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## **THE PRESENT STATUS OF OUR KNOWLEDGE OF FATIGUE PRODUCTS.<sup>1</sup>**

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In 1865 Johannes Ranke (1), then lecturer in the Physiological Institute at Munich, published a book of nearly 500 pages in which he gave the results which he had obtained from his studies on the physiology of muscle. In many ways this book has never been superseded. Among other things he here developed the idea of fatigue substances. At that time Ranke brought out the fact that fatigue is due, at least to a great extent, to something which arises within the organ rather than to the absence of anything used up by the process of muscular contraction. That is, fatigue is to be explained on the basis of a full ash pit rather than an empty coal bin. His principal evidence consisted of the fact that when a fatigued muscle was irrigated with an indifferent fluid, as salt solution, it resumed its power of contraction. Now, it was argued, since the irrigating fluid could not have supplied anything necessary to the muscle, it must have removed something detrimental to it. The substances supposed to have been removed are the fatigue substances.

Obviously, the next point is their isolation and identification. Their identification has been attempted both by chemical comparison of fatigued material with resting material and by the injection into the nonfatigued preparation of substances which are suspected of being fatigue substances. Though the results so far at hand are somewhat disappointing, we have some definite data upon which to base our conclusions.

One of Ranke's experiments consisted in treating a muscle with lactic acid, and by this treatment he obtained fatigue phenomena. Lactic acid was therefore placed in the list of fatigue substances, and has been maintained there. So far as lactic acid is concerned we have progressed considerably beyond the point where Ranke left us.

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<sup>1</sup> Read before the Section on Industrial Hygiene of the American Public Health Association, Washington, D. C., Oct. 19, 1917.

About 10 years ago Fletcher and Hopkins (2) published a very important paper on the origin of lactic acid in muscle. Though there are some rather discouraging difficulties in the analytical technic which have never been satisfactorily removed, the work reported by these authors leaves no doubt that there is an accumulation of lactic acid or of its salts in excised muscle during fatigue. They further show that the accumulation of lactic acid results from an insufficient supply of oxygen, and that an abundant supply of oxygen prevents the accumulation of the lactic acid or causes its removal in case it has already accumulated. Fletcher and Hopkins have summarized their work in a recent Croonian Lecture (3). At about the time of the appearance of the first paper by Fletcher and Hopkins two articles appeared by Lee (4, 5), in which he gives a very convincing series of tracings obtained from muscles which had been irrigated with solutions containing lactic acid or its salts. These tracings show not only that the onset of fatigue is hastened and that its results are intensified by the presence of lactic acid, but that the familiar phenomenon of *treppe*, which up to that time had been without satisfactory explanation, was caused by the same substance. Thus *treppe*, or the augmentation of the contractions which occurs in the early stages of a series, is due to the same material which later causes exhaustion. In a sense it may be considered as the first indication of fatigue. Lee calls attention to the apparent conflict between this fact and the general biological law that metabolic products are harmful to the protoplasm in which they are formed. This conflict is apparent rather than real, for we are in all probability dealing with at least two phenomena, the rate of activity of one of which may be reduced while that of the other may at the same time be augmented. One of these phenomena is the production of lactic acid; another is the effect of this acid, or possibly more accurately of its hydrogen ion, upon the contractile mechanism. The law, in all probability, is, in part, a special application of the more general chemical law of mass action, and if sufficiently accurate methods were at hand it could probably be demonstrated that the rate of formation of the acid is progressively decreased during activity. This is, however, quite apart from the effect of the acid upon the muscle fibers. The activity of these may be augmented or depressed according to the concentration of the acid.

Some years after the articles by Lee appeared, Burrige (6) published the results of a similar set of experiments. While the experiments of Burrige differed somewhat in detail from those of Lee the essential principles involved were the same and the results of the two experimenters agreed. In addition to lactic acid both authors perfused muscle with salts of lactic acid; notably with the lactates of sodium, potassium, and ammonium. Lee found that the salts

produced effects similar to those produced by the acid, though perhaps in a somewhat less marked degree, and concluded that both the positive and negative ions were functional in producing fatigue. Burridge worked with the advantage of the beautiful work of Mines (7) before him. A comparison of his results with those of Mines led him to believe that the effects were wholly those of the positive ions. This phase of the problem is distinctly in need of more work.

Since the hydrogen ion seems to be of much importance, one would expect other metabolic products which increase the concentration of this ion to be effective producers of fatigue. In line with this idea, Lee gives records, obtained after treatment of the muscles with carbon dioxide or with potassium dihydrogen phosphate, which show results very similar to those obtained after treatment with lactic acid.

The question of the effect of the negative ion of acids other than lactic arises at this time. Other organic acids may be eliminated in a group from further discussion by the simple statement that normally they are present in very small amounts, if present at all, and that not enough is known concerning them to warrant any discussion at this time. Lee (19) does, however, find that when muscles are perfused with  $\beta$  oxy-butyric acid and its salts, results are obtained which are similar to those given by lactic acid. A study of the effect of the acids derived from glucose and of the fatty acids in their relation to fatigue would be highly interesting and might throw some valuable light on the course of events in intermediate metabolism.

Among the inorganic acids it may be said that no chlorine ion is formed during fatigue because all the chlorine of the body is, so far as we know, present only in the ionic form. There is, however, some modification in the chlorine metabolism. Thus Tissie (8) found in a 24-hour bicycle race by a professional cyclist that the urinary chlorine output was slightly below normal on the day of work and markedly so on the following day. Harper and Holliday (9) also noted the same reduction in chloride output. This is, however, closely bound up with the chlorine excreted in the perspiration, as shown by Viale (10), who measured the chlorine output per square centimeter of skin area as taken on the foreheads of marching soldiers. He found that the perspiration averaged 0.85 per cent chlorine, but that while the rate of water excretion diminished with the progress of the march that of chlorine increased. So far as I know, there are no figures showing whether or not there is a change of the chlorine relationships in any organ of the body during fatigue. I do not think we are warranted at present in believing that hydrochloric acid or any of its salts stands in any causal relation to fatigue.

Of the other inorganic acids the increased concentration of carbon dioxide is best substantiated. That the concentration of this acid is of great importance is made evident by the very abundant literature on the subject. However, I am not clear as to what extent this substance is effective apart from its rôle as a modifier of hydrogen ion concentration.

Tissié on his bicyclist and Garratt on himself, as a bicyclist, both observed an increase in the output of phosphates and sulphates in the urine after work. Their experiments were conducted under more or less severe conditions, but I think I am warranted in saying that a man doing ordinary work to which he is daily accustomed secretes somewhat more sulphate at night than he does in the morning. The sulphur, it seems to me, is derived from broken-down protein and may be related to the fact noted by Lee, Scott, and Colvin (11) that muscles capable of doing more severe work contain more protein sulphur. The phosphorous output is thought by most observers to represent a disintegration of the nucleins. Dunlop (16) and co-authors find that the increased phosphorous excretion takes place only in untrained men, though one would hardly expect Tissié's professional bicyclist to be an untrained man. Here, again, very little is known as to whether phosphoric and sulphuric acids have any effect except that of their hydrogen ion or that resulting from the sweeping of alkalies and alkaline earths from the body.

Many organic extractives have been named as fatigue substances, but the claims for very few, if indeed any, bear careful analysis. One of the earliest of these to be proposed was creatin. This was one of the original list proposed by Ranke, though later he failed to confirm his earlier experiments, and consequently it does not appear in his later lists. Folin's colorometric method for creatinine gave a great impulse to the study of creatin and creatinine and has resulted in a very extensive bibliography on this subject. Among these papers there are several having to do with creatinine or creatin after fatigue. These papers, however, taken as a whole, only add to the confusion, for while Scaffidi (12) and some others report no change in the amount of either creatin or creatinine, Gregor (13) reports a decreased urinary output, while Oddi and Tarulli (14) and others report increases in the amount present in either the muscle or urine after fatigue. Work in our own laboratory indicates clearly that the amount of creatin or of creatinine in muscle is independent of the work done, and this whether the muscle is worked in situ or whether it is excised.

The evidence in regard to uric acid is also more or less conflicting. Judging from what has been said as to the increased output of phosphoric acid and the supposed origin of this acid from the nucleins, one would expect some additional evidence of nuclein metabolism. An increased output of uric acid would be the most probable change.

Tissières found in the urine of his cyclist on the day of the race about double the amount of uric acid that Folin (15) gives as the average of his 30 normal urines, while on the following day there was a still greater rise. Garratt, again using himself as subject, finds that a slight increase is usual after work, but that in one case, when out of training, the increase was more marked. Dunlop (16) and coauthors think there is no rise when the subject is in training, but otherwise there is an increased excretion of uric acid. They interpret the rise to mean a destruction of protein outside the muscles and suggest that it may be due to a mobilization of the protein of the more inactive portions of the body somewhat akin to the mobilization which takes place during starvation. In their interpretation Garratt agrees with them. Bearing on purine metabolism, attention should be called to the work in which Scaffidi (17) showed that there was no accumulation of uric acid in excised muscles which had been exhausted by fatigue, though there was a loss of fixed purine base. This hardly bears out Dunlop's contention, but on the other hand indicates that the source of the uric acid is the working muscle itself and that perhaps the trained muscle differs from the untrained in its power of breaking up the uric acid, or in the path taken in the disintegration of the purine.

Of course there are numerous other disintegration products which might be expected to arise, as by-products of the working muscle, but evidence that such exist or that they have any bearing on fatigue is even poorer than is that for creatin and uric acid. There is even some question as to whether any protein is destroyed during muscular activity. However, in spite of the fact that according to Luciani (18) Succì excreted no more nitrogen on the twelfth day of his fast when he took exercise than on the eleventh, which he spent in bed, and in spite of the fact that Benedict and Cathcart's (20) experiments indicate no change of urinary nitrogen during work, I feel warranted in believing that there is a definite, though perhaps limited, increased nitrogen output resulting from increased muscular work. Tissières, again working on the urine of his bicycle rider, reports a normal nitrogen excretion on the day of the race, while on the following day there was an increase of 85 per cent. Garratt agrees with Tissières in finding no increase during the actual work period, and finds a distinct rise beginning at once after the cessation of work and reaching a maximum some 12 hours later. The excretion did not return to normal for some 30 hours after the work had ceased. This rise followed a different curve from that which followed the taking of food and in addition it occurred during the abstinence from food. Again, Frentzel (21) gives similar results following work done by fasting dogs.

The destruction of protein suggests the possibility that certain of the protein disintegration products may have some bearing upon

fatigue. Lee (19) has performed perfusion experiments with indol, skatol, methyl mercaptan, and phenol. In every case he obtained results similar to those obtained with lactic acid or carbon dioxide. These effects were noted in some cases with very small concentrations. There is a general idea extant that the fatigued organism works to less advantage in many ways than does the nonfatigued organism. Normally, the toxic property of such substances as those named is reduced or destroyed by the union of the toxic body with an acid, as sulphuric or gluceronic acid. We are now conducting a series of experiments in the Public Health Service by means of which we hope to show not only whether the output of these bodies is increased during the work day, but also whether the organism can as effectually de-toxify them after as it can before a period of work.

If the destruction of protein is granted, one might expect specific protein toxins which could truthfully be called fatigue toxins, which would be comparable to the bacterial toxins. Such Weichardt (22) claimed to have found and named "kinitoxin." This he originally prepared from the muscle of fatigued animals and when it was injected into the blood streams of normal animals it was reported to produce the phenomena of fatigue. Weichardt himself soon abandoned his original line of research and became interested in some bizarre experiments which apparently led to nothing of present interest. Other workers have found it difficult or impossible to repeat his work, and finally Korff-Peterson (23) and Lee and Aronovitch (24) conclude definitely that no such bodies result in the course of normal fatigue.

To summarize, we may conclude that—

1. Substances carrying hydrogen ions, as lactic,  $\beta$  oxy-butyric acids, potassium, dihydrogen phosphate and carbon dioxide, stand as causal agents of fatigue.
2. Certain products of protein disintegration, as indol, skatol and phenol may produce fatigue symptoms and may be active agents in producing normal fatigue.
3. There is some evidence that the negative ion of lactic and  $\beta$  oxy-butyric acids and that certain positive ions, especially that of potassium, are capable of producing certain fatigue phenomena.
4. There is no evidence that the negative ions of carbonic, phosphoric or sulphuric acids are fatigue substances.
5. There is no evidence at present for the existence of specific fatigue substances as proposed by Weichardt.
6. There is very little probability that creatin or creatinine have any relation to fatigue or to muscle work in general.
7. There are no doubt numerous bodies, as purine bases, uric acid, etc., which may be increased by work, but which have no causal bearing on fatigue.

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Additional literature will be found in the article on fatigue by Ioteyko in *Richet's Dictionaire de Physiologie*, Vol. 6, 1904.

## 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.**

**EXTRA-CANTONMENT ZONES—CASES REPORTED WEEK ENDED APR. 23.**

CAMP BEAUREGARD ZONE, LA.		CAMP DONIPHAN ZONE, OKLA.	
Alexandria:	Cases.	Faxon:	Cases.
Cerebrospinal meningitis.....	1	Smallpox.....	15
Diphtheria.....	2	Lawton:	
Gonorrhea.....	3	Diphtheria.....	1
Mumps.....	11	German measles.....	1
Pneumonia.....	2	Gonorrhea.....	2
Whooping cough.....	6	Smallpox.....	16
Pineville:			
Mumps.....	2	CAMP EBERTS ZONE, ARK.	
Typhoid fever.....	1	Cerebrospinal meningitis:	
		Scotts, route 2.....	1
CAMP BOWIE ZONE, TEX.		Dysentery:	
Fort Worth:		England.....	1
Herpes genitalis.....	1	Carlisle.....	1
Pneumonia.....	1	Erysipelas:	
Scabies.....	1	Ward.....	1
Syphilis.....	2	Gonorrhoea:	
Typhoid fever.....	2	Austin.....	2
		Scotts.....	3
CAMP DEVENS ZONE, MASS.		Scotts, route 1.....	8
Chicken pox:		Malaria:	
Lunenburg.....	1	England.....	6
German measles:		England, route 1.....	1
Ayer.....	1	England, route 2.....	1
Lunenburg.....	2	England, route 3.....	1
Measles:		Lonoke.....	1
Ayer.....	1	Austin, route 2.....	1
		Plum Bayou.....	3
CAMP DODGE ZONE, IOWA.		Scotts, route 2.....	1
Des Moines:		Measles:	
Chancroid.....	1	England.....	4
Diphtheria.....	7	England, route 1.....	1
Gonorrhoea.....	19	England, route 2.....	5
Measles.....	3	Lonoke, route 3.....	6
Scarlet fever.....	26	Eberts Field.....	1
Smallpox.....	23	Mumps:	
Syphilis.....	17	England.....	2
Oralabor:		England, route 1.....	1
Typhoid fever.....	1	Lonoke.....	2

## CAMP EBERTS ZONE, ARK.—continued.

Mumps—Continued.	Cases.
Eberts Field .....	1
Cabot .....	1
Ward .....	1
Ophthalmia neonatorum:	
England .....	1
Pellagra:	
England .....	2
Pneumonia:	
Cabot .....	1
Septic sore throat:	
England, route 2 .....	1
Smallpox:	
England .....	1
England, route 2 .....	4
England, route 3 .....	1
Lonoke .....	1
Plum Bayou .....	1
Syphilis:	
Scotts .....	3
Scotts, route 1 .....	4
Tonsillitis:	
Cabot .....	1
Tuberculosis:	
England, route 1 .....	1
England, route 3 .....	2
Lonoke .....	1
Carlisle .....	1
Pettus .....	1
Kerr, route 1 .....	1
Scotts, route 1 .....	4
Whooping cough:	
England, route 4 .....	1
Plum Bayou .....	1

## CAMP FUNSTON ZONE, KANS.

Chicken pox:	
Manhattan .....	2
Measles:	
Cleburne .....	2
Manhattan .....	5
Stockdale .....	1
Mumps:	
Junction City .....	4
Manhattan .....	8
Scarlet fever:	
Manhattan .....	1
Whooping cough:	
Junction City .....	3

## CAMP GORDON ZONE, GA.

Cerebrospinal meningitis:	
Atlanta .....	4
Diphtheria:	
Atlanta .....	1
Doraville .....	1
Malaria:	
Atlanta .....	2
Measles:	
Atlanta .....	7
Decatur .....	3
Mumps:	
Atlanta .....	11
Chamblee .....	1
Decatur .....	3
Ingle side .....	2

## CAMP GORDON ZONE, GA.—continued.

Pneumonia:	Cases.
Atlanta .....	5
Kirkwood .....	1
Scottdale .....	1
Stone Mountain .....	1
Scarlet fever:	
Atlanta .....	3
East Point .....	1
Septic sore throat:	
Atlanta .....	2
Smallpox:	
Atlanta .....	3
Clarkston .....	1
Tuberculosis:	
Atlanta .....	3
Scottdale .....	2
Typhoid fever:	
Atlanta .....	2
Decatur .....	1

## CAMP GREENE ZONE, N. C.

Charlotte Township:	
German measles .....	2
Gonorrhea .....	19
Malaria .....	2
Measles .....	10
Mumps .....	1
Scarlet fever .....	3
Smallpox .....	1
Syphilis .....	18
Tuberculosis .....	6
Typhoid fever .....	1

## GULFPORT HEALTH DISTRICT, MISS.

Gulfport Health District:	
Chicken pox .....	1
Gonorrhea .....	1
Malaria .....	1
Measles .....	4
Mumps .....	2
Whooping cough .....	1

## CAMP HANCOCK ZONE, GA.

Augusta:	
Chicken pox .....	1
German measles .....	1
Measles .....	16
Pneumonia, lobar .....	1
Tuberculosis, pulmonary .....	3
Whooping cough .....	5

## CAMP JACKSON ZONE, S. C.

Columbia:	
Measles .....	3
Mumps .....	17
Pellagra .....	1
Whooping cough .....	6

## CAMP JOSEPH E. JOHNSTON ZONE, FLA.

Chicken pox:	
Jacksonville .....	4
Diphtheria:	
Jacksonville .....	1
Dysentery:	
Jacksonville .....	15

## CAMP JOSEPH E. JOHNSTON ZONE, FLA.—continued.

Gonorrhea:	Cases.
Jacksonville.....	2
Mandarin.....	1
Malaria:	
Eastport.....	4
Jacksonville.....	1
Mandarin.....	1
Moncrief.....	1
Measles:	
Fishers Corner.....	1
Jacksonville.....	8
Mumps:	
Jacksonville.....	14
Pellagra:	
Jacksonville.....	1
Pneumonia:	
Eastport.....	1
Jacksonville.....	6
Syphilis:	
Dinsmore.....	1
Jacksonville.....	2
Trachoma:	
Jacksonville.....	1
Tuberculosis:	
Jacksonville.....	7
South Jacksonville.....	1
Whooping cough:	
Jacksonville.....	20
Ortega.....	2

## FORT LEAVENWORTH ZONE, KANS.

Leavenworth:	
Measles.....	33
Pneumonia, lobar.....	2
Scarlet fever.....	1
Smallpox.....	1
Typhoid fever.....	1
Leavenworth County:	
Measles.....	16
Scarlet fever.....	3
Whooping cough.....	4

## CAMP LEE ZONE, VA.

Chicken pox:	
Chesterfield County.....	2
Prince George County.....	1
German measles:	
Ettricks.....	4
Petersburg.....	3
Prince George County.....	3
Gonorrhea:	
Hopewell.....	1
Petersburg.....	1
Prince George County.....	1
Malaria:	
Ettricks.....	1
Petersburg.....	1
Measles:	
Ettricks.....	1
Hopewell.....	5
Petersburg.....	1
Prince George County.....	2
Mumps:	
Ettricks.....	2
Hopewell.....	5
Petersburg.....	4
Prince George County.....	1

## CAMP LEE ZONE, VA.—continued.

Pneumonia:	Cases.
Ettricks.....	1
Petersburg.....	1
Septic sore throat:	
Chesterfield County.....	1
Dinwiddie County.....	2
Petersburg.....	5
Prince George County.....	2
Tuberculosis:	
Ettricks.....	1
Whooping cough:	
Ettricks.....	1
Hopewell.....	3
Chesterfield County.....	1

## CAMP LEWIS ZONE, WASH.

Chicken pox:	
Parkland.....	4
German measles:	
Greendale.....	1
Oak Knoll.....	1
Parkland.....	3
Spanaway.....	6
Mumps:	
Du Pont.....	2
Flett Station.....	1
Roy.....	1
Spanaway.....	2
Tuberculosis, pulmonary:	
Du Pont.....	1
Whooping cough:	
American Lake.....	4
Parkland.....	3

## CAMP LOGAN ZONE, TEX.

Chancroid:	
Houston.....	1
Diphtheria:	
Houston.....	1
Dysentery:	
Moonshine Hill.....	3
German measles:	
Houston.....	1
Gonorrhea:	
Houston.....	25
Humble.....	1
Hulsmith.....	1
Westfield.....	1
Cottage Grove.....	1
Malaria:	
Houston.....	1
Measles:	
Houston.....	4
Louetta.....	5
Spring.....	1
Mumps:	
Houston.....	5
Pneumonia:	
Houston.....	6
Syphilis:	
Houston.....	29
Humble.....	1
Brooksmith.....	1
Brookshire.....	1
Goose Creek.....	1
Tuberculosis:	
Houston.....	1
Louetta.....	1

## CAMP LOGAN ZONE, TEX.—continued.

Typhoid fever:	Cases.
Houston.....	3
Whooping cough:	
Houston.....	4

## CAMP MACARTHUR ZONE, TEX.

Waco:	
Gonorrhea.....	1
Measles.....	6
Mumps.....	25
Pneumonia, lobar.....	1
Smallpox.....	6
Tuberculosis.....	1

## CAMP M'CLELLAN ZONE, ALA.

Chicken pox:	
Anniston.....	1
Diphtheria:	
Oxford.....	1
Measles:	
Anniston.....	1
Mumps:	
Anniston.....	1
Scarlet fever:	
Anniston.....	1
Smallpox:	
Anniston.....	8
Oxford.....	1
Precinct Four.....	1

## CAMP PIKE ZONE, ARK.

Cerebrospinal meningitis:	
Little Rock.....	1
Chancroid:	
Little Rock.....	1
North Little Rock.....	2
Chicken pox:	
Little Rock.....	2
Erysipelas:	
Little Rock.....	3
German measles:	
North Little Rock.....	1
Gonorrhea:	
Little Rock.....	18
North Little Rock.....	1
Scotts.....	7
Malaria:	
Little Rock.....	12
Measles:	
Little Rock.....	2
Mumps:	
Little Rock.....	6
North Little Rock.....	3
Pneumonia:	
Little Rock.....	3
North Little Rock.....	2
Scarlet fever:	
Little Rock.....	4
Smallpox:	
Little Rock.....	9
North Little Rock.....	4
Syphilis:	
Little Rock.....	3
Scotts.....	7

## CAMP PIKE ZONE, ARK.—continued.

Tuberculosis:	Cases.
Little Rock.....	10
Alzheimer.....	1
Typhoid fever:	
Little Rock.....	1
Whooping cough:	
Little Rock.....	1

## NORFOLK COUNTY NAVAL DISTRICT, VA.

Diphtheria:	
South Norfolk.....	1
Gonorrhea:	
South Norfolk.....	1
Malaria:	
Ocean View.....	3
Measles:	
Portsmouth.....	7
Ocean View.....	2
South Norfolk.....	1
Mumps:	
Ocean View.....	3
South Norfolk.....	2
Pneumonia:	
Portsmouth.....	2
Pinner's Point.....	1
Norfolk County.....	2
South Norfolk.....	2
Scarlet fever:	
Portsmouth.....	3
Tuberculosis:	
Oakwood.....	1
Portsmouth.....	1
Willoughby.....	1
Varicella:	
Ocean View.....	1

## FORT OGLETHORPE ZONE, GA.

Chicken pox:	
Chattanooga.....	2
German measles:	
Missionridge.....	1
Gonorrhea:	
Chattanooga.....	51
Measles:	
East Lake.....	1
Mumps:	
Chattanooga.....	1
East Chattanooga.....	1
Pneumonia:	
Chattanooga.....	2
Alton Park.....	1
Scarlet fever:	
Chattanooga.....	3
Smallpox:	
Chattanooga.....	2
Syphilis:	
Chattanooga.....	17
Churchville.....	1
Tuberculosis:	
Chattanooga.....	2
Whooping cough:	
Chattanooga.....	3

## CAMP SEVIER ZONE, S. C.

Cerebrospinal meningitis:	Cases.
Butler Township.....	1
Greenville, suburban.....	1
Measles:	
Judson Mills.....	2
Union Bleachery.....	9
Mumps:	
Union Bleachery.....	2
Pneumonia:	
Chick Springs Township.....	1
Typhoid fever:	
American Spinning Co.....	1

## CAMP SHELBY ZONE, MISS.

Hattiesburg:	
German measles.....	1
Malaria.....	30
Mumps.....	14
Pneumonia, lobar.....	1
Tuberculosis.....	1
Venereal.....	8
Whooping cough.....	10

## CAMP SHERIDAN ZONE, ALA.

Montgomery:	
German measles.....	1
Measles.....	9
Mumps.....	7
Ringworm.....	6
Smallpox.....	1
Tuberculosis.....	1

## CAMP SHERMAN ZONE, OHIO.

Gonorrhea:	
Chillicothe.....	1
Measles:	
Chillicothe.....	7
Green Township.....	1
Mumps:	
Chillicothe.....	3
Liberty Township.....	1
Pneumonia, lobar:	
Chillicothe.....	1
Scarlet fever:	
Chillicothe.....	5
Union Township.....	1
Scioto Township.....	1
Tuberculosis, pulmonary:	
Chillicothe.....	1
Typhoid fever:	
Chillicothe.....	1
Whooping cough:	
Chillicothe.....	1

## CAMP ZACHARY TAYLOR ZONE, KY.

Jefferson County:	
Measles.....	1
Pneumonia, lobar.....	1
Tuberculosis, pulmonary.....	1
Typhoid fever.....	1
Whooping cough.....	3

## CAMP ZACHARY TAYLOR ZONE, KY.—continued.

Louisville:	Cases.
Cerebrospinal meningitis.....	1
Chicken pox.....	2
Diphtheria.....	2
Malaria.....	1
Measles.....	14
Pneumonia, lobar.....	8
Scarlet fever.....	2
Smallpox.....	5
Rabies in animals.....	1
Tuberculosis, pulmonary.....	12
Typhoid fever.....	2
Whooping cough.....	5
U. S. Government clinic:	
Chancroid.....	5
Gonorrhea.....	22
Syphilis.....	39

## TIDEWATER HEALTH DISTRICT, VA.

Hampton:	
Measles.....	3
Mumps.....	1
Tuberculosis.....	2
Typhoid fever.....	1
Newport News:	
Cerebrospinal meningitis.....	2
Chicken pox.....	3
German measles.....	4
Measles.....	16
Mumps.....	18
Scarlet fever.....	3
Smallpox.....	2
Whooping cough.....	1
Phoenix:	
Scarlet fever.....	3

## CAMP TRAVIS ZONE, TEX.

San Antonio:	
Chancroid.....	2
Gonorrhea.....	55
Influenza.....	3
Measles.....	14
Mumps.....	9
Otitis media.....	1
Pellagra.....	1
Pneumonia.....	5
Syphilis.....	7
Tuberculosis.....	30
Typhoid fever.....	6

## CAMP WHEELER ZONE, GA.

Macon:	
Cerebrospinal meningitis.....	1
Chicken pox.....	4
Gonorrhea.....	6
Mumps.....	8
Scarlet fever.....	6
Smallpox.....	2
Syphilis.....	1
Typhoid fever.....	1

## DISEASE CONDITIONS AMONG TROOPS IN THE UNITED STATES.

The following data are taken from telegraphic reports received in the office of the Surgeon General, United States Army, for the week ended April 12, 1918:

Annual admission rate per 1,000 (disease only):		Noneffective rate per 1,000 on day of report—Continued.	
All troops.....	1,627.1	National Army camps.....	55.7
National Guard camps.....	1,232.2	Regular Army.....	44.8
National Army camps.....	1,959.4	Annual death rate per 1,000 (disease only):	
Regular Army.....	1,502.5	All troops.....	11.3
Noneffective rate per 1,000 on day of report:		National Guard camps.....	3.4
All troops.....	48	National Army camps.....	17.9
National Guard camps.....	37.8	Regular Army.....	10.3

*New cases of special diseases reported during the week ended Apr. 12, 1918.*

Camp.	Pneumonia.	Dysentery.	Malaria.	Venereal.	Measles.	Meningitis.	Scarlet fever.	Deaths.	Annual admission rate per 1,000 (disease only).	Noneffective per 1,000 on day of report.
Wadsworth.....	4			16	3		1	0	846.1	24.6
Hancock.....	4			32	10		2	1	602.0	26.8
McClellan.....	5			21	1	2		0	1,263.8	35.6
Sevier.....	16			20	9	2	1	5	1,021.4	30.0
Wheeler.....	3	1	2	23		2		3	1,355.1	55.3
Logan.....	12		2	32	14		6	0	1,653.0	35.0
Cody.....	26			11				8	640.7	27.3
Doniphan.....								0	1,065.0	14.9
Bowie.....	35			54				3	2,260.1	54.0
Sheridan.....	6			20		1	2	1	1,204.4	36.1
Shelby.....			1	13				0	1,470.9	52.5
Beauregard.....	9		13	40		1		0	1,454.7	56.0
Kearney.....	1		1	2			11	1	1,131.8	45.6
Devens.....	38			50	5	2	7	10	1,623.6	47.0
Upton.....	20			50	17	1	5	6	827.8	32.0
Dix.....	5	1		163	11	1	10	2	1,733.8	41.2
Meade.....	25			15	5	1	1	7	497.2	31.4
Lee.....	15			179	14	1		6	1,751.2	60.2
Jackson.....	29			14	24	2		5	1,533.5	55.5
Gordon.....	26		1	129	38	1	6	3	2,282.7	46.3
Sherman.....	25	1		184	9		16	19	2,267.0	55.7
Taylor.....	28			26	57		3	15	3,272.9	95.4
Custer.....	72		1	77	6		12	15	1,403.0	36.2
Grant.....	7			13	10	1	7	8	842.2	27.4
Pike.....	22		3	55	23	2	6	10	2,715.4	71.1
Dodge.....	90			57	29		23	34	2,693.5	120.6
Funston.....	31			85	19		4	11	1,837.0	83.9
Travis.....	21	2	1	41	28	1		7	4,839.4	70.4
Lewis.....	27			87	1		17	7	1,882.1	56.3
Northeastern Department.....	6			20	9		1	5	1,863.0	45.9
Eastern Department.....	10		1	62	10			5	1,329.8	33.0
Southeastern Department.....	9		3	34	13		1	7	1,323.8	49.1
Central Department.....	23	1	1	30	17	2	23	8	1,451.6	44.3
Southern Department.....	21	2	2	56	16		9	6	1,834.9	55.3
Western Department.....	8		1	28	10		7	3	1,187.4	27.0
Aviation, S. C.....	34		2	88	86	1	48	27	1,490.0	40.4
Camp Greene.....	9			32	9	2	3	3	1,320.3	45.8
Camp Fremont.....	3			13	19	2		1	2,457.8	78.8
El Paso.....	1			11	1		1	0	1,476.3	6.7
Columbus Barracks.....	3			10	2			3	1,471.4	56.6
Jefferson Barracks.....	5			62	3		10	3	4,247.4	125.1
Fort Logan.....	7			1	2		6	6	2,065.9	86.2
Fort McDowell.....			1	5	1	1	5	0	1,914.1	64.4
Fort Slocum.....	4			10	1			1	1,743.0	50.0
Fort Thomas.....	1			2	6			0	1,431.2	67.3
D. B. Alcatraz.....								0		
D. B. Fort Leavenworth.....	2			1				2	1,167.0	38.4
A. A. Humphreys.....					1			0		
J. E. Johnston.....	2	1	1	44	7	1	1	0	1,472.4	37.3
Camp Merritt.....	20			112	4	2	14	7	1,412.0	56.6
Camp Stuart.....	19			144	8	2	1	11	1,545.7	64.8

*New cases of special diseases reported during the week ended Apr. 12, 1918—Continued.*

Camp.	Pneumonia.	Dysentery.	Malaria.	Venereal.	Measles.	Meningitis.	Scarlet fever.	Deaths.	Annual admission rate per 1,000 (disease only).	Noneffective per 1,000 on day of report.
West Point, N. Y. ....				2	7		1	0	451.9	12.4
Edgewood-Aberdeen .....	1							0	1,398.8	40.1
Provisional depot for corps and Army troops .....	11		1	23	20			1	1,868.7	44.5
Camp Holabird .....				1				0		
Camp Raritan .....				1	2			0	672.4	20.5
National Guard departments .....	2			17	9		1	1		
National Army departments .....	35		3	167	81	1	22	9		
Total .....	838	9	41	2,485	677	35	294	296	1,627.1	148.0

<sup>1</sup> All troops.*Annual rate per 1,000 for special diseases.*

Disease.	All troops in United States. <sup>1</sup>	Regulars in United States. <sup>1</sup>	National Guard, all camps. <sup>1</sup>	National Army, all camps. <sup>1</sup>	Expeditionary forces. <sup>2</sup>
Pneumonia .....	34.6	25	19.9	52.9	35.8
Dysentery .....	0.4	0.5	0.16	0.4	1.0
Malaria .....	1.7	1.6	3.1	0.7	0.0
Venereal .....	102.8	95.5	46.7	134.8	49.2
Paratyphoid fever .....	0.0	0.0	0.0	0.0	0.1
Typhoid fever .....	0.04	0.1	0.0	0.0	0.3
Measles .....	28	31.9	6	32.6	10.3
Meningitis .....	1.4	1.6	1.3	1.4	3.3
Scarlet fever .....	12.1	16.4	3.6	13	13.7

<sup>1</sup> Week ended Apr. 12, 1918.<sup>2</sup> Week ended Apr. 4, 1918.**CURRENT STATE SUMMARIES.****Alabama.**

From Collaborating Epidemiologist Perry, by telegraph, for week ended April 20, 1918:

Jefferson County, smallpox 43, meningitis 1.

**California.**

From the State Board of Health of California, by telegraph, for week ended April 20, 1918:

Prevalence of reportable diseases in California reduced, except diphtheria and smallpox. Diphtheria: More prevalent in southern California than in other parts of State. Measles greatly reduced but still prevalent in southern California. Mumps, German measles, and whooping cough prevalent in San Francisco. Smallpox epidemic in Brawley, Imperial County. Eight cases of epidemic cerebrospinal meningitis; 4 in San Joaquin County, 2 Napa County, 1 each San Francisco and Los Angeles.

Reported by mail for preceding week (ended April 13):

**CURRENT STATE SUMMARIES—Continued.**

Cerebrospinal meningitis.....	9	Pneumonia.....	67
Chicken pox.....	153	Poliomyelitis.....	2
Diphtheria.....	67	Ophthalmia neonatorum.....	1
Erysipelas.....	13	Scarlet fever.....	70
German measles.....	271	Smallpox.....	14
Gonococcus infection.....	59	Syphilis.....	41
Leprosy.....	1	Tetanus.....	1
Malaria.....	11	Trachoma.....	2
Measles.....	923	Tuberculosis.....	87
Mumps.....	298	Typhoid fever.....	14
Pellagra.....	2	Whooping cough.....	160

**Connecticut.**

From Collaborating Epidemiologist Black, by telegraph, for week ended April 20, 1918:

Smallpox: Hartford, 6 cases. Cerebrospinal meningitis: Hartford, 1, New Haven 1, Naugatuck 1, Wallingford 1, Ledyard 1. Scarlet fever: Norwalk 16 cases, institutional.

**Georgia.**

From Collaborating Epidemiologist Abercrombie, by telegraph, for week ended April 20, 1918:

Cerebrospinal meningitis: Dalton 6 cases, 2 deaths. Dysentery: Dallas 8 cases, 2 deaths, Surrency 3 new cases, 2 deaths. Smallpox: General throughout State.

**Illinois.**

From Collaborating Epidemiologist Drake, by telegraph, for week ended April 20, 1918:

Smallpox: One hundred and sixty-six; of which in Chicago 10, Quincy 17, Riverside Township (Adams County) 10, Bryant 5, Farmington 6, Alton 28, Peoria 21, Belleville 5, Millcreek 13. Diphtheria: One hundred and seventy-six; of which in Chicago 113, Quincy 4, Altamont 4, Edwardsville 4. Scarlet fever: One hundred and sixty-nine; of which in Chicago 55, De Kalb 5, East Galesburg 4, Virdin 4, Keithsburg 42, Moline 6. Poliomyelitis: Chicago 5, De Kalb 1, Waukegan 1. Meningitis: Chicago 9, Springfield 1, Rockford 1.

**Indiana.**

From the State Board of Health of Indiana, by telegraph, for week ended April 20, 1918:

Scarlet fever: One death each Winamac, Decatur, Fremont, Bloomington. Whooping cough: One death each Kokomo, Peru. Measles: Epidemic Warsaw, Huntington, Grant City. Diphtheria: One death each Anderson, Greensburg. Rabies: Epidemic Pike County. Grippe: Epidemic Warsaw, Newcastle, Huntington, Bluffton, Muncie, Gary.

**Kansas.**

From Collaborating Epidemiologist Crumbine, by telegraph, for week ended April 20, 1918:

Smallpox (10 or more cases): By counties—Butler 17, Cowley 14, Ness, 11; by cities—Coffeyville 12, Fort Scott 20, Hutchinson 16, Iola 11, Kansas City 15,

**CURRENT STATE SUMMARIES—Continued.**

**Kansas—Continued.**

Salina 17, Wichita 20. Scarlet fever (10 or more cases): By counties—Clay 16, Kiowa 14; by cities—Dodge City 10, Hutchinson 11, Topeka 20. Meningitis: In cities—Eldorado 1, Frankfort 1, Lebo 1, Manhattan 1, Plains 1, Reece 1, Topeka 1, Wichita 1. Poliomyelitis: Newton 1.

**Louisiana.**

From Collaborating Epidemiologist Dowling, by telegraph, for week ended April 20, 1918:

Meningitis, excluding Rapides Parish: Orleans Parish 3.

**Massachusetts.**

From Collaborating Epidemiologist Hitchcock, by telegraph, for week ended April 20, 1918:

Unusual prevalence. German measles: Lynn 46. Measles: Brookline 35, Chelsea 37, Chelmsford 12, Haverhill 58, Newberry 6, Shirley 21, Westford 15. Smallