland, Oreg.	1	
Charleston, S. C.	2		Reading, Pa.	3	
Chicago, Ill.	15	1	Roanoke, Va.	1	
Cincinnati, Ohio.	1		Rochester, N. Y.	11	
Cleveland, Ohio.	2		Rockford, Ill.	1	
Columbus, Ohio.		1	Sacramento, Cal.	1	
Danville, Ill.	1		St. Louis, Mo.	6	2
Detroit, Mich.	11	1	St. Paul, Minn.	1	
Elgin, Ill.		1	Salt Lake City, Utah	1	
El Paso, Tex.		1	San Diego, Cal.	1	
Evansville, Ind.		1	Schenectady, N. Y.	1	
Fall River, Mass.	1		South Bend, Ind.	1	1
Galveston, Tex.	3		Springfield, Ohio.	1	
Grand Rapids, Mich.	3	1	Stockton, Cal.	1	1
Kansas City, Mo.	3		Syracuse, N. Y.	1	
Kokomo, Ind.		1	Tazoma, Wash.	1	
Lancaster, Pa.	1		Toledo, Ohio.	4	
Lawrence, Mass.	4		Trenton, N. J.	1	
Los Angeles, Cal.	1		Troy, N. Y.	1	
Milwaukee, Wis.	8	1	Washington, D. C.	5	1
Mobile, Ala.	1		Wilmington, Pa.	1	
New Castle, Pa.	2		Worcester, Mass.	1	
New Haven, Conn.	1				

TYPHUS FEVER.

Texas, New Mexico, and Arizona.

Senior Surg. Pierce submitted a report of cases of typhus fever which occurred in Texas, New Mexico, and Arizona during the period from March 18 to May 1, 1916, as follows:¹

El Paso, Tex.—Case No. 24: J. F., male; age, 12 years. Lived in El Paso 10 years. Went to public school on Kansas Street until March 17, when he took sick. Lived near Eleventh and Oregon Streets and played with Cases Nos. 19, 20, 21, and 22 before they took sick. Reported as typhus March 21, and sent to hospital. Recovered.

Case No. 25: M. O., male; age, 33. Lived in El Paso 14 years. Had been sick for 15 days; treated for typhoid. Diagnosed typhus March 26; sent to hospital. Died March 31.

Case No. 26: A. M., male; age, 40. Lived in El Paso 2 years. Moved to 120½ East Ninth Street on March 10. Took sick March 21; sent to hospital; typhus March 27. Died March 29.

Case No. 27: C. G., male; age, 50. Had been working in California. Came to El Paso about March 1. Took sick March 20. Had no doctor. Sent to county hospital March 28, from 1120 South El Paso Street. Recovered.

Case No. 28: E. S., female; age, 23. Nurse at county hospital, taking care of typhus cases, from about March 8 to 23. Stayed home nights during this period. Left hospital as a nurse March 23; took sick March 24; sent to hospital with typhus March 30, from 1408 East Second Street. Recovered.

Case No. 29: J. T., male; age, 47. Stated he came from Guanajuato Mexico March 25. Took sick next day. Treated by local doctor at 1301 South Stanton Street until April 2; reported then as typhus. Sent to hospital. Recovered.

Case No. 30: H. T., male; age, 45. Born in Socoro, Tex. Lived in El Paso and vicinity all his life. Took sick April 3, at 1120 South Oregon Street. Had been working on tracks of G. H. & S. A. R. R. Co. Sent to hospital April 7. Recovered.

Case No. 31: R. M., male; age, 12. Took sick March 23. This family is said to have waded the river on the night of April 6. Found in rear of No. 30 Border Street. Sent to hospital April 9. Recovered.

Case No. 32: V. M., female; age, 48. Mother of cases 31, 33, 34, 35. Said to have first developed illness March 29; sent to hospital April 9. Recovered.

Case No. 33: G. M., female; age 16. Took sick April 6; sent to hospital April 9. Recovered.

¹ A report of cases of typhus fever which were notified in Texas and New Mexico previous to Mar. 18, 1916, was published in the Public Health Reports of Apr. 7, 1916, p. 896.

Case No. 34: A. M., male; age, 14. Took sick March 24; sent to hospital; convalescent April 9. Recovered.

Case No. 35: J. M., male; age, 4. Convalescent. Recovered.
Cases Nos. 31 to 35, inclusive, all one family.

Case No. 36: V. G., male; age, 33. Lived at Ysletta, 12 miles East of El Paso. Came to El Paso every day selling hay. Slept there several nights. Took sick April 2; not diagnosed typhus until April 13; sent to hospital April 13. Recovered.

Case No. 37: A. G., female; age, 14. Sent to El Paso from Malpais, N. Mex., with typhus on April 20. Had been sick then nine days. Came from Leon, Mexico. Father works on E. P. & S. W. tracks; family lived at section house, Malpais. Recovered.

Case No. 38: G. M., male; age, 32. Had been sick 10 days when found at Globe Mills Settlement, just west of El Paso. This small settlement had been overlooked in the clean-up work of city and county. Sent to hospital April 20. Died April 23, 1916.

Case No. 39: T. M., male; age, 36. Came from Jalisco, Mexico, on April 20. Was disinfected in Juarez. Clean when found. Took sick day after arrival. Sent to hospital. Recovered.

Case No. 40: E. G., male; age, 30. Came from Jalisco. Said he had been in El Paso a "long time." Took sick in a house near the El Paso foundry, but moved to the Smelter Settlement while sick. Took sick About April 16; sent to hospital with typhus April 26. Still there May 3.

Case No. 41: C. C., male; age, 30. Came from Guanajuato; uncertain. Lived in house known as Presidio when first sick; moved to 1105½ Santa Fe Street on April 29; found there May 2 with typhus; sent to hospital May 2.

Laredo, Tex.—Case No. 11: L. T., male; age, 25. Had been at San Luis Potosi for about one month. Waded the river about 2 miles below Laredo on March 27, but was too weak to proceed. He remained near the river for three days before found. Sent to hospital at Laredo March 30 with typhus. Recovered.

Case No. 12: T. C. H., male; age, 17. Had been working in the neighborhood of Tampico for several months. Had fever several days previous to his arrival at Laredo on March 29. He had never been vaccinated, so smallpox was suspected. He refused to go to detention camp, and returned to Nuevo Laredo, Mex. On March 31 diagnosis of typhus was made, and he was taken to hospital in Laredo. Died March 31.

Case No. 13: C. G., female; age, 21. Came from San Antonio, Tex., April 6. Had been living at 317 North Conchos Street in San Antonio. Had been sick four days when found at 1317 San Bernardo Street, Laredo. Sent to hospital with typhus April 14. Recovered.

Case No. 14: N. V., female; age, 52. Had been living at 510 San Enriquez Street, Laredo, for past two years. Took sick April 7. Case reported April 17; diagnosed typhus and sent to hospital. Died April 22, 1916.

Case No. 15: C. G., female; age, 30. Passed through Laredo about March 28, and had been working in the onion fields until she took sick about April 13. Case reported April 24; diagnosed typhus and sent to hospital at Laredo.

Conejo, Tex.—**Case No. 1:** A. T., male; age, 36. Came from Guajuato, latter part of February through El Paso. Went to Conejo to work on March 14. Conejo is a section camp on the G. H. & S. A. R. R. near Valentine and Marfa, Tex. Sent by train to El Paso County hospital on April 14, 1916, with typhus. Recovered.

Case No. 2: J. T., female; age, 30. Wife of Case No. 1. Sent to hospital with typhus April 14. Recovered.

Case No. 3: G. R., male; age, 35. With cases No. 1 and No. 2, since coming from Mexico. Sent to hospital with typhus April 14. Recovered.

Hurley, N. Mex.—**Case No. 3:** C. M., female; age, 26. Came to Hurley from El Paso, Tex., on March 23. Took sick March 26; first seen by the doctor April 2, when she had typhus. Sent to hospital. Recovered. (This was case No. 3 for Hurley, as the two credited to Santa Rita in P. H. R. of April 7 were Hurley cases.)

Santa Rita, N. Mex.—**Case No. 1:** A. C., male; age, 25. Came from San Juan de los Lagos, Mexico, but had been living in Santa Rita for over a year. First found sick April 3; diagnosed typhus. Recovered.

Case No. 2: F. S., male; age, 45. Came from San Juan de los Lagos, Mexico, about a year ago. Found sick at Santa Rita on April 11; then convalescent from typhus. Recovered.

Case No. 3: P. S., female; age, 40. Wife of case No. 2; same history. Recovered.

Phoenix, Ariz.—**Case No. 1:** Reported by county superintendent of health, Maricopa County. Case of a Mexican laborer from California. Had typhus at Phoenix about December 27, 1915. Informal report to Pierce during the meeting of the Arizona Medical Association.

Miami, Ariz.—**Case No. 1:** Reported by Dr. Bacon, of Miami. Mexican man; came from Mexico, through Laredo, about March 16; took sick with typhus shortly after arrival. All precautions to prevent spread were taken, and no other cases have occurred.

Florence, Ariz.—**Case No. 1:** Reported by Dr. Huffman. No data regarding case on record; occurred about March 25. Mexican living in a cave near Florence.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

City Reports for Week Ended Apr. 29, 1916.

City.	Population as of July 1, 1915 (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.....	584,605	212	16	223	1	24	1	24	30
Boston, Mass.....	745,139	265	52	6	260	60	2	41	24	
Chicago, Ill.....	2,447,045	699	92	10	259	3	207	7	263	
Cleveland, Ohio.....	656,975	216	23	1	152	23	.....	50	22
Detroit, Mich.....	554,717	220	79	3	117	6	54	3	35	
New York, N. Y.....	5,468,190	1,588	302	28	1,095	20	177	5	450	
Philadelphia, Pa.....	1,683,664	1,515	70	1	533	3	69	1	117	
Pittsburgh, Pa.....	571,984	188	17	3	210	1	10	40	18	
St. Louis, Mo.....	745,988	200	44	5	304	6	36	3	28	
From 300,000 to 500,000 inhabitants:										
Buffalo, N. Y.....	461,335	168	7	.....	39	.....	15	3	24
Cincinnati, Ohio.....	405,706	112	18	1	288	7	.....	23	13
Jersey City, N. J.....	300,133	92	9	.....	89	5	26	1	24
Los Angeles, Cal.....	465,367	107	8	.....	34	.....	8	.....	59
Milwaukee, Wis.....	428,062	130	10	3	187	5	41	2	15	
Newark, N. J.....	399,000	118	24	1	391	.....	25	1	73
New Orleans, La.....	366,484	106	11	.....	11	.....	2	.....	27
Washington, D. C.....	358,679	109	22	2	116	.....	11	.....	30
From 200,000 to 300,000 inhabitants:										
Columbus, Ohio.....	209,722	73	.....	.....	100	3	.....	.....	11
Kansas City, Mo.....	289,879	.....	8	3	260	1	28	1	.....
Portland, Ore.....	272,833	48	4	.....	18	.....	8	.....	12
Providence, R. I.....	250,025	.....	5	1	37	3	22	.....	2
Rochester, N. Y.....	250,747	58	7	.....	55	1	5	.....	3
St. Paul, Minn.....	241,999	70	1	1	53	.....	6	.....	13
From 100,000 to 200,000 inhabitants:										
Atlanta, Ga.....	184,873	43	.....	.....	.....	.....	1	.....	.....
Birmingham, Ala.....	174,108	43	1	.....	2	.....	1	.....	9
Bridgeport, Conn.....	118,434	49	4	.....	12	.....	2	.....	6
Cambridge, Mass.....	111,669	29	5	.....	9	1	6	.....	13
Camden, N. J.....	104,549	.....	1	.....	6	.....	.....	.....	10
Fall River, Mass.....	126,004	27	.....	.....	4	.....	1	.....	6
Grand Rapids, Mich.....	125,759	34	.....	.....	21	.....	17	.....	6
Hartford, Conn.....	108,969	40	8	.....	70	2	4	.....	4
Lowell, Mass.....	112,124	.....	4	1	11	.....	3	.....	5
Lynn, Mass.....	100,316	29	11	1	14	.....	4	1	2
New Bedford, Mass.....	114,604	40	1	.....	14	.....	3	.....	11
New Haven, Conn.....	147,095	.....	1	.....	10	.....	10	.....	8
Oakland, Cal.....	190,803	.....	4	2	1	.....	2	.....	5
Omaha, Nebr.....	135,455	56	6	1	14	.....	25	1	3
Reading, Pa.....	105,084	.....	.....	.....	8	.....	4	.....	12
Richmond, Va.....	154,674	56	1	.....	558	6	7	.....	2
Salt Lake City, Utah.....	113,567	26	9	.....	9	.....	.....	.....	.....
Springfield, Mass.....	103,216	31	4	1	158	.....	9	.....	3
Syracuse, N. Y.....	152,534	50	7	.....	3	.....	2	.....	6
Tacoma, Wash.....	108,064	.....	1	.....	2	.....	2	.....	.....
Toledo, Ohio.....	187,840	79	5	.....	150	7	15	.....	26
Trenton, N. J.....	109,212	43	4	.....	9	.....	4	.....	5
Worcester, Mass.....	160,523	64	1	.....	49	2	.....	.....	6
From 50,000 to 100,000 inhabitants:										
Akron, Ohio.....	82,958	44	5	.....	54	3	11	.....	1
Allentown, Pa.....	61,901	21	.....	.....	5	.....	1	.....	.....
Atlantic City, N. J.....	55,806	6	.....	.....	3	.....	1	.....	4
Bayonne, N. J.....	67,582	.....	3	.....	10	.....	4	.....	4
Berkeley, Cal.....	54,879	16	2	.....	1	.....	1	.....	.....
Binghamton, N. Y.....	53,082	24	4	1	76	.....	.....	.....	3
Brookton, Mass.....	65,746	20	3	.....	179	3	1	.....	2
Canton, Ohio.....	59,139	15	1	.....	4	1	5	.....	3
Charleston, S. C.....	60,427	16	.....	.....	13	.....	.....	.....	1
Chattanooga, Tenn.....	58,576	17	2	1	.....	.....	9	.....	1
Covington, Ky.....	56,520	17	.....	.....	7	.....	1	.....	3
Duluth, Minn.....	91,913	21	2	.....	35	1	8	.....	2
Elizabeth, N. J.....	84,550	27	3	1	20	.....	4	.....	8
El Paso, Tex.....	51,936	50	1	.....	15	1	.....	12	.....
Erie, Pa.....	73,798	24	1	.....	104	.....	2	.....	2
Evansville, Ind.....	72,125	20	.....	.....	2	.....	.....	1	.....
Fort Wayne, Ind.....	74,352	30	.....	.....	42	.....	1	.....	2
Harrisburg, Pa.....	70,754	29	1	1	146	.....	.....	.....	1

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

City Reports for Week Ended Apr. 29, 1916—Continued.

City.	Population as of July 1, 1915 (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.										
Hoboken, N. J.	76,104	19	5		21		4		4	1
Johnstown, Pa.	66,585	17	1		28		1		3	
Lancaster, Pa.	50,269				89		1		1	
Lawrence, Mass.	98,197	25	9		9		2		3	1
Little Rock, Ark.	55,158	20			2				1	
Malden, Mass.	50,067	13	4		9		6	1	2	
Manchester, N. H.	76,959	20	1		34		2		5	2
Mobile, Ala.	56,536	19							2	3
New Britain, Conn.	52,203		2		47		1		11	2
Norfolk, Va.	88,076		1		39				5	5
Oklahoma, Okla.	88,158	13	1		8		1		3	1
Passaic, N. J.	69,010	20	3	1	2				4	1
Pawtucket, R. I.	58,156	21	8		15					3
Rockford, Ill.	53,761	13	3		31		5		6	1
Sacramento, Cal.	64,806	20					1		3	4
Saginaw, Mich.	54,815	17	4		35		1		3	
San Diego, Cal.	51,115	26			39				7	5
Schenectady, N. Y.	95,265	15	2		13		4		1	1
Sioux City, Iowa	55,588		1							
Somerville, Mass.	85,460	21	3	1	4		1		5	2
South Bend, Ind.	67,030	20	1		80		4			1
Springfield, Ill.	59,468		6		3		3		2	3
Springfield, Ohio	50,804	15	1		48		6		5	2
Troy, N. Y.	77,738		2		17		7		2	7
Wichita, Kans.	67,847				6		2		1	1
Wilkes-Barre, Pa.	75,218	22	2		6				3	1
Wilmington, Del.	93,161		6		64		2			
York, Pa.	50,543		2		15				5	
From 25,000 to 50,000 inhabitants:										
Alameda, Cal.	27,331	2					4			1
Auburn, N. Y.	36,947	17			68		1			2
Brookline, Mass.	31,934	7			3		4			1
Butler, Pa.	26,587	11			123					
Butte, Mont.	42,918	30	4	1	103				8	4
Chelsea, Mass.	* 32,452	11	2		2		2		1	1
Chicopee, Mass.	28,688		1		8		3		4	
Cumberland, Md.	25,564	9	2		10				3	1
Danville, Ill.	31,554	13	1		22				2	
Davenport, Iowa	47,127						7			
Dubuque, Iowa	39,650						2			
East Orange, N. J.	41,155	18	2		52		2		3	1
Elgin, Ill.	27,844	5	1				5			
Everett, Mass.	38,307	11	4				1		1	2
Everett, Wash.	33,767	5			3					
Fitchburg, Mass.	41,144	10	2		23		3		2	
Galveston, Tex.	41,073	22	3							
Haverhill, Mass.	47,774	14	2		3		2		3	1
Kalamazoo, Mich.	47,364	14			3		1		2	1
Kenosha, Wis.	30,319	4	1		6					
Knoxville, Tenn.	38,300	1	1		24					
La Crosse, Wis.	31,522	12	3							2
Lexington, Ky.	39,703	10			4				1	1
Lincoln, Nebr.	46,028	12	2		5		2		2	
Lorain, Ohio	35,662				14		3			
Lynchburg, Va.	32,385		1		107				1	
Madison, Wis.	30,084				2					
Medford, Mass.	25,737	7			3		1			
Montclair, N. J.	25,550	7			8		3		4	2
New Castle, Pa.	40,251				49					
Newport, Ky.	31,735	10					3		2	2
Newport, R. I.	29,631	5	1		5					
Newton, Mass.	43,085	5	2		24		2		2	2
Niagara Falls, N. Y.	36,240	7			110		2		1	
Norristown, Pa.	30,833	3			45				2	
Ogden, Utah	30,466	10	1	1			1			
Orange, N. J.	32,524	13	5		78				1	1
Pasadena, Cal.	43,859	9			6		1		2	
Perth Amboy, N. J.	39,725		1						2	

* Population Apr. 15, 1910; no estimate made.

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

City Reports for Week Ended Apr. 29, 1916—Continued.

City.	Population as of July 1, 1915 (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 50,000 inhabitants—Continued.										
Pittsfield, Mass.....	37,580	.....	2	.....	.....	.....	2	1	.....	1
Portsmouth, Va.....	38,610	8	3	.....	10	.....	1	.....	.....	.....
Racine, Wis.....	45,507	12	3	.....	8	.....	11	1	.....	.....
Roanoke, Va.....	41,929	10	.....	.....	28	1	.....	.....	.....	1
Rock Island, Ill.....	27,961	9	.....	.....	.....	.....	4	.....	.....	.....
San Jose, Cal.....	37,994	10	.....	.....	.....	.....	.....	.....	.....	.....
Steubenville, Ohio.....	26,631	13	1	1	14	.....	.....	.....	.....	.....
Stockton, Cal.....	34,508	10	1	.....	.....	.....	.....	.....	2	2
Superior, Wis.....	45,285	11	.....	.....	6	.....	1	.....	.....	1
Taunton, Mass.....	35,957	12	.....	.....	.....	.....	.....	.....	1	3
Waltham, Mass.....	30,129	8	.....	1	.....	.....	4	.....	.....	1
West Hoboken, N. J.....	41,893	6	3	1	2	.....	2	.....	2	1
Wheeling, W. Va.....	43,097	18	.....	.....	36	.....	.....	.....	.....	.....
Williamsport, Pa.....	33,495	.....	1	.....	3	.....	3	.....	1	.....
Wilmington, N. C.....	28,264	10	.....	.....	.....	.....	.....	.....	.....	1
Zanesville, Ohio.....	30,406	.....	1	1	.....	.....	.....	.....	.....	.....
From 10,000 to 25,000 inhabitants:										
Ann Arbor, Mich.....	14,979	12	2	.....	1	.....	3	.....	.....	.....
Beaver Falls, Pa.....	13,316	.....	.....	.....	1	.....	.....	.....	.....	.....
Braddock, Pa.....	21,310	.....	.....	.....	3	.....	.....	.....	.....	.....
Cairo, Ill.....	15,593	8	.....	.....	3	.....	.....	.....	.....	1
Clinton, Mass.....	*13,075	.....	.....	.....	9	.....	.....	.....	.....	.....
Coffeyville, Kans.....	16,765	.....	.....	.....	8	.....	.....	.....	.....	1
Concord, N. H.....	22,480	8	.....	.....	5	.....	.....	.....	.....	.....
Galesburg, Ill.....	23,923	3	1	.....	.....	.....	1	.....	.....	.....
Harrison, N. J.....	16,555	.....	.....	.....	19	.....	.....	.....	1	.....
Kearny, N. J.....	22,753	7	.....	.....	7	.....	1	.....	2	1
Kokomo, Ind.....	20,312	3	1	.....	.....	.....	.....	.....	.....	.....
Long Branch, N. J.....	15,057	5	.....	.....	1	.....	.....	.....	.....	.....
Melrose, Mass.....	17,166	4	.....	.....	.....	.....	1	.....	.....	.....
Nanticoke, Pa.....	22,441	5	.....	.....	.....	.....	.....	.....	.....	.....
Newburyport, Mass.....	15,195	6	.....	.....	.....	.....	.....	.....	1	1
New London, Conn.....	20,771	11	.....	1	14	.....	.....	.....	.....	.....
North Adams, Mass.....	*22,019	10	.....	.....	.....	.....	1	.....	.....	.....
Northampton, Mass.....	19,846	8	.....	.....	7	.....	3	.....	.....	.....
Plainfield, N. J.....	23,280	5	1	.....	3	.....	1	.....	2	1
Rutland, Vt.....	14,624	4	.....	.....	.....	.....	1	.....	.....	.....
Saratoga Springs, N. Y.....	12,842	.....	.....	.....	.....	.....	2	.....	.....	.....
Steelton, Pa.....	15,337	4	.....	2	.....	.....	.....	.....	.....	.....
Wilkesburg, Pa.....	22,361	37	.....	.....	95	.....	.....	.....	.....	.....
Woburn, Mass.....	15,862	9	.....	.....	97	.....	7	.....	3	.....
						1				

* Population Apr. 15, 1910; no estimate made.

FOREIGN.

CHINA.

Examination of Rats—Shanghai.

During the two weeks ended April 15, 1916, 592 rats were examined at Shanghai. No plague infection was found.

CUBA.

Communicable Diseases—Habana.

Communicable diseases were notified at Habana during the 10-day period ended April 30, 1916, as follows:

Disease.	New cases.	Deaths.	Remain- ing under treat- ment Apr. 30, 1916.
Cerebrospinal meningitis.....	1	1	.....
Diphtheria.....	10	1	7
Leprosy.....	.....	1	243
Malaria.....	1	.....	5
Measles.....	16	.....	13
Paratyphoid fever.....	.....	.....	2
Scarlet fe. er.....	4	.....	6
Smallpox.....	11	.....	1
Typhoid fever.....	8	1	27
Varicella.....	19	.....	12

¹ Imported.

EGYPT.

Typhus Fever—Alexandria.

An outbreak of typhus fever was reported at Alexandria, Egypt, April 8, 1916, with a total since January 1, 1916, of 170 cases, with 46 deaths.

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

Reports Received During Week Ended May 19, 1916.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Bombay.....	Mar. 26-Apr. 1.....	1	1	
Calcutta.....	Mar. 12-25.....	.....	106	
Indo-China:				
Saigon.....	Mar. 20-Apr. 2.....	4	2	
Java:				
Batavia.....	Feb. 17-Mar. 1.....	2	2	
Siam:				
Bangkok.....	Mar. 12-18.....	2	2	

¹ From medical officers of the Public Health Service, American consuls, and other sources.

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

Reports Received During Week Ended May 13, 1916—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.	
Ceylon:					
Colombo.....	Mar. 5-25.....	13	13		
China:					
Hongkong.....	Mar. 5-11.....	2	2		
Egypt:					
Assiout Province.....	Mar. 31-Apr. 6.....	45	22	Jan. 1-Apr. 6, 1916: Cases, 540; deaths, 261.	
Peni-Souef Province.....	Mar. 3-Apr. 5.....	5	5		
Fayoum Province.....	Mar. 31-Apr. 6.....	48	18		
Gieh Province.....	Apr. 1-6.....	3	2		
Misieh Province.....	Mar. 3-Apr. 6.....	23	18		
Port S. id.....	Apr. 6.....	1	1		
India:					
Bahain.....	Mar. 5-11.....		6	Jan. 2-Mar. 25, 1916: Cases, 18,894; deaths, 16,135.	
Bombay.....	Mar. 19-Apr. 1.....	200	226		
Calcutta.....	Mar. 12-25.....		5		
Hyderabad.....	Mar. 5-11.....		38		
Karachi.....	Mar. 25-Apr. 1.....	1	1		
Madras Presidency.....	Mar. 19-Apr. 1.....	2:6	149		
Malabar.....	Mar. 5-11.....		54		
Moulmein.....	Mar. 5-11.....		18		
Myingyan.....	Feb. 27-Mar. 4.....		5		
Pegu.....	Mar. 5-11.....		15		
Prome.....	Mar. 5-11.....		18		
Toungoo.....	Mar. 5-11.....		1		
Java:					
Ke liri residency.....	Feb. 12-25.....	18	17		Feb. 12-25, 1916: Cases, 131; deaths, 110.
Madison residency.....	do.....	21	2		
Paseroean residency.....	do.....	9	9		
Surabaya residency.....	do.....	22	22		
Surakarta residency.....	do.....	61	60		
Siam:					
Bangkok.....	Mar. 5-18.....	88	80		

SMALLPOX.

Australia:				
New South Wales—				
Newcastle.....	Mar. 31-Apr. 13.....	7		From s. s. Cian Maccorquodale from Marseille. Case in member of crew taken on at Colombo. Removed to North Head quarantine station.
Sydney.....	Apr. 6.....	1		
Austria-Hungary:				
Austria—				
Vienna.....	Mar. 19-Apr. 8.....	23	10	
Hungary—				
Budapest.....	Mar. 25-Apr. 8.....	9		
Canada:				
Manitoba—				
Winnipeg.....	Apr. 23-29.....	12		
Ontario—				
Fort William and Port Arthur.....	do.....	1		
Ceylon:				
Colombo.....	Mar. 19-25.....	1		
China:				
Chungking.....	do.....			Present.
Hongkong.....	Mar. 6-Apr. 1.....	25	21	Do.
Nanking.....	Mar. 25-Apr. 8.....			
Shanghai.....	Apr. 2-8.....	1		
Tientsin.....	do.....	14	4	
France:				
Paris.....	Apr. 19-25.....	3		
Germany:				
Breslau.....	Mar. 12-Apr. 8.....	3		
Great Britain:				
Cardiff.....	Apr. 16-22.....	2		
South Shields.....	Apr. 2-8.....	1	1	
Greece:				
Athens.....	May 9.....			Prevalent.

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

Reports Received During Week Ended May 19, 1916—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Bombay.....	Mar. 19-Apr. 1.....	306	151	
Calcutta.....	Mar. 12-25.....		7	
Karachi.....	Mar. 19-25.....	1		
Madras.....	Mar. 19-Apr. 1.....	142	52	
Indo-China:				
Saigon.....	Mar. 20-Apr. 2.....	5	1	
Japan:				
Kobe.....	Apr. 17-23.....	12	1	
Java:				
Batavia.....	Feb. 9-Mar. 1.....	10	7	Feb. 5-Mar. 1, 1916: Cases, 114; deaths, 35.
Samarang.....	Feb. 12-18.....	2	1	
Mexico:				
Aguascalientes.....	Apr. 24-30.....		30	
Campeche.....	May 3.....	4		
Guadalajara.....	Apr. 16-29.....	74	13	
Liguna.....	May 3.....	10		
Monterey.....	Apr. 9-30.....	21		
Tampico.....	Apr. 11-20.....		6	
Vera Cruz.....	Apr. 17-23.....	8	1	
Porto Rico:				
Areibo.....	Apr. 29-May 12.....	4		
Arrovo.....	do.....	1		
Carolina.....	do.....	1		
Catano.....	do.....	1		
Gurabo.....	do.....	7		
Humacao.....	do.....	1		
Loiza.....	do.....	39		
Rio Piedras.....	do.....	4		
San Juan.....	do.....	70		
San Lorenzo.....	do.....	5		
Trujillo Alto.....	do.....	39		
Portugal:				
Lisbon.....	Apr. 9-15.....	4		
Russia:				
Moscow.....	Mar. 5-25.....	138	34	
Petrograd.....	Mar. 5-11.....	22	6	
Riga.....	Mar. 19-25.....	1		
Sierra Leone.....	May 14.....			Prevalent.
Spain:				
Madrid.....	Mar. 1-31.....		38	
Seville.....	do.....		11	
Valencia.....	Mar. 26-Apr. 22.....	34	1	
Straits Settlements:				
Penang.....	Feb. 20-Mar. 11.....	14		

TYPHUS FEVER.

Austria-Hungary:				
Austria—				
Budapest.....	Mar. 25-Apr. 1.....	2		
Canary Islands:				
Santa Cruz de Tenerife.....	Mar. 19-Apr. 8.....		2	
Egypt:				
Alexandria.....	do.....	92	27	
Germany:				
Berlin.....	Mar. 19-Apr. 1.....		2	
Bremen.....	Mar. 5-Apr. 1.....	1	2	
Hannover.....	Mar. 19-25.....		1	
Königsberg.....	Apr. 2-8.....	2		
Greece:				
Saloniki.....	Mar. 27-Apr. 2.....		2	
Java:				
Batavia.....	Feb. 17-Mar. 1.....	30	5	Feb. 5-Mar. 1, 1916: Cases, 45; deaths, 9.
Samarang.....	Feb. 5-18.....	8	3	
Mexico:				
Aguascalientes.....	Apr. 21-30.....		12	
Guadalajara.....	Apr. 16-29.....	20	3	
Russia:				
Moscow.....	Mar. 5-25.....	380	37	
Petrograd.....	Mar. 5-11.....	6	2	
Riga.....	Mar. 12-18.....	2		

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

Reports Received from Jan. 1 to May 12, 1916.

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary.				Total, Oct. 25, 1915-Jan. 2, 1916:
Austria.....	No. 7-Dec. 18.....	209	66	Cases, 412; deaths, 165. Jan.
Do.....	Jan. 1-Feb. 12.....	144	49	3-Feb. 5, 1916: Cases, 138;
				deaths, 47.
Cattaro.....	Apr. 2.....			Present.
Bosnia-Herzegovina.....	Dec. 23-Jan. 3.....	8	6	
Do.....	Jan. 9-Feb. 12.....	12	6	
Croatia-Slavonia.....	Oct. 18-Dec. 20.....	247	105	
Do.....	Jan. 3-31.....	138	126	
Hungary.....	Oct. 18-Jan. 2.....	339	197	No. 18-Dec. 10, 1915: Cases, 675;
Do.....	Jan. 10-16.....	2	2	deaths, 276. In a prison camp.
Borneo:				
Putatan.....	Oct. 17-23.....	2		
Greece:				
Corfu.....	Mar. 9-28.....		30	
India:				
Bassein.....	No. 28-Jan. 1.....		29	
Do.....	Jan. 2-Mar. 4.....		28	
Bombay.....	Jan. 16-Mar. 18.....	3	2	
Calcutta.....	Oct. 31-Jan. 1.....		139	
Do.....	Jan. 2-Mar. 11.....		169	
Hyderabad.....	Oct. 7-No. 27.....		3	
Do.....	Feb. 20-25.....		1	
Madras.....	No. 7-Dec. 4.....	5		
Do.....	Jan. 2-Feb. 25.....	29	23	
Madras Presidency.....	No. 21.....		12	
Mandalay.....	Oct. 24-Dec. 18.....		46	
Merut.....	Oct. 23-Jan. 1.....		12	
Do.....	Jan. 2-Feb. 19.....		22	
Myingyan.....	Oct. 19-Dec. 25.....		15	
Pakloou.....	Oct. 10-No. 6.....		45	
Peru.....	Jan. 16-Feb. 19.....		4	
Prome.....	No. 14-Jan. 1.....		106	
Rangoon.....	Oct. 31-Jan. 1.....	88	69	
Do.....	Jan. 2-Mar. 4.....	56	41	
Tatoy.....	Dec. 5-Jan. 1.....		18	
Do.....	Jan. 2-Feb. 5.....		11	
Toungoo.....	Oct. 7-Dec. 11.....		47	
Yenangyaung.....	No. 2.....	1	1	American.
Indo-China:				Sept. 1-30, 1915: Cases, 813;
Anam Province.....	Sept. 1-30.....	127	92	deaths, 549.
Cambodia Province.....	do.....	1	1	
Cochin China Province.....	do.....	15	8	
Saigon.....	Oct. 25-No. 28.....	4	3	
Do.....	Jan. 3-23.....	3	1	
Tonkin Province.....	Sept. 1-30.....	670	448	
Java:				Oct. 15-Dec. 6, 1915: Cases, 86;
Batavia.....	Oct. 26-Dec. 27.....	55	36	deaths, 58.
Do.....	Jan. 11-17.....	2	1	Apr. 14, 1916: Epidemic.
Preles.....	Oct. 15-Dec. 9.....	10	10	
Cheribon.....	Dec. 28-Jan. 3.....	1		Vicinity of Batavia.
Persia:				
Enzei.....	No. 6-12.....		10	No. 22, 1915: Still present.
Do.....	Feb. 6-Mar. 2.....		11	Present.
Essa'eme.....	No. 28.....		7	
Galian.....	No. 6-12.....		4	
Karhan-Roud.....	No. 28.....		38	And in vicinity.
Kazin.....	No. 27.....		10	
Resht.....	No. 21.....			And vicinity: Present.
Do.....	Feb. 6.....			Present.
Philippine Islands:				
Manila.....	Dec. 26-Jan. 1.....	1	1	
Do.....	Jan. 2-Mar. 4.....	25	12	
Russia:				
Moscow.....	Nov. 14-27.....	4	1	
Siam:				
Bangkok.....	Jan. 9-Feb. 26.....	3	4	
Turkey in Asia:				
Trebisond.....	Dec. 2-4.....	15	10	Dec. 1-31, 1915: Present.
Do.....	Jan. 8.....			Present.

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

Reports Received from Jan. 1 to May 12, 1916—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Bahia.....	Nov. 21-Feb. 19...	18	11	
Ceylon:				
Colombo.....	Oct. 24-Dec. 25....	37	31	
Do.....	Jan. 2-Mar. 4.....	36	35	
China:				
Hongkong.....	Nov. 7-Jan. 1.....	4	4	
Do.....	Jan. 2-Feb. 26....	3	3	
Ecuador:				
Guayaquil.....	Nov. 1-30.....	1	1	
Egypt.....				
Alexandria.....	Dec. 23-31.....	2	1	
Assiout Province.....	Dec. 17-31.....	4	2	
Do.....	Jan. 2-Mar. 30....	147	61	
Assouan Province.....	Mar. 17-30.....	2	1	
Beni-Souef Province.....	Mar. 23-30.....	15	3	
Fayoum Province.....	Jan. 23-Mar. 30....	137	53	
Garbich Province.....	Dec. 6-28.....	6	48	
Do.....	Jan. 10-Feb. 13....	2	1	
Girgeh Province.....	Feb. 18-Mar. 22....	7	2	
GLeh Province.....	Dec. 27.....	1	1	
Do.....	Mar. 5.....	1	1	
Keneh Province.....	Feb. 15-22.....	4	3	
Minhieh Province.....	Nov. 27-Dec. 31....	13	9	
Do.....	Jan. 1-Mar. 30....	51	24	
Port Said.....	Aug. 13-Nov. 1....	3	2	
Suez.....	Jan. 10.....	1	1	
Greece:				
Athens.....	Dec. 8-20.....		1	
Piræus.....	Jan. 29.....	7	5	
Syra Island.....	Jan. 16.....	16	10	
India.....				
Akyab.....	Jan. 16-29.....		1	
Bassén.....	Dec. 26-Jan. 1....		3	
Do.....	Jan. 2-Mar. 4.....		49	
Bombay.....	Nov. 9-Jan. 1....	53	51	
Do.....	Jan. 2-Mar. 18....	563	332	
Calcutta.....	Nov. 21-27.....		1	
Do.....	Jan. 2-Mar. 4.....		5	
Haráda.....	Dec. 26-Jan. 1....		1	
Do.....	Jan. 2-Mar. 4.....		205	
Karachi.....	Nov. 7-20.....		2	
Madras.....	Jan. 2-8.....	1	1	
Madras Presidency.....	Oct. 16-Nov. 5....		118	
Do.....	Nov. 12-Jan. 1....	1,839	1,288	
Do.....	Jan. 9-Mar. 18....	4,545	3,160	
Mandalay.....	Oct. 21-Jan. 1....		266	
Do.....	Jan. 2-Feb. 12....		1,001	
Moulmein.....	Feb. 13-Mar. 4....		18	
Myingyan.....	Jan. 30-Feb. 26....		11	
Pegu.....	Jan. 9-Mar. 4.....		44	
Prome.....	.....do.....		51	
Rangoon.....	Oct. 1-Dec. 18....	68	66	
Do.....	Jan. 2-Mar. 4.....	469	437	
Toungoo.....	Jan. 10-Feb. 19....		5	
Indo-China.....				
Anam Province.....	Sept. 1-30.....	9	5	
Cambodia Province.....	do.....	20	19	
Cochin China Province.....	do.....	2	2	
Saigon.....	Oct. 25-Dec. 5....	8	5	
Do.....	Jan. 3-Mar. 19....	59	24	
Tonkin Province.....	Sept. 1-30.....	41	41	
Java.....				
Kediri residency.....	Oct. 22-Dec. 30....	527	507	
Do.....	Jan. 1-Feb. 11....	145	142	
Madiren residency.....	Oct. 22-Nov. 11....	1	1	
Do.....	Jan. 15-Feb. 11....	16	15	
Paseroean residency.....	Oct. 22-Dec. 30....	49	50	
Do.....	Jan. 1-Feb. 11....	34	33	
Surabaya residency.....	Oct. 22-Dec. 30....	24	24	
Do.....	Jan. 1-Feb. 11....	46	46	
Surabaya.....	Nov. 5-Dec. 30....	12	12	
Do.....	Jan. 1-Feb. 11....	45	45	
Surakarta residency.....	Oct. 22-Dec. 16....	1,085	1,056	
Do.....	Jan. 1-Feb. 11....	393	381	

Jan. 1-Dec. 31, 1915: Cases, 285; deaths, 120. Jan. 1-Mar. 30, 1916: Cases, 312; deaths, 146.

On s. s. Syria, from Bombay.

Oct. 31, 1915-Jan. 1, 1916: Cases, 40,533; deaths, 34,225. Jan. 2-Mar. 11: Cases, 77,688; deaths, 61,570.

Madras Presidency, Aug. 1, 1898, to June 30, 1915: Cases, 141,356; deaths, 109,095.

Sept. 1-30, 1915: Cases, 72, deaths, 65.

Nov. 19-Dec. 30, 1915: Cases, 1,689; deaths, 1,638. Year 1915: Cases, 4,884; deaths, 4,482; among Chinese and natives. Jan. 1-Feb. 11, 1916: Cases, 644, deaths, 617.

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

Reports Received from Jan. 1 to May 12, 1916—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Mauritius.....	Oct. 1-Dec. 30.....	8	.....
Do.....	Jan. 10-Feb. 12.....	2	.....
Peru.....	Jan. 1 - Dec. 31, 1915.....	8	6	Jan. 1-Dec. 31, 1915: Cases, 455; deaths, 240. In addition, 18 cases, cause of disease unknown.
Ancachs department.....	do.....	23	15	
Arequipa department.....	do.....	39	13	
Callao department.....	do.....	102	38	
Lambayeque department.....	do.....	123	63	
Libertad department.....	do.....	104	63	
Lima department.....	do.....	52	33	
Piura department.....	do.....	4	9	
Tumbes Province, Piura.....	do.....	.....	.....
Russia:				
Siberia—				
Transbaikal Province.....	October, 1914.....	16	13	
Straits Settlements:				
Penang.....	Nov. 28-Dec. 4.....	1	1	
Singapore.....	Oct. 31-Dec. 18.....	5	2	
Do.....	Feb. 20-26.....	1	1	
Siam:				
Bangkok.....	Nov. 14-20.....	.....	1	
Do.....	Jan. 2-Mar. 14.....	103	99	
Union of South Africa:				
Orange Free State.....	Jan. 23-Mar. 5.....	34	21	In Hoopstad, Winsburg, and Senekal districts.
At sea.....	Dec. 29, 1915-Jan. 10, 1916.....	4	.....	On s. s. Sarria from Bombay. Three cases left at Aden; 1 arrived Jan. 10 at Suez.

SMALLPOX.

Algeria:				
Algiers.....	Dec. 1-31.....	1	.....
Australia:				
New South Wales.....				Nov. 19-Dec. 30, 1915: Cases, 62. Jan. 7-Mar. 23, 1916: Cases, 28. Suburb of Sydney.
Auburn.....	Jan. 21-Feb. 4.....	2	.....
Bega district.....	Dec. 10-16.....	1	.....
Bulahdelah district.....	Jan. 3-6.....	1	.....
Chatswood district.....	Feb. 4-10.....	1	.....	Do.
Cundletown.....	Dec. 24-30.....	3	.....
Do.....	Jan. 7-13.....	2	.....
Forster district.....	Jan. 21-27.....	1	.....
Gloucester district.....	Dec. 10-16.....	1	.....
Kempsey.....	Jan. 7-13.....	1	.....	On s. s. Yulgilbar from Sydney. Case returned to Sydney.
Newcastle district.....				Nov. 19-Dec. 30, 1915: Cases, 53. Jan. 7-Mar. 23, 1916: Cases, 17.
Wallsend.....	Jan. 3-6.....	1	.....
Rooty Hill district.....	Dec. 10-16.....	1	.....
Singleton district.....	Feb. 4-24.....	2	.....
Sydney.....	Dec. 3-10.....	10	.....
Do.....	Jan. 3-6.....	1	.....
Taree district.....	Jan. 7-13.....	2	.....
Wyang district.....	Jan. 3-6.....	1	.....
Austria-Hungary:				
Austria.....				Nov. 7-Dec. 4, 1915: Cases, 3,600. Jan. 16-Feb. 12, 1916: Cases, 7,824.
Prague.....	Jan. 9-15.....	1	.....
Trieite.....	Feb. 20-26.....	2	.....
Vienna.....	Dec. 10-Jan. 1.....	24	3	
Do.....	Jan. 2-Mar. 18.....	108	20	
Hungary—				
Budapest.....	Nov. 21-Dec. 31.....	373	.....	In addition, Jan. 1-8, 3 among troops.
Do.....	Jan. 1-Mar. 4.....	101	5	
Brazil:				
Rio de Janeiro.....	Nov. 14-Jan. 1.....	147	31	
Do.....	Jan. 2-Mar. 18.....	108	25	
British East Africa:				
Mombasa.....	Dec. 1-31.....	2	2	
Do.....	Jan. 1-31.....	.....	1	
Canada:				
Alberta—				
Calgary.....	Mar. 5-25.....	2	.....
Manitoba—				
Winnipeg.....	Feb. 10-26.....	1	.....

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

Reports Received from Jan. 1 to May 12, 1916—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Canada—Continued.				
Ontario—				
Fort William and Port Arthur.	Dec. 19-25.....	1		
Do.	Jan. 16-22.....	2		
Niagara Falls.....	Mar. 19-Apr. 22...	2		
Quebec—				
Montreal.....	Dec. 19-25.....	1		
Do.	Jan. 16-Mar. 18....	4		
Canary Islands:				
Grand Canary.....	Nov. 23.....			
Arucas.....	Dec. 5-18.....			Epidemic.
Las Palmas.....	Jan. 3-9.....		1	Present.
Ceylon:				
Colombo.....	Oct. 24-Nov. 13....	6	2	
Do.....	Jan. 30-Feb. 26....	2		
China:				
Antung.....	Jan. 3-Mar. 5.....	2		
Chungking.....	Feb. 27-Mar. 4.....			Do.
Foochow.....	Nov. 21-27.....			Do.
Do.....	Jan. 2-Mar. 4.....			Do.
Harbin.....	Nov. 15-Dec. 26....	12		
Do.....	Jan. 3-Feb. 13.....	5		
Honskong.....	Jan. 23-Mar. 5.....	34	29	
Tientsin.....	Nov. 21-27.....		2	
Do.....	Feb. 27-Mar. 25....	25	15	
Nanking.....	Nov. 7-Dec. 18....			Do.
Do.....	Jan. 16-29.....			Do.
Shanghai.....	Feb. 13-26.....	2		
Colombia:				
Sincé.....	Jan. 23.....	9		50 miles from Cartagena.
Cuba:				
Guantanamo.....	Jan. 16.....	1		U. S. naval station. Case, mild varioloid from U. S. S. Louisiana.
Do.....	Jan. 28-Feb. 8.....	1		U. S. naval station. Case, confluent form.
Egypt:				
Alexandria.....	Dec. 21-27.....	3		
Do.....	Mar. 5-11.....	1		
Cairo.....	Sept. 3-Dec. 31....	9	1	
Port Said.....	Dec. 10-16.....	1		
France:				
Marseille.....	Feb. 1-Mar. 31....		2	
Paris.....	Dec. 5-11.....	1		
Germany:				
Bavaria—				
Munich.....	Dec. 19-25.....	1		
Berlin.....	Feb. 20-26.....	1		
Breslau.....	Dec. 12-18.....	1	1	
Bronnberg, Govt. district.....	Jan. 2.....	1		
Düsseldorf.....	Dec. 5-11.....	1		
Gumbinnen, Govt. district.....	Jan. 2-8.....	1		
Hamburg.....	Dec. 26-Jan. 1.....	1		
Lüneburg, Govt. district.....	Feb. 13-19.....	1		
Oppeln, Govt. district.....	Nov. 21-Dec. 25....	14		
Do.....	Jan. 2-8.....	1		Of these, 8 in one institution.
Saxony.....	Nov. 21-Dec. 25....	1		
Great Britain:				
Bristol.....	Jan. 30-Feb. 5.....	1		On s. s. from Bombay.
Cardiff.....	Jan. 30-Apr. 8.....	32	1	
Liverpool.....	Mar. 19-Apr. 8.....	7		From vessels.
Manchester.....	Feb. 20-26.....	1		
South Shields.....	Mar. 5-Apr. 1.....	3		
Greece:				
Piræus.....	Jan. 31.....			Present in virulent form.
Guatemala:				
Guatemala City.....	Jan. 9-Mar. 19....			Present.
India:				
Bassein.....	Jan. 30-Feb. 5.....		1	
Bombay.....	Nov. 7-Jan. 1.....	103	67	
Do.....	Jan. 2-Mar. 18....	941	515	
Calcutta.....	Nov. 7-Jan. 1.....		3	
Do.....	Jan. 9-Mar. 11....		25	
Karachi.....	Jan. 30-Mar. 4.....	4	1	
Madras.....	Nov. 7-Jan. 1.....	46	20	
Do.....	Jan. 2-Mar. 18....	609	192	
Rangoon.....	Oct. 31-Dec. 11....	14	7	
Do.....	Jan. 2-Mar. 4.....	314	67	
Toungoo.....	Dec. 5-11.....		1	

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

Reports Received from Jan. 1 to May 12, 1916—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Indo-China:				
Saigon.....	Feb. 28-Mar. 19.....	4	.....
Italy:				
Turin.....	Nov. 22-Dec. 5.....	6	.....
Japan:				
Yokohama.....	Jan. 17-Mar. 19.....	12	2	
Java:				
Batavia.....	Nov. 9-Jan. 3.....	36	13	
Do.....	Jan. 4-Feb. 9.....	16	10	Oct. 15-Dec. 30, 1915: Cases, 558; deaths, 118. Jan. 1-Feb. 9, 1916: Cases, 97; deaths, 21.
Samarang.....	Nov. 12-22.....	2	.....
Malta:				
Harbin.....	Dec. 1-31.....	1	.....
Manchuria:				
Harbin.....	Nov. 15-28.....	5	.....	See China.
Mexico:				
Agascalientes.....	Dec. 13-Jan. 2.....	11	7	
Do.....	Jan. 10-Apr. 23.....	.....	288	
Chihuahua.....	Jan. 3-9.....	1	1	
Frontera.....	Nov. 21-Dec. 25.....	86	24	Dec. 26-31, 1915: Present.
Do.....	Jan. 1-Apr. 8.....	.....	14	Present Jan. 1-Feb. 10; estimate number cases, 70.
Guadalajara.....	Dec. 5-25.....	21	7	
Do.....	Jan. 2-Apr. 8.....	61	34	
Hermosillo.....	Dec. 12-Mar. 4.....	141	29	Feb. 13, from 50 to 100(estimated) cases present within radius of 50 miles of city.
Juarez.....	Feb. 11-Mar. 19.....	13	.....	Including 53 cases brought, Feb. 9-15, from Sonora.
Mazatlan.....	Jan. 25-Apr. 25.....	65	49	Feb. 29, 2 cases on train from Mexico City to El Paso.
Mexico City.....				
Monterey.....	Dec. 13-19.....	5	3	
Do.....	Jan. 3-Apr. 19.....	25	.....
Naco.....	Feb. 15.....	2	.....
Nogales.....	Feb. 7-Mar. 4.....	27	3	
Piedras Negras.....	Jan. 10-Apr. 21.....	23	15	
Progreso.....	Dec. 5-18.....	2	.....
Salina Cruz.....	Jan. 1-15.....	1	1	
Tampico.....	Dec. 7-31.....	.....	21	Jan. 14: Epidemic; estimated cases, 100.
Do.....	Jan. 1-Apr. 10.....	.....	105	
Vera Cruz.....	Dec. 13-Jan. 1.....	34	29	
Do.....	Jan. 3-Apr. 9.....	109	87	
Netherlands:				
Amsterdam.....	Jan. 15-Apr. 8.....	34	3	
Persia:				
Teheran.....	Nov. 25-Dec. 10.....	.....	140	
Porto Rico:				
Arroyo.....	May 6.....	1	.....
Rio Piedras.....	.....do.....	1	.....
San Juan.....	.....do.....	26	.....
Trujillo Alto.....	.....do.....	16	.....
Portugal:				
Lisbon.....	Dec. 5-26.....	4	.....
Do.....	Feb. 13-Mar. 11.....	7	.....
Russia:				
Petrograd.....	Oct. 24-Dec. 25.....	195	37	
Do.....	Jan. 2-Mar. 4.....	256	94	
Riga.....	Nov. 14-Jan. 1.....	6	.....	Aug. 1-31, 1915: Cases, 10; deaths, 1.
Siberia—				
Vladivostok.....	Dec. 29-Jan. 4.....	10	3	
Siam:				
Bankok.....	Nov. 28-Dec. 4.....	.....	1	
Spain:				
Cadix.....	Dec. 1-31.....	.....	1	
Madrid.....	Nov. 1-Dec. 31.....	.....	41	
Do.....	Jan. 1-Feb. 29.....	.....	68	
Seville.....	Dec. 1-31.....	.....	7	
Do.....	Jan. 1-Feb. 29.....	.....	10	
Tarragona.....	Feb. 13-19.....	.....	1	
Valencia.....	Nov. 21-Jan. 1.....	141	10	
Do.....	Jan. 2-Mar. 25.....	95	8	
Straits Settlements:				
Penang.....	Dec. 26-Jan. 1.....	2	1	
Do.....	Jan. 2-Feb. 19.....	18	6	
Singapore.....	Nov. 28-Jan. 1.....	9	1	
Do.....	Jan. 16-Mar. 11.....	26	5	
Switzerland:				
Basel.....	Nov. 29-Dec. 25.....	43	.....
Do.....	Jan. 30-Mar. 11.....	53	.....	Jan. 16-22, 1916: Cases, 13; received out of date.

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

Reports Received from Jan. 1 to May 12, 1916—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Turkey in Asia:				
Beirut.....	Oct. 10-Dec. 25....	75	31	
Do.....	Jan. 9-Feb. 12.....	21	9	
Union of South Africa:				
Johannesburg.....	Oct. 17-23.....	2		
Uruguay:				
Montevideo.....	Oct. 1-31.....	1		
Venezuela:				
Tachira, State.....	Mar. 12.....			Present.

TYPHUS FEVER.

Algeria:				
Algers.....	Feb. 1-29.....	1	1	
Argentina:				
Rosario.....	Oct. 1-31.....		1	
Do.....	Jan. 1-31.....		1	
Austria-Hungary:				
Austria.....				
Trieste.....	Feb. 6-12.....	6		
Vienna.....	Jan. 23-29.....	12	2	
Hungary.....				
Budapest.....	Dec. 12-31.....	3	1	
Do.....	Jan. 1-Feb. 23.....	14		
China:				
Antung.....	Nov. 22-Dec. 5....	2		
Do.....	Mar. 13-19.....	1		
Tientsin.....	Mar. 19-25.....		1	
Cuba:				
Habana.....	Feb. 1-10.....	2	1	Imported from Mexico.
Egypt:				
Alexandria.....	Nov. 12-Dec. 31...	5	2	
Do.....	Jan. 1-Mar. 18....	78	19	
Cairo.....	Aug. 13-Dec. 31...	73	40	
Port Said.....	Nov. 19-Dec. 31...	1	2	
Germany:				
Aix la Chapelle.....	Jan. 9-Mar. 18....		3	
Bremen.....	Jan. 2-8.....	2		
Berlin.....	Nov. 21-Jan. 1....		7	
Do.....	Jan. 30-Mar. 11...		10	
Bremen.....	Nov. 23-Dec. 4....	1	1	
Do.....	Jan. 23-Feb. 23...	1	3	
Bromberg, Go t. district.....	Feb. 21-23.....	1	1	
Chemnitz.....	Jan. 23-Mar. 23...		1	
Dortmund.....	Dec. 12-18.....	1	1	
Erfurt.....	Dec. 19-25.....		1	
Do.....	Jan. 2-Mar. 4.....		4	
Frankfort on Main.....	Feb. 5-11.....	1		
Hannover.....	Nov. 21-Dec. 25...	2	2	
Do.....	Jan. 9-Mar. 27....	2	3	
Königsberg.....	Nov. 28-Jan. 1....	10		
Do.....	Jan. 1-Apr. 8.....	21	4	
Lübeck.....	Nov. 7-Dec. 31...	3	2	
Do.....	Jan. 1-8.....	1		
Merburg.....	Feb. 20-25.....	1	1	
Merseburg, Go t. district.....	Dec. 21-Jan. 1....	1		
Oppeln, Go t. district.....	Jan. 23-29.....	1	1	
Saxe-Coburg-Gotha.....	Dec. 5-18.....	3		
Do.....	Jan. 9-15.....	1		
Saxony.....	Feb. 20-23.....	37	1	
Stettin, Go t. district.....	Dec. 5-25.....		6	
Do.....	Jan. 9-23.....	1	2	
Great Britain:				
Dundee.....	Dec. 12-18.....	3		
Glasgow.....	Feb. 11-Mar. 1....	9		
Liverpool.....	Dec. 5-18.....	3	2	
Do.....	Mar. 5-11.....	1	1	
Manchester.....	Jan. 23-29.....	5	1	
Greece:				
Saloniki.....	Oct. 24-Jan. 2....		186	Dec. 10: Present among troops.
Do.....	Jan. 3-Mar. 19...		27	
Yehije-Vardar.....	Dec. 10.....			Present among troops.

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

Reports Received from Jan. 1 to May 12, 1916—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Italy:				
Palermo.....	Dec. 13-19.....	3		
Do.....	Jan. 3-9.....	3		
Japan:				
Tokyo.....	Feb. 27-Apr. 2.....	145		Jan. 1-Apr. 2, 1916: Cases, 190.
Java.....				Oct. 15-Dec. 30, 1915: Cases, 42;
Batavia.....	Oct. 26-eb. 9.....	70	22	deaths, 28. Jan. 3-eb. 9, 1916:
Samarang.....	Oct. 22-Dec. 7.....	7	1	Cases, 24; deaths, 11.
Do.....	Jan. 1-eb. 4.....	9	3	
Mexico:				
Aguascalientes.....	Dec. 13-Jan. 2.....		12	
Do.....	Jan. 10-Apr. 23.....		76	
Gundamara.....	Dec. 25-31.....	6	2	
Do.....	eb. 6-Apr. 8.....	146	34	
Hermosillo.....	eb. 4-22.....	3	3	
Juarez.....	To Mar. 19.....	5		
Mexico City.....	Dec. 23.....			Prevalent.
Do.....	Jan. 12.....		1	Jan. 1-31, 1916: Cases, 2, 001;
Monterey.....	Jan. 3-9.....	1		deaths, 488.
Oaxaca.....	Dec. 9.....		1	American.
Piedras Negras.....	Mar. 5-18.....	2		
Queretaro.....	Dec. 16.....			Prevalent. Estimated number
Salina Cruz.....	Dec. 16-21.....	1		cases, 500.
Do.....	eb. 1-15.....	1		In person from Mexico City.
Tampico.....	Dec. 1-31.....		1	
Do.....	Jan. 11-Apr. 10.....		6	
Vera Cruz.....	Feb. 7-Apr. 16.....		6	
Russia:				
Moscow.....	Dec. 7-27.....	28	5	Nov. 28-Dec. 11, 1915: Cases, 22.
Do.....	Jan. 2-Mar. 4.....	859	91	
Petrograd.....	Oct. 24-Dec. 25.....	34	6	
Do.....	Jan. 2-Mar. 4.....	57	15	
Riga.....	Nov. 14-20.....	12		
Vladivostok.....	Oct. 8-Nov. 13.....	21	6	
Spain:				
Madrid.....	Nov. 1-30.....		1	
Do.....	Feb. 1-29.....		1	
Sweden:				
Stockholm.....	Dec. 26-Jan. 1.....	1		
Do.....	Feb. 6-26.....	5		
Switzerland:				
Zurich.....	Jan. 16-22.....	1		
Turkey in Asia:				
Aleppo.....	Oct. 26-Nov. 1.....			Estimated deaths, 200 daily.
Bagdad district.....	Feb. 23.....			Prevalent.
Beirut.....	Nov. 21-27.....	7	3	
Do.....	Jan. 2-eb. 12.....	20	10	
Damascus.....	eb. 1-29.....	1,100	150	Estimated; among troops.
Mersina.....	Nov. 21-27.....	3		

YELLOW FEVER.

Ecuador:				
Guayaquil.....	Nov. 1-30.....	1	1	
Mexico:				
Frontera.....	Apr. 20.....		1	

SANITARY LEGISLATION.

COURT DECISIONS.

OHIO SUPREME COURT.

Workmen's Compensation Law—Occupational Diseases not Included in the Terms of the Ohio Law of 1911.

INDUSTRIAL COMMISSION OF OHIO v. BROWN, 110 N. E. Rep., 744.

The Ohio workmen's compensation law of 1911, which provided for compensation to employees "injured in the course of their employment," did not cover cases of lead poisoning contracted in the course of employment. In reaching this conclusion the court was guided partly by the fact that this construction had been adopted by the administrative officers charged with the enforcement of the law and by the further fact that later legislative enactments, while apparently following the same general policy, had excluded occupational diseases.

NICHOLS, C. J.: The particular question involved in the instant case is whether the words "personal injuries sustained in the course of employment" as used in the workmen's compensation law, approved June 15, 1911 (102 O. L. 524), include lead poisoning contracted in course of employment.

The defendant in error was employed in August, 1913, by the Eagle White Lead Co., of Cincinnati: such company being at the time a voluntary contributor to the State insurance fund. While thus employed Brown contracted lead poisoning of so serious a nature that he became sick and disabled from work. He made application for compensation to the State liability board of awards, and its successor, the Industrial Commission of Ohio, disallowed his claim. In January, 1914, Brown filed in the court of common pleas of Hamilton County his appeal from the decision of such industrial commission, in conformity with the provisions of the law. Trial was had, resulting in a verdict and judgment in favor of Brown, and this judgment was affirmed by the court of appeals of the same county. Reversal of the judgments is now sought by the State.

The question is one of paramount public importance, not only to the industrial classes, but to the State as well. The State has been administering this great trust for nearly four years, and during all that period the construction given the statute under consideration by the administrative body has been such as to preclude recovery for occupational disease, or any disease, for that matter, incurred in the course of employment. For while the disease under consideration was clearly occupational, yet if the claim of Brown to participate in the fund be sustained, it would at once open wide the doors to all claimants who have suffered from disease of any sort which they may have incurred while employed.

The premium rates assessed and collected by the administering board during this period of time have been fixed on a basis of death and injuries by accident solely, to the entire exclusion of injury through disease. It is quite patent that any other construction would necessitate an immediate and striking horizontal elevation of all premium rates, and would in all probability prove a serious menace to the law itself.

Administrative interpretation of a given law, while not conclusive, is, if long continued, to be reckoned with most seriously, and is not to be disregarded and set aside

unless judicial construction makes it imperative so to do. This might be said to be particularly true of laws of the nature and character of the one under consideration. The State has entered on a virgin field, not wholly without chart or compass, it is true, yet without much in the way of experience to light the way. In a large measure Ohio may be said to be the pioneer in working out and reducing to a working basis the theories of workmen's compensation. No statute enacted in these later days has had to encounter so fierce and powerful an opposition as this particular class of legislation. The law is yet on trial. It has to justify itself for its maintenance before the bar of public opinion. To seriously cripple it by a construction that could readily be defended from a legal standpoint, and that would at the same time be held to be the more humane interpretation, would in the long run work great injury to the industrial classes as a whole. An injustice would likewise be done to the employers of Ohio, who alone are contributing the millions that go to make up the fund.

Courts will take judicial notice of the events going to make up the history of a State, as well as the transactions and objects intimately connected with it. Why, then, should this court, contrary to the general knowledge possessed by the people of Ohio, blind itself to the real situation and content itself with a mere abstract construction of what might be included in the phrase "personal injuries," realizing all the while that to grant the enlarged construction sought for by the defendant in error would put in peril the splendid efforts that have been exerted by the public servants of Ohio, with much travail of soul, to provide compensation with promptness and certainty to the unfortunates killed and wounded in their battle for existence?

This court, with much show of logic and also authority, could construe this phrase as did the courts below. It is no difficult matter to bring within the purview of the words "personal injuries sustained in the course of employment" occupational diseases incurred in course of employment. It can be further conceded that, had the legislature, in enacting either the original or the present law, desired to make plain its intention to exclude occupational disease from participation in the fund, the exclusion could readily have been made by adding to the words "personal injuries" the qualifying phrase "by accident."

As against all this the court feels impelled to follow both the executive and legislative construction of the word "injury" as employed in this act and to limit recovery of compensation to such as may have suffered injury otherwise than through disease, thereby giving to the legislative and executive construction the added force of judicial construction.

The court arrives at the clear legislative construction of the term by a review of the history of the law in the seventy-ninth and eightieth general assemblies in connection with the constitutional amendment on the subject of workmen's compensation. We find that the first expression of the general assembly was had in the act of 1911, at which time there was no specific authority in the organic law for such a measure. Consequently the act was wholly voluntary.

In 1912 the constitutional convention submitted to the people of the State of Ohio what is now section 35 of article 2, which, so far as it is important to consider in the instant case, provides that:

For the purpose of providing compensation to workmen and their dependents for death, injuries, or occupational diseases, occasioned in the course of such workmen's employment, laws may be passed * * * etc.

This proposition was ratified by the people by a most decisive majority and gave the authority necessary to the legislature for the enactment of the present act. In 1913 the existing compulsory act was passed. Act March 14, 1913 (103 Ohio Laws, p. 72).

It is to be observed that the constitutional amendment differentiates between injuries and occupational disease. It clearly recognizes three distinct classes for which

provision may be made: (1) Injuries resulting in death; (2) nonfatal injuries; and (3) occupational diseases—and all are to be limited to such as might be occasioned in due course of employment.

The present law specifically provides for compensation for two of these classes only and significantly omits any provision for compensation for the third class. Were this claim one that had accrued under the new law the court could only construe the passage in dispute, in the light of the Constitution, as wholly excluding any compensation for injury by disease, whether occupational or otherwise. The legislature would have been within its constitutional rights had it included the third class, and its failure to do so, under the circumstances, makes of it a case of designed omission.

We note that the act now in force, enacted by the legislature after the constitutional authority had been granted, contains the same language in respect to the beneficiaries of the act as was employed in the original law, thereby clearly demonstrating an intention on the part of both of the assemblies speaking on the subject to give the restricted rather than the enlarged meaning to the phrase "personal injuries. * * *" If this deduction be not justified, it at least must be necessarily conceded that the eightieth general assembly so construed the language of the seventy-ninth general assembly.

Thus we arrive at the legislative construction. To this may be added the thought that the subject of compensation for occupational disease occupies a distinct field of its own. It is so recognized, not only in our Constitution, but by all humanitarians who have given the matter thoughtful attention. It is a vast subject, worthy of the most careful attention by the lawmaking body, and it was evidently the intention of both the seventy-ninth and eightieth general assemblies that Ohio should eventually enter into the larger field, as is evidenced by the resolution on the subject of occupational diseases enacted by both assemblies that legislated on the workmen's compensation subject.

The victims of modern industrialism springing from disease incident thereto are only less numerous than those arising from pure accident, and no sound policy can be suggested that should protect the one class and ignore the other, especially when the compensation system becomes firmly established. Until this is done the court will continue to construe the law as it was obviously intended by the legislature that it should be construed.

Authority is not wanting in support of the position taken by the court in this case. It really is not needed, in view of the intention of the Legislature of Ohio so definitely manifested, but may be briefly referred to nevertheless. Reference is made to the case of *Adams v. Acme White Lead & Color Works* (182 Mich., 157, 160; 148 N. W., 485, 486), where the identical question before this court was passed upon by the supreme court of Michigan. Quotation from the opinion of the court is made to this extent:

It might be well to keep in mind the conditions sought to be remedied by the diverse workmen's compensation enactments which have been adopted by several of the States of the Union and in foreign countries. The paramount object has been for the enactment of what has been claimed to be more just and humane laws to take the place of the common-law remedy for the compensation of workmen for accidental injuries received in the course of their employment by the taking away and removal of certain defenses in that class of cases. * * * Manifestly the terms "personal injury" and "personal injuries," above mentioned, refer to common-law conditions and liabilities and do not refer to and include occupational diseases, because an employee had no right of action for injury or death due to occupational diseases at common law, but, generally speaking, only accidents, or rather accidental injuries, gave a right of action. We are not able to find a single case where an employee has recovered compensation for an occupational disease at common law. Certainly it can be said that in this State no employer has ever been held liable to the employee for injury from an occupational disease, but only for injuries caused by negligence. It seems to us that the whole scheme of this act negatives any liability of the employer for injury resulting from an occupational disease.

A brief citation from the opinion of Judge Johnson in the case of *State ex rel. v. Creamer* (85 Ohio St., 349, 386; 97 N. E., 602, 603 [39 L. R. A.] N. S., 694), construing the original act, demonstrates that our own supreme court at that time had in mind the belief that the legislature had limited the provisions in the way of awards to industrial disasters to workers for which there had heretofore been a clear remedy at common law. In this opinion the court, through Johnson, J., says of the act:

It provides a plan of compensation for injuries * * * resulting from accidents to employees.

And again in the same opinion (83 Ohio St., at p. 389, 97 N. E. 604 [39 L. R. A. (N. S.), 694]) it is said:

The system which has been followed in this country, of dealing with accidents in industrial pursuits, is wholly unsound. * * * That there has been enormous waste under the present system, and that the action for personal injuries by employ ee against employer no longer furnishes a real and practical remedy, annoys and harasses both, and does not meet the economic and social problem which has resulted from modern industrialism.

The judgment of the court of appeals will be accordingly reversed, and the cause will be remanded to the court of common pleas, with instructions to sustain the demurrer of the State to the petition on appeal of the claimant Brown.

Johnson, Donahue, Newman, Jones, and Matthias, JJ., concur.

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

LACKAWANNA, N. Y.

Communicable Diseases—Notification of Cases—Placarding—Quarantine—Disinfection—School Attendance—Burial. Tuberculosis. (Ord. Feb. 1, 1915.)

SEC. 3. Every physician who has been called to attend or has attended a case of contagious disease shall report the same to the health officer of this board immediately. The report shall be made in writing upon blanks furnished for that purpose by this board.

SEC. 4. When a case of contagious disease is not brought to the knowledge of a physician, it shall be the duty of the nurse, or other person, in whose care or custody the person sick with such disease may be, as soon as the nature of the disease is known or suspected by such person, to report to the health officer in writing, forthwith, the name of the person having the disease, the nature and state of the disease and the place of dwelling or the place where the person having the said disease is temporarily lodged.

SEC. 5. No superintendent, principal, teacher, manager, or other person acting in such capacity in any school, musical conservatory, or other institution of learning, public or private, or Sunday school, church, or assemblies, and no parent, master, guardian, or custodian of any minor child shall permit any child having any contagious disease, or any child residing in any house in which any such disease exists, or has recently existed, to attend any school, musical conservatory, or other institution of learning, or Sunday school, until he or she shall have obtained from this board or the health officer, permission to so attend. Nor shall any such superintendent, principal, teacher, manager, or other person afflicted with smallpox [sic], or any member permit any such child to be unnecessarily exposed, or to negligently expose any other person to the infection of any contagious disease.

SEC. 6. All communication with any house or family infected with the hereinafter-named contagious, infectious, or pestilential diseases, is hereby forbidden, except the physicians, nurses, or messengers, to carry necessary advice, medicines, and provisions, and to [sic] such other person as may be necessary to render aid within said house, for the support or assistance of said family. The diseases named under this section are: Scarlet fever, diphtheria, smallpox, cholera, typhus, or ship fever, and such other diseases as may at any time be or be declared by this board to be dangerous or a menace to public health. All cases of scarlet fever shall be quarantined for at least 30 days, and as long thereafter as the health officer deems it necessary for the protection of others. All cases of diphtheria shall be quarantined for a period of 15 days, and as long thereafter as the health officer deems necessary.

SEC. 7. Any such nurse shall not depart from nor leave such house during the time such sick person remains therein without the written permission of the health officer and until all the wearing apparel which he or she has worn while in attendance at such place has been replaced with clothing properly disinfected, or which has not been worn in such sick room.

SEC. 8. Any physician, or the health officer who visits such person shall wear a suitable garment, wholly protecting their person, and thoroughly disinfect their hands, face, beard and hair, and garment before entering any other building.

SEC. 9. For the purpose of this article, it is ordered that a sign or placard, designating the name of the disease therein, shall be fixed by order of this board on a conspicuous place near the main entrance of a house or building wherein there exists a contagious disease. Such sign or placard shall not be removed by any person except by order of this board.

SEC. 10. The health officer shall as soon as practicable after putting up such placard or sign, leave a written or printed notice with such persons on the premises as to him seems best, that a quarantine has been established by the board of health, and that all the rules, regulations, and ordinances of the board of health must be strictly obeyed. He shall also leave with such person a copy of such rules, regulations, and ordinances relating to infectious and contagious diseases as may be prepared for that purpose. No clothing shall be removed to any laundry or other place from a house containing a contagious disease, unless upon the written consent of the health officer.

SEC. 11. All rooms, or apartments, occupied by any person sick of any contagious disease, immediately upon the death or recovery of any such person, shall be by the health officer, or by his authority, thoroughly cleansed and disinfected; and all clothing, beds, bedding, or infected articles used by or in caring for such sick persons, shall be likewise cleansed and disinfected or in extreme cases destroyed, as said officer may direct.

SEC. 12. The health officer shall have power and it shall be his duty to enter any and all premises and thoroughly examine the same for the purpose of ascertaining the supposed prevalence of any contagious disease, and also for the purpose of examining into any suspected unsanitary condition.

SEC. 13. No person or article liable to propagate a contagious or infectious disease shall be brought within the limits of the city of Lackawanna, N. Y., unless by the special permit and direction of the health officer or of this board; and any one having knowledge that such person or article has been brought within such limits shall immediately notify the health officer or this board thereof.

SEC. 14. No person shall, within the limits of this city, unless by permit of the health officer, or of this board, carry or remove from one building to another, any patient affected with any contagious disease. Nor shall any person, by the exposure of any individual so affected, or of the dead body of such individual, or of any article capable of conveying contagion or infection, or by any negligent act connected with the care or custody thereof, or by any needless exposure of himself or herself, cause or contribute to the spread of disease from any such individual or dead body.

SEC. 15. In case of death from smallpox, varioloid, scarlet fever, diphtheria, (including membranous croup), yellow fever, cholera, typhus fever, or cerebrospinal meningitis, it shall be the duty of the person in charge of such deceased to cause the body to be buried within 24 hours after death, except permission for further delay be received from the health officer.

SEC. 16. The undertaker in charge of bodies of persons dying from smallpox, varioloid, diphtheria (including membranous croup), yellow fever, scarlet fever, typhus fever or cerebrospinal meningitis, shall at once cause the body to be disinfected, wrapped in a sheet wet with a solution of bichloride of mercury 1 to 500 and placed immediately in a casket, the inner surface of which must be lined with raw cotton and made absolutely tight, and not reopened.

SEC. 17. No undertaker shall conduct or any person attend a public funeral of any person who has died of smallpox, diphtheria (including membranous croup), scarlet fever, Asiatic cholera or other malignant, contagious, or infectious disease, declared by the board or State board of health to be dangerous to the public health; and the family of the deceased person shall limit the attendance at the burial of such deceased person to such persons as are allowed by the health officer, or by this board.

SEC. 18. When an undertaker has charge of the remains of any person who has died from smallpox, diphtheria (including membranous croup), scarlet fever, measles,

typhoid fever, consumption, puerperal fever, erysipelas, epidemic dysentery, cerebro-spinal fever, yellow fever, typhus fever, Asiatic cholera, or other malignant contagious diseases, the undertaker shall before leaving the premises on which he has cared for such remains, burn or cause to be burned, or disinfected and buried, all valueless articles and cleansing fluids he has brought or caused to be brought in contact with said remains, and also all fluids and more or less solid excreta from any cavity of the remains; he shall also, before leaving, thoroughly disinfect all articles of value, whether the same are to be left on the premises or to be carried off the premises, which he has brought in contact with the remains, cleansing fluid or excreta; and he shall do or cause to be done the work required by this code, and the health officer so as to make the remains and its surroundings safe from contagion, at the earliest possible moment.

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SEC. 21. Pulmonary tuberculosis is hereby declared to be an infectious and communicable disease, dangerous to public health. It shall be the duty of every physician in this city to report forthwith to the health officer in writing the name, age, occupation, and address of every person having such disease who has been attended by or who has come under the observation of such physician.

SEC. 22. It shall be the duty of every person sick with pulmonary tuberculosis and every person in attendance upon any one sick with this disease, to observe and enforce all the sanitary rules and regulations of the State board of health for the prevention of the spread of pulmonary tuberculosis.

SEC. 23. Upon such report being made to such health officer, it shall be his duty to visit the place where such case is reported to be and leave rules and regulations governing such cases or see that the attending physician supplies such rules and regulations and disinfect the house where such patient resided, if in his judgment it is necessary.

SEC. 24. Upon any such investigation by the health officer, if any such patient by reason of inability to procure the necessary food, supplies, etc., should be deemed by such health officer to be a menace to public health, that matter shall be referred to the commissioner of charities.

Foodstuffs—Sale and Protection. Slaughterhouses. (Ord. Feb. 1, 1915.)

SEC. 25. No person shall keep, sell, offer for sale, or bring within the city limits any unwholesome, unsound, impure meat, fish, fowls, vegetables, or other unwholesome article to be offered for sale for use for human food.

SEC. 26. No person shall keep, sell, offer for sale, or bring within the city limits the meat of a calf less than four weeks old or the meat of any pig less than five weeks old, or the meat of any lamb less than eight weeks old.

SEC. 27. Any person, persons, firm, or corporation who shall hereafter kill, in slaughterhouse within this city, or who shall transport or bring within said city an animal or any part thereof, which is diseased, unwholesome, or unfit for human food from any cause, shall forthwith report all the facts concerning the same to the health officer of said city; and no part of such animal shall be disposed of until it has been examined by the health officer or other authorized agent of this board. No person shall cart through the streets of said city, except it be covered so as to protect it from dust and dirt, the body or any part thereof of any animal which is dressed and to be used as food. Such cart shall be kept in a clean and sanitary condition at all times.

SEC. 28. Any person, persons, firm, or corporation having in charge or being in possession of any slaughterhouse or other place within the city where any animal is or shall be slaughtered shall at all times admit within such slaughterhouse or other place and to any other place where the meat or any portion of a slaughtered carcass shall be, the health officer, or any member of this board, or any authorized agent of this board for purposes of inspection by said officer, board, or agent.

SEC. 29. Every person being the owner or lessee or occupant of any room, stall, store, building, or place where meat, fish, vegetables, or other articles designed for human food shall be stored, or shall be kept or offered for sale, shall keep such room, stall, store, building or place and its appurtenances, and all yards, grounds, alleys, or premises owned, occupied, or used by such persons in a clean and wholesome condition; and every person who has charge of or is interested in the care, custody, or sale of any meat, fish, fowls, or vegetables, or other articles, designed for human food shall keep and preserve the same in a clean and wholesome condition.

SEC. 30. No person shall build or use any slaughterhouse within the limits of this city, nor slaughter any cattle, swine, sheep, lambs, or calves within the limits of this city, without a special written permit from this board or its health officer.

SEC. 31. No person or persons, corporation or corporations, shall sell or offer for sale to anyone for human consumption as food any meat, fish, or fowl that has been treated by any preservatives. All fowls that have been dressed for market shall be properly drawn.

Ice—Sale—Source of. (Ord. Feb. 1, 1915.)

SEC. 54. No person, association, firm, or corporation shall give, offer for sale, or deal in any ice to be consumed or used in this city by private consumers or by meat, fish, or provision dealers, except ice taken from pure and wholesome waters. No such person, association, firm, or corporation shall give, offer for sale or deal in any ice to be consumed or used in said city for any purpose whatsoever, taken from any source or water that may be condemned by this board.

Milk and Cream—Production, Care, and Sale. (Ord. Feb. 1, 1915.)

SEC. 32. No person shall sell, offer, or have for sale in the city or have in his possession any unwholesome, impure, watered, or adulterated cream, milk, or milk known as swill milk, or milk from cows that for the most part are kept tied up in the stables, or from those that are fed on swill or like substances, or from diseased cows.

SEC. 33. All milk houses within the city limits shall be of sufficient size and have a sufficient number of windows to insure thorough light and ventilation and shall be floored and constructed of such material and in such manner as to be sanitary and to be able to be maintained in a sanitary condition.

SEC. 34. Such milk houses shall not communicate directly with any water-closet, sleeping room, or with any unsanitary closet or room, and shall be used for no other purpose than for the storage and dispensation of milk.

SEC. 35. No milk house shall be maintained in any horse or cow stable or in direct communication therewith, nor in connection with any building, business, or condition that may be unsanitary or make possible the contamination of milk.

SEC. 36. All milk boxes used for the storage and cooling of milk shall be substantially constructed and lined with zinc, and they shall be elevated not less than 10 inches above the floor level and away from the surrounding walls or partitions so as to insure perfect cleanliness. All such boxes shall be cleaned not less than twice a week in the summer and once a week in the winter and shall be properly drained over and into a drain, but shall not directly communicate with such drainage or sewer apparatus.

SEC. 37. All plumbing connected with milk houses shall be in accordance with the rules of the bureau of plumbing, and sewers connected with such milk-house drains shall be both properly trapped and ventilated and approved by this board.

SEC. 38. All milk cans and bottles shall, before being returned to the dairy, be rinsed out and cleaned.

SEC. 39. No person or persons, or association owning one or more cows shall sell, offer, or have for sale any milk or cream of any kind or description in any quantity whatsoever within the city limits without first obtaining a license from the city clerk.

Sec. 40. Nor shall any person or persons bring or send into the city for sale or offer for sale any milk or cream without a written permit to do so from the city clerk; such permit shall not be transferable, and may be revoked by the board of health, when it shall appear that the person, persons, or association holding such permit have violated any provision of this ordinance, or when from any cause it may be deemed best by the board of health, in the interest of public health.

Sec. 41. Before any such permit shall be issued, the applicant shall file a statement with the city clerk showing his residence, the number of his cows, the name of the persons from whom he is purchasing milk, and the amount and the number of gallons of milk or cream sold by him daily. Each licensee shall give notice to the board of health of any change in the person or persons from whom such licensee obtained his supply.

Sec. 42. Section 41 shall not apply to storekeepers who do not peddle milk, but dispense the same solely upon their premises, provided such milk is obtained from a duly licensed milk dealer.

Sec. 43. No licensed dealer shall furnish milk to be sold by any storekeeper, unless said storekeeper complies with all the provisions of this ordinance governing the sale and sanitary protection of milk, and such milk [sic] may be forbidden at any time by the board of health in the interest of public health.

Sec. 44. Each and every permit shall expire on the first of May next, after its issue, and every violation of the provisions of this section shall subject the person or persons or association violating the same to be guilty of a misdemeanor.

Sec. 45. All dairies, including the cows, cow stables, milk houses, milk vessels, the owner or owners of which offer milk or cream for sale within the limits of the city, shall be subject to inspection by any of the members of the board of health or some one deputed by the board of health. Any officer or assistant of the health board may enter any place where milk or cream is sold or kept, or any carriage used to convey the milk within the limits of the city, and any refusal to allow such entry shall forfeit permit, or, if the refusal be on the part of the person producing milk or cream under a permit, the holder thereof shall discontinue the same under penalty of life forfeiture.

Sec. 46. All milk wagons shall have the name of the owner, the number of the license painted thereon, on both sides of the wagon, in plain and legible English. Every dealer in milk who uses in his business a wagon, cart, or other vehicle, shall, during the months of May to September, inclusive, have and keep upon said wagon, cart, or other vehicle, between the hours of 10 a. m. and 4 p. m., a covering of canvas or other material so as to securely protect the contents from the rays of the sun.

Sec. 47. No dealer in milk nor his agents shall serve milk in bottles to any dwelling that has in it any contagious disease or that is placarded by the board of health for contagious disease, until said placard has been removed by the proper authorities.

Sec. 48. Nor shall any person remove from such dwelling any bottles or receptacles which have been, or are to be, used for the purpose of receiving or storing milk.

Sec. 49. Milkmen or any other person or persons guilty of violating the ordinances governing the sale of milk or cream shall forfeit their license.

Sec. 50. No dairyman who shall feed to his milch cows or have in his possession with intent to feed to such cows any garbage, refuse, or other improper food, shall sell or offer for sale to any dealer or other resident of the city of Lackawanna the milk from such cows; nor shall any such dealer knowingly receive or sell any milk produced from said dairy, nor shall the milk of cows which may be kept in any place where the water, ventilation, food, and surroundings are not wholesome and sufficient for the preservation of their health, safe condition, and the wholesomeness of their milk be sold within the city limits.

SEC. 51. Any sample of milk which shall be shown upon analysis to contain less than 12 per cent of milk solids and less than 3 per cent of fat or any samples of less specific gravity than 10.29 shall be declared to be adulterated.

SEC. 52. All dealers in milk are prohibited hereafter from using milk tickets which may be used more than once.

SEC. 53. No bottles shall be filled with milk except at the milk room, and no bottles shall be refilled until after they have been properly sterilized.

Water—Domestic Use—Not to be Used when Source is Contaminated or Likely to Become Contaminated. (Ord. Feb. 1, 1915.)

SEC. 69. No person or persons shall use or permit to be used for drinking or culinary purposes the water from any well, spring, or other source which has been condemned by this board or its health officer; and any condemned well or other source of water shall be filled or destroyed at the expense of the owner, user, or agent, upon order of this board.

SEC. 70. No person or persons shall use or permit to be used for drinking or culinary purposes any water drawn from a well or a spring so situated as to be contaminated by a privy vault or cesspool so constructed as to allow any of the contents of such privy vault or cesspool to pass into and percolate through any of the surrounding soil.

Premises—Care of. (Ord. Feb. 1, 1915.)

SEC. 55. No animal or vegetable substance, garbage, house refuse, nor any materials which are offensive, or tend by decay to become putrid, or to render the atmosphere impure or unwholesome shall be thrown, placed, or permitted to remain in or upon any yard, lawn, garden, ash heap, parking, or street, or premises within this city; and the owner, lessee, or occupant of any such premises within the city shall forthwith remove such substances therefrom.

SEC. 56. No sunken or other places shall be filled nor made land constructed with any material containing an admixture of putrescible animal or vegetable matter.

SEC. 57. When any lot or lots or any part thereof shall from any cause whatsoever become in whole or in part the repository of stagnant water, it shall be the duty of the owner, lessee, or occupant within a specified time, given in a written notice by this board or its health officer, to cause such lot or lots, or part thereof, to be filled with clean earth or other inoffensive substances, or if ordered by this board shall cause the proper drainage thereof.

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SEC. 59. No person shall permit or have any vegetable or animal substance, water or other liquid on his premises or grounds which shall give an offensive odor or be prejudicial to life or health.

Privies and Cesspools—Construction and Maintenance—Removal of Contents. (Ord. Feb. 1, 1915.)

SEC. 76. No person shall for hire clean any privy vault, dry-earth closet, or cesspool within this city unless he shall have first obtained a license therefor from the board of health of said city. No person shall obtain such license until he shall have satisfied the board of health of said city that he has the proper appliances and is so situated that he or his employees can clean such vaults, closets, and cesspools in a sanitary and proper manner.

The license herein provided shall be in writing and shall continue in force from its date to the time specified therein for its termination: *Provided, however,* That no license granted under this section shall run for a longer period than the 1st day of May following the date of its issue.

The fee for such license shall in each case be fixed by the common council.

SEC. 77. The contents of privy vaults and cesspools when removed shall be immediately taken from the premises in water-tight receptacles with close fitting covers in such a manner that the escape therefrom of noxious and offensive liquids or odors shall be prevented, and to such localities only as that it may not be obnoxious to any human being, and all such work shall be done between the hours of 9 p. m. and 5 a. m. unless a special permit is given to the contrary.

SEC. 78. All persons engaged in the business of scavenging shall maintain the vehicles and implements used therefor in a sanitary and inoffensive condition, and when not in use the same shall be stored where no offense can be given. In the transit through the city as rapid progress shall be made as is consistent with safety, and in every act it shall be the duty of the scavenger and his agents or employees to avoid giving offense.

SEC. 79. Every owner, tenant, lessee, or occupant of any house, building, or premises or of any part thereof where drains, cesspools, dry-earth closets, or privies are permitted by this board to be used shall at all times keep and maintain the same or such thereof as are owned, used, or controlled by such owner, tenant, lessee, or occupant in a clean, wholesome, and sanitary condition and free from offensive odors.

SEC. 80. Every owner, tenant, lessee, or occupant of any house, building, or premises shall clean and thoroughly disinfect any such drain, dry-earth closet, privy, or cesspool whenever the same shall become insanitary, unwholesome, or offensive, or whenever this board or its health officer shall order such drain, dry-earth closet, privy, or cesspool to be cleaned and disinfected.

SEC. 81. Every owner, tenant, lessee, or occupant of any house, building, or premises on any sewerred street when or where sewer connections can be made fronting such premises who may at any time be ordered by this board of health to abandon and cease using any privy, dry-earth closet, or cesspool shall within 30 days after receiving such order entirely abandon and cease using such privy, dry-earth closet, or cesspool, and shall within 15 days after receiving such order thoroughly cleanse or cause to be cleaned such privy, closet, or cesspool, and in case of a privy vault or cesspool, fill the same with clean earth or other inoffensive and wholesome substance; and shall also, in case of a privy, remove the seats therefrom.

SEC. 82. No privy vault, sink, or cesspool shall hereafter be made or built in this city, except in accordance with the regulations of the board of health of this city; nor shall any building cover be made or placed upon or over any such vault, sink, or cesspool until the same has been inspected by an officer of the board of health and found to be in accordance with the permit granted and regulations of the board.

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SEC. 84. No person, firm, or corporation shall make, build, construct, use, or maintain within any dwelling house or other building within this city any pipe or pipes connecting any privy vault, sewer pipe, or cesspool, with any sink, bowl, cistern, overflow, or drain in such house or building unless each such pipe be provided and built with a suitable trap or water seal and in such a manner as may be approved by the board of health of said city, and all sewer connections inside of the cellar walls shall be of iron or steel.

Domestic Animals—Keeping of. (Ord. Feb. 1, 1915.)

SEC. 64. No person shall keep any pigs, hogs, or swine within the limits of this city without having first obtained a special permit in writing from this board so to do, upon written application made therefor.

SEC. 65. No person shall keep or maintain any horses, cattle, sheep, or goats within this city, except that the places where the same are kept shall at all times be in a clean, wholesome, and sanitary condition and free from offensive odors. All collection or accumulations of any hennery, park, stable refuse, or manure in or about any hennery,

park, barn, stable, yard, or appurtenance thereof must be removed before the same shall become offensive.

SEC. 66. No person owning, occupying, or having charge of any stable or other premises shall keep or allow thereon or therein any dog or other animal which shall by noise disturb the quiet or repose of any person therein or in the vicinity to the jeopardy of the life or health of any human being.

Garbage, Refuse, Ashes, and Night Soil—Care and Disposal. (Ord. Feb. 1, 1915.)

SEC. 58. All substance from any sink, cesspool, privy, or garbage, or rubbish, ashes, or dirt, or any foul liquids in substance whatsoever, or any drainage from any house, barnyard, barn, place of business, or manufactory shall be disposed of or abated as recommended by the board of health.

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SEC. 62. It shall be the duty of every owner, lessee, tenant, or occupant of any building, premises, or place of business in this city where garbage is made, accumulated, or exists to provide or cause to be provided and all times thereafter to keep within such building or upon said premises or place of business, suitable and efficient boxes, barrels, or tubs for receiving and holding without leakage all garbage that may accumulate from said buildings, places of business, or upon said premises, or the portion thereof which such persons may be the owner, tenant, lessee, or occupant. Every such box, barrel, or tub for the reception and retaining of garbage shall not remain on any sidewalk or in any public place longer than may be necessary for the removal of the contents thereof, and all boxes, barrels, or tubs designed for the reception and containing of garbage shall be provided with proper covers. The boxes, tubs, and barrels herein mentioned shall be placed and kept in such position (unless kept within or upon private grounds of residences and sufficiently removed from adjoining premises to prevent any offense thereof) as the board of health may direct. Said receptacles shall be used for no other purpose than as receptacles for garbage; ashes and rubbish must be excluded therefrom. The contents of such receptacle shall be emptied and entirely destroyed or removed from said city at least once a week.

SEC. 63. No person or persons shall gather, collect, or transport within the limits of this city any garbage, except such persons as are licensed by the board of health of this city so to do; and no garbage shall be transported through the streets of this city except in water-tight receptacles and in the manner required by the board of health.

Offensive Trades—Regulation of. (Ord. Feb. 1, 1915.)

SEC. 60. No person shall boil, heat, dry, keep, or store any offal, swill, blood, bones, rags, or decaying animal or vegetable matter within the limits of this city without permission from this board or its health officer.

SEC. 61. No person shall engage in the business of boiling or rendering fat, lard, or animal matter within this city, except that the same shall be so carried on as to prevent offensive odors; and such person shall cause the scraps or residue therefrom to be dried or otherwise so prepared as effectually to deprive such material of all offensive odors and to preserve the same entirely inoffensive immediately after the removal thereof from the receptacle in which the rendering process was conducted.

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SEC. 67. No person, association, or corporation shall erect or maintain any manufactory or place of business dangerous to life or detrimental to health, or where unwholesome, offensive, or deleterious odors, gas, smoke, dust, deposit, or exhalations are generated, or carpets or rugs are cleaned, or hides, bones, or market fats are stored without a special permit in writing of this board, duly granted upon application

therefor; and all such establishments shall be kept clean and wholesome so as not to be offensive or prejudicial to public health; nor shall any offensive or deleterious waste substance, gas, tar, sludge, refuse, or injurious matter be permitted to accumulate upon the premises or be thrown or allowed to run in any public waters, stream, watercourse, street, or public place. And every person, association, or corporation conducting such manufacture or business shall use all reasonable means to prevent the escape of smoke, gases, and odors and to protect the health and safety of all operatives employed therein.

SEC. 68. No person, firm, or corporation shall keep in this city any premises for the storage, drying, cleaning, or assorting of rags in any building occupied by human beings as a sleeping place; nor shall any person, firm, or corporation gather, collect, accumulate, store, expose, carry, or transport in any manner, through the streets and public places of this city, or in or to any building, tenement house, cellar, or house in this city any rags, bones, refuse, paper, or any offensive material without a permit in writing from this board, in accordance with the conditions and subject to the limitations thereof.

Births and Marriages—Reporting of. (Ord. Feb. 1, 1915.)

SEC. 86. It shall be the duty of the groom in every marriage, or the clergyman or magistrate performing the ceremony, and of the parents or custodian of every child born, to make sure that the prescribed report of such marriage or birth is presented to the board of health or its registering officer within 48 hours.

Burial—Permit Required—Death Certificates. (Ord. Feb. 1, 1915.)

SEC. 19. No person or persons acting in the capacity of an undertaker shall conduct a funeral or attempt to bury a deceased person without first obtaining at the office of this board a burial permit, provided for and prescribed by the State commissioner of public health, and every physician or professional adviser who has attended any person at last illness, or has been present at the death of any person, shall, on request of the undertaker, write in the death certificate such statements regarding the deceased as are required or prescribed by the State commissioner of public health; and any relative or friend of the deceased who is in possession of any facts required by the said regulations on the said blanks so prescribed shall furnish the same to an undertaker. In case a person dies without having professional attention in his or her last illness, the coroner shall prepare and sign said certificate as to the cause of death, the same shall be specified in the report and shall, until the true and real cause of death shall have been ascertained, answer the requirements of this code; and the herein-mentioned death certificate shall be filed in the office of this board within 24 hours.

SEC. 20. The body of any person dying within this city shall not be interred or placed in any tomb, vault, or cemetery, or other place, until a permit from the clerk of this board has been obtained, and no sexton or other person shall assist in, assent to, or allow any such body to be interred or placed until a permit has been obtained. The violation by any person or corporation of any of the issuing provisions of this sanitary code is hereby declared a misdemeanor.

Health Officer—Powers and Duties. (Ord. Feb. 1, 1915.)

SEC. 85. The health officer is directed and empowered to execute and enforce within a reasonable time each and every section of this sanitary code and all sanitary regulations hereafter to be published by this board; also to enter upon and within any premises where conditions dangerous to the public health are known or believed to exist, and to examine into the nature of complaints made by any of the inhabitants of this city concerning sources of danger or injury to health, and he shall preserve accurate records of his information and official actions and report the same to this

board at its next meeting. And whenever, in his judgment, danger to public health shall arise requiring special regulation not of general application, he shall forthwith notify the president of this board, who shall thereupon convene this board to take such action as may be necessary and proper.

Public Places—Sanitary Regulation—Spitting Prohibited. (Ord. Feb. 1, 1915.)

SEC. 71. No person shall throw, deposit, or leave upon any street or public place any dirt, brick, or other material whatever so as to obstruct the free flow of water along any gutter or surface waterway.

SEC. 72. No person shall permit any noxious or offensive liquid of any kind or nature or any foul or filthy matter whatever to drip, run, or fall from or out of any building, vehicle, structure, yard, or place into or upon any street or public place.

SEC. 73. No person shall throw, deposit, place, or leave upon any street or public place any dead animal, fowl, or fish, or any decaying vegetable or animal matter or any matter likely to decay or to become offensive. No body of a dead animal shall be transported through the streets unless it be covered from sight.

SEC. 74. No person shall spit upon the floor, steps, or platform of any car, nor upon the floor of any public hall or building, or of the hallways, stairs, or approaches thereto, or upon any sidewalk.

SEC. 75. Whenever, in the judgment of this board, the public health requires, they may order and direct any court, area, lane, or alley to be effectively paved and drained, so as to prevent the saturation and contamination of the soil and air; and all such courts, areas, lanes, and alleys, whether paved or not, shall at all times be kept clean and free from all accumulations of ashes, garbage, or other waste substances by the owners, occupants, or persons in possession.

Public Halls and Places of Amusement—Sanitary Regulation. (Ord. Feb. 1, 1915.)

SEC. 83. Any and all person or persons, firm, or corporation, having in charge any public hall, opera house, theater, place of amusement, or other place whatsoever in this city, at or in or where the public congregate, shall from time to time and whenever the same is insanitary in condition, clean, cleanse, and purify the floor and walls of such hall, house, or place and the furniture and contents thereof, by such means and in such manner as to render the same sanitary and wholesome in condition.

Definition of Terms. (Ord. Feb. 1, 1915.)

SECTION 1. The terms "board," "this board," and "said board" shall be held to mean the board of health of the city of Lackawanna, N. Y.; the words "person," "owner," "tenant," "lessor," "lessee," "occupant," "party," "manager," "board," and "officer" shall respectively be held to apply to and to include both jointly and severally each and all owners, part owners, tenants, lessors, lessees, occupants, managers, parties in interest, persons, officers, boards, and corporations who may sustain the relation, or may be in like position of any one or more thereof referred to in any ordinance or regulation, or section herein; the words "city" or "said city," whenever used herein, shall mean the city of Lackawanna, N. Y.; the words "street," or "streets," whenever used herein, shall be held to include avenues, sidewalks, gutters, lanes, and alleys to which the public has access; the words "public place" or "public places" shall include parks and open places thereto adjacent, and also public yards, grounds, and areas, and open spaces between buildings and streets; and in view of such street; the word "ashes" shall be held to include cinders, coal, and everything that usually remains after fires; the word "rubbish" shall be held to include all the loose and decayed material and dirt-like substance that attends use or decay, or which accumulates from building, storing, or cleaning; the word "gar-

bage" shall be held to include every accumulation of both animal and vegetable matter, liquid or otherwise, that attends the preparation, decay, and dealing, or storage of meats, fish, fowls, birds, or vegetables; the word "dirt" shall be held to mean natural soil, earth and stone; the word "meat," whenever herein used, includes every part of any land animal and eggs (whether mixed or not with any other substance); the word "fish" shall include every part of any animal that lives in the water, or the flesh of which is not meat; and the word "vegetable" includes every article of human consumption as food, which not being meat or fish or milk, is held or offered or intended for sale or consumption as food for human beings, at any place in said city; and all fish and meat found therein shall be deemed to be therein, and held for such sale or consumption as such food, unless the contrary be distinctly proved.

SEC. 2. The phrase "contagious disease," whenever used herein, shall be held to include all diseases of an infectious, contagious, or pestilential nature, more especially referring to smallpox, cholera, diphtheria (including membranous croup), typhus, typhoid, contagious cerebrospinal, or spotted and scarlet fever (including scarlatina), tuberculosis, measles, ophthalmia, whooping cough, mumps, chicken-pox, including pneumonia and any other disease or diseases that shall be publicly declared by the said board or State board of health dangerous to the public health.

Penalties for Violations of Ordinance. (Ord. Feb. 1, 1915.)

SEC. 87. The violation by any person or corporation of any of the provisions of this chapter or sanitary code shall be liable [sic] to a penalty of not more than \$100 for each offense, to be recovered in a civil action, or shall constitute disorderly conduct, and upon being convicted thereof in a court of criminal jurisdiction, such person shall be subject to a fine of not more than \$100; and in case the person so convicted does not immediately pay such fine, he or she may be committed to the Erie County Penitentiary for a term of one day for each and every dollar of such fine not paid.

LOS ANGELES, CAL.

Manure and Stable Refuse—Transportation of. (Ord. 33475, Dec. 18, 1915.)

SECTION 1. It shall be unlawful for any person, firm, or corporation to haul, transport, or convey, or to cause or permit to be hauled, transported, or conveyed any manure or stable, barnyard, cow yard, or poultry yard refuse upon or along any public street, alley, or other public place in the city of Los Angeles except in a vehicle, box, or other receptacle so constructed and maintained that such manure, or stable, barnyard, cow yard, or poultry yard refuse shall not escape from any such vehicle, box, or other receptacle in, into, or upon any such public street, alley, or other public place.

SEC. 2. It shall be unlawful for any person, firm, or corporation to transport, load, or deposit, or to cause or permit to be transported, loaded, or deposited in, into, or upon any car located upon any steam or electric railroad in the city of Los Angeles within 200 feet of any dwelling, apartment house, lodging house, hotel, church, school, hospital, or other public building, or any public park, except within the districts hereinafter described. The said districts are herein defined as follows, to wit: [Five districts are described].

SEC. 3. It shall be unlawful for any person, firm, or corporation to sort, separate, or deposit, or to cause or permit to be sorted, separated, or deposited any manure or stable, barnyard, cow yard, or poultry yard refuse upon or along the tracks or right of way of any steam or electric railroad in the city of Los Angeles.

SEC. 4. That any person, firm, or corporation violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punishable by a fine of not more than \$500 or by imprisonment in the city jail for a period of not more than six months, or by both such fine and imprisonment.

MARQUETTE, MICH.**Midwifery—Practice of—License Required. (Ord. Oct. 18, 1915.)**

SECTION 1. A midwife, within the meaning of this ordinance, shall be deemed to be any person, other than a regularly registered and licensed physician, who makes a business of taking superintending care of cases of delivery of women with child; or who, for pay or reward, shall take superintending care in any case or cases of childbirth.

SEC. 2. No person, other than a regularly registered and licensed physician, shall in this city, act as a midwife or take superintending care of any case of childbirth, for pay or reward, who is not registered and licensed as a midwife pursuant to this ordinance.

SEC. 3. Any person who has attained the age of 21 years, who is able to read and write in the English language, is of good moral character and of cleanly habits, who desires to be registered and licensed as a midwife, shall make written application therefor to the health officer; which application shall state the applicant's name, age, residence, principal occupation, and training and experience in midwifery.

SEC. 4. If on examination of such applicant as to her qualifications, knowledge of obstetrics and gynecology, experience as a midwife, familiarity with the rules and regulations prescribed for governing the practice of midwives in this city, and such other investigation as he may deem necessary, the health officer be satisfied that such applicant is qualified to practice midwifery, he shall so certify in writing to the city clerk; whereupon said clerk, upon payment by the applicant to the city treasurer of a license fee of 50 cents, shall enter the name of such applicant and date of such entry in a register to be kept for that purpose, and shall issue to such applicant a license as a midwife for the period of one year, to which license there shall be securely affixed a copy of all rules and regulations then in force governing the practice of midwives in this city.

SEC. 5. Such rules and regulations governing the practice of midwives in this city as may from time to time be prescribed by the board of health, or by the health officer with the approval of the department of public health and safety, shall be kept on file in the offices of the city clerk and health officer.

SEC. 6. Every midwife shall strictly observe each and every requirement of any and all rules and regulations governing the practice of midwives in this city prescribed by the board of health, or prescribed by the health officer with the approval of the head of the department of public health and safety.

SEC. 7. For any cause deemed sufficient, any such license may be suspended or revoked by the board of health, the city commission, or the department of public health and safety.

SEC. 8. Any violation of this ordinance shall be punished by a fine of not less than \$5, nor exceeding \$50, or by imprisonment in the city lockup or county jail for a period not exceeding 90 days, or both such fine and imprisonment in the discretion of the court before whom a conviction is had.

Midwifery—Regulation of Practice of. (Reg. Bd. of H., Oct. 18, 1915.)

1. Each midwife shall maintain a fixed place of residence, which shall be known to the health officer.

2. Any midwife changing her name or address must report such change at once to the health officer.

3. She shall file all certificates of birth with the city clerk within five days after date of birth, as is required by the State law.

4. She shall also keep a record of every case attended by her, which record shall show each patient's name, address, time of labor, the general condition of the mother

and of the child before and after delivery, and any noteworthy incident to the labor or puerperium. In addition, she shall receive and preserve a copy of these rules, which she shall carefully follow.

5. The home of the midwife, her equipment, and record of cases, shall at all times be open to inspection by the authorized officers or agents of the board of health.

6. The midwife must constantly show evidences of cleanliness in her home, in her general appearance, and in her habits. In her attendance on a case of labor she must be scrupulously clean in every way. She should wear a clean dress of washable material, and over this a clean washable apron. The sleeves of the dress should be such that they can be rolled up above the elbows.

7. She shall take to each case the following equipment:

Nailbrush; wood or bone nail cleaner; soap, preferably green soap; clinical thermometer; blunt scissors for cutting cord; lysol, or creolin, carbolic acid, bichloride of mercury tablets; boric-acid powder; 2 per cent solution of silver nitrate; medicine dropper; narrow tape or soft twine for tying cord; absorbent cotton, preferably in $\frac{1}{4}$ -pound packages.

She may take, also, the following articles:

Enema reservoir and tubing; two rectal nozzles, large and small; tube of vaseline; alcohol.

No other instruments are to be used, owned, or possessed by a midwife.

8. The equipment should be carried either in a metal case that can be easily boiled or in a bag fitted with an inner lining of washable material that can be easily removed and washed and boiled.

9. At every case, before using the nailbrush, nail cleaner, scissors, or tape, they must be boiled for five minutes; when the labor is terminated, they should be washed with soap and boiled before replacing them in the bag or case.

10. Before examining a woman in labor the midwife must roll her sleeves above the elbows and scrub the hands and forearms in warm water with the nailbrush and soap for at least five minutes; during this washing the skin under and around the nails must be cleaned with the nail cleaner.

11. The woman's external genitals, skin over the lower part of the abdomen and the inner sides of the thighs must then be washed with soap and water, and afterwards sponged with absorbent cotton, soaked in either:

Solution of lysol or creolin, 1 per cent; solution of carbolic acid, 1 per cent; solution of bichloride of mercury, 1-10,000.

Note.—To make a 1 per cent solution, take three teaspoonfuls of either lysol, creolin; or carbolic acid, and add one quart of warm water. Directions for bichloride solution are found on the bottle containing the tablets.

A pad of cotton wet with the solution should be left over the vulva. No vaginal douche shall be given at any time without the order of a physician.

12. The hands of the midwife must then be scrubbed with the nail brush in the antiseptic solution before making an internal examination. Before every subsequent internal examination the midwife must wash and scrub her hands with soap and warm water and afterwards in the antiseptic solution, and the woman's external genitals must be washed with the antiseptic solution. As few vaginal examinations as possible should be made.

13. It is the duty of any physician, nurse, or midwife who shall assist or be in charge at the birth of any infant, or have care of the same after birth, to treat the eyes of the infant as soon as practicable after birth, and always within one hour, with silver nitrate. One drop of 2 per cent silver nitrate solution is to be instilled in each eye, after which they are to be washed with physiological salt solution or boric-acid solution. If any redness, swelling, or gathering of pus shall appear in the eyes of any infant, or upon the lids or about the eyes within two weeks after birth, then any nurse, midwife, or other person having care of the infant shall report the same within six hours to the board of health.

14. In caring for a woman after labor and throughout the lying-in period, the midwife must exercise the same care in washing her hands when dressing the patient as is called for in rule 12.

15. In every case after labor the temperature must be taken morning and night for five days. If, during this time, or at any later period of the lying-in, the temperature reaches or exceeds 101° F., and continues at this for 24 hours, the case must be reported to the board of health. The midwife must not go from such a case to other cases until she has made an entire change of clothing, thoroughly washed her arms, hands, face, and hair with soap and warm water, and washed and boiled her instruments.

16. A midwife may attend only cases of labor in which there is an uncomplicated vertex (head) presentation. In all other cases she must call a physician.

17. If during pregnancy any of the following conditions develop, or are suspected, the midwife shall not engage to attend the case, but must refer it to a physician:

(a) A contracted pelvis or other deformity that will interfere with labor; (b) bleeding from the uterus; (c) swelling of the face and hands; (d) excessive vomiting; (e) persistent headache; (f) dimness of vision; (g) convulsions.

18. If during labor any of the following conditions exist or develop a physician must be summoned at once:

(a) Presenting part is other than an uncomplicated vertex, such as face, breech, leg, arm, etc.; (b) convulsions; (c) excessive bleeding; (d) prolapse of the cord; (e) swelling or tumor that obstructs the birth of the child; (f) signs of exhaustion or collapse; (g) unduly prolonged labor.

19. Under no circumstances shall a midwife introduce her hand into the vagina or uterus to remove either the placenta or membranes. If, after an hour from the birth of the child, the mother being in otherwise good condition, the afterbirth (placenta and membranes) are not expelled or can not be expressed by manipulation of the uterus through the abdominal wall, a physician must be called to extract them.

20. If after the birth of the child the mother develops convulsions, or has excessive bleeding, or has been lacerated, a physician must be called in attendance.

21. If during the lying-in period any of the following conditions develop, a physician must be summoned:

(a) Convulsions; (b) excessive bleeding; (c) foul-smelling lochia (discharge); (d) persistent rise of temperature to 101° F. for 24 hours; (e) severe chill with rise of temperature; (f) retention of urine; (g) inability to nurse the child.

22. Every child should be thoroughly examined after birth; and if the child has or develops any of the following conditions, a physician must be summoned:

(a) Deformities, malformations, or injuries; (b) inability to suckle or nurse; (c) inflammation around or discharge from the navel; (d) swelling and redness of the eyelids, with a discharge of matter from the eyes; (e) bleeding from the mouth, navel, or bowels.

MIDDLETOWN, CONN.

Foodstuffs—Protection of. (Ord. July 12, 1915.)

SECTION 1. No person, firm, or corporation shall expose for sale in or upon any street, sidewalk, doorway, alley, open window, or any other public or private place in the open air adjacent to any street, sidewalk, or alley within the limits of the city of Middletown any fruit, vegetable, confectionery, meat, poultry, fish, or any other article of food, except such as are contained in dust-proof containers, or such fruit or vegetables as have a natural covering that requires to be removed before eating, or in the use of which for food cooking is necessary unless such articles of food shall be reasonably protected from dust, filth, and other infectious substances, and from flies, by proper covering and in a proper manner so as to reasonably prevent pollution and contamination from such sources, nor unless the same, when so exposed for sale,

shall be placed at least 18 inches above the sidewalk, floor, or ground upon which they are so exposed.

SEC. 2. Every person who peddles meats or fish from a cart, wagon, or other vehicle in the city of Middletown shall keep in such vehicle a proper receptacle for all refuse or waste, in which he shall place and keep such refuse or waste until he shall properly dispose of the same in such a manner as not to cause a nuisance.

SEC. 3. Every manager, owner, or other person in control of any store, market, bakery, or other place where articles of food are prepared, stored, or offered for sale shall cause such store, market, bakery, or other place to be screened, and shall, as far as reasonably possible, prevent flies and other insects from obtaining access to such articles of food, and shall not permit articles of food which are of such nature that they may be defiled or polluted by handling to be exposed for sale in such manner that they may be handled by prospective purchasers or others by whom such handling is not necessary.

SEC. 4. Every person who violates any of the provisions of the next preceding three sections of these ordinances shall pay a fine not exceeding \$100 for each offense.

SEC. 5. It shall be the duty of the health officer to frequently inspect all markets, stores, warehouses, restaurants, bakeries, and vehicles and other places wherein food-stuffs are prepared, stored, or exposed for sale in the city and to report violations of the above next preceding four sections of these ordinances to the prosecuting attorney for prosecution.

MINNEAPOLIS, MINN.

Children—Reception in and Transfer to Homes and Hospitals—Report Required to be Made to Department of Health. (Ord. Aug. 19, 1915.)

SECTION 1. No person shall, for the purposes of adoption or for keeping or care of any child under 8 years of age receive, transfer, or cause to be transferred, any such child from one home or hospital to another home or hospital in the city of Minneapolis or from one home or hospital in the city of Minneapolis to another home or hospital outside the city without furnishing to the department of health of the city a report in writing of such transfer or receipt. A record of every such transfer shall be made and kept by the department of health of the city in a proper book kept for that purpose. Such report shall give the name, age, and parentage of each child so received or transferred and the name of the person or institution receiving the child, together with the address or location of such, respectively. Such blanks shall be furnished and distributed to all persons receiving a hospital license in the city of Minneapolis.

SEC. 2. Any person who shall violate any of the provisions of this ordinance shall, upon conviction thereof before the municipal court of the city of Minneapolis, be punished by a fine not exceeding \$100 or by imprisonment not exceeding 90 days.

MONROE, LA.

Privies—Cleaning and Disinfection. (Ord. 2052, Sept. 8, 1915.)

SECTION 1. That the cleaning of closets or privies within the corporate limits of the city of Monroe shall be done exclusively by or under the control and supervision of the city or sanitary contractor of the city, and it shall be unlawful for any private person to do said work: *Provided*, That a family may remove the night soil from the privy or closet by removing the same beyond and out of the corporate limits of the city.

SEC. 2. That the said closets or privies shall be properly cleaned and disinfected by the said sanitary department of the city, or sanitary contractor, and the excrements from said closets and privies shall be removed in sealed barrels or other covered receptacles by said department or individuals, and deposited or disposed of at such place and manner as may be dictated by the sanitary committees and approved by the board of health and mayor and city council.

SEC. 3. That the following charge shall be made of the owner or occupant of each premises wherein a closet may be used or in use, which charge shall cover the expense of said department for such work, to wit: For cleaning each closet or privy, for private family, not to exceed 75 cents a quarter in advance; and for cleaning each closet for a hotel or business house, not exceeding \$1.50 a quarter in advance. The fee or charge set out in this section shall be paid to the sanitary department of the city, at the city hall, at the beginning of each quarter, in advance.

SEC. 4. That the closets or privies of each private family shall be cleaned and disinfected not less than once a week from April 1 to December 1, each year; and every two weeks from December 1 to April 1, the same being required of hotels and business houses.

SEC. 5. That any person or persons exercising the privilege of maintaining said closets or privies who shall refuse to pay the fees or charges hereinbefore provided for, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than \$1 and not more than \$10, and in default of the payment of the fine and costs shall be imprisoned for not less than 1 day nor more than 10 days.

NASHUA, N. H.

Garbage—Care and Collection—Receptacles. (Reg. Bd. of H., May 11, 1915.)

CHAPTER I. SECTION 1. All persons keeping or offering garbage for collection shall provide a water-tight receptacle with proper handles and a tight-fitting cover to hold not less than 5 gallons, or other suitable and sanitary receptacle, for the storage of, and shall keep therein, said garbage. Such receptacles shall be so placed that at all times they may be easily accessible to garbage collectors for the removal of the garbage therein; and nothing except garbage shall be placed in said receptacles.

SEC. 2. Garbage as used in this rule shall be held to include all kitchen and table refuse, swill, offal, and every accumulation of animal and vegetable matter that attends the preparation, decay, dealing in, or storage of meats, fruits, fish, fowl, game, or vegetables.

SEC. 3. No person except an officer or employee of the board of health, or garbage contractor, or person licensed by the board of health, shall act as a collector of garbage or move the same through any street or alley, or other public place or way in said Nashua.

SEC. 4. There shall be one garbage collector who shall be under contract to collect and dispose of all garbage in the city of Nashua, the collection and disposal of which is not otherwise provided for, in accordance with such specifications and on such terms, as shall be approved by the board of health. Said garbage contractor shall furnish a bond to the city of Nashua in the sum of not less than \$1,000 with such sureties as shall be provided by the board of health, conditioned for the faithful performance of his said contract, for his compliance with the ordinances of the city and the rules and regulations of the board of health in relation to the collection and disposition of garbage.

SEC. 5. The board of health may also grant to any other suitable person who applies therefor, a license or permit to collect garbage within the city of Nashua until the first day of June next following, and may renew the same annually in the month of May upon application therefor. Said license or permit shall contain a condition that the licensee shall use a proper sanitary equipment for the collection of garbage and shall collect and dispose of the same in a sanitary way, and shall comply with all the rules and regulations established by the board of health and the ordinances of the city of Nashua, in relation thereto.

SEC. 6. Every person licensed as aforesaid shall cause his name and the words "garbage collector" and the number of his license to be placed in a conspicuous position on the outer side of all carriages and vehicles used in his said business; and no garbage shall be collected and conveyed therein by any person so licensed through any street

or other public place or way in the city of Nashua except between the hours of 7 o'clock in the morning and 8 o'clock in the evening.

SEC. 7. Any person who shall collect or dispose of garbage and move the same through any street, alley, or other public place or way in said Nashua, without a license as aforesaid, not being a garbage contractor, or shall violate the conditions of his license or any of the provisions of this chapter, shall be deemed guilty of a misdemeanor and shall be fined for each offense not less than \$1 and not more than \$10.

NEW BEDFORD, MASS.

Tenements and Lodging Houses—Regulation of. (Chap. 234, Special Act Massachusetts Legislature, Mar. 29, 1915.)

SECTION 1. Section 1 of chapter 212 of the acts of the year 1913 is hereby amended by inserting after the word "Lawrence," in the first line, the words, "and in the city of New Bedford," so as to read as follows:

"SECTION 1. The board of health in the city of Lawrence, and in the city of New Bedford, may by a vote limit the number of occupants in any tenement or lodging house, or in any part or parts of the same, and shall in such case cause a notice stating such number to be posted conspicuously in such building and served upon the owner, agent, or person having charge thereof. If the number is exceeded, the board may order the premises vacated, and they shall not again be occupied until said board shall so permit, upon being satisfied that the vote will be complied with. Said board may make such further regulations as to overcrowding, ventilation, and occupation of such houses and the cellars thereof, not inconsistent with other laws, as it may deem proper."

SEC. 2. Section 2 of said chapter 212 is hereby amended by inserting after the word "Lawrence," in the second and third lines, the words, "or in the city of New Bedford," so as to read as follows:

"SEC. 2. Every owner or agent or person having charge of a tenement or lodging house in the city of Lawrence, or in the city of New Bedford, shall leave his address with the board of health, and shall have legibly posted on the wall or in the entry of such tenement or lodging house the name and address of such owner and of the agent or person having charge of the same, and service upon parties whose address is out of the city, of any papers or notices required by this act, or any act relating to the preservation of health, or by any proceedings to enforce any provision of any such act, shall be sufficient if made by sending a copy of such paper or notice through the mail to the address of the person so designated as owner, agent, or person having charge of such tenement or lodging house; and service on parties whose address is in the city may be made by leaving the copy at such address."

SEC. 3. Section 3 of said chapter 212 is hereby amended by inserting after the word "Lawrence," in the second line, the words, "or in the city of New Bedford," so as to read as follows:

"SEC. 3. Every officer of the board of health in the city of Lawrence, or in the city of New Bedford, and every officer upon whom any duty or authority is imposed or conferred, may have free access to every part of any lodging or tenement house in the proper execution of the duties of his office."

Garbage—Collection and Transportation. (Reg. Bd. of H., Sept. 22, 1915.)

SECTION 1. No swill, offal, or garbage shall be collected in or transported through the streets of New Bedford except in water-tight wagons or carts provided with tight-fitting wooden or metal covers approved by the board of health.

SEC. 2. The covers on wagons or carts used in the collection and transportation of swill, offal, or garbage in New Bedford shall be kept shut at all times except when it is absolutely necessary for the proper performance of the work of collection to open them.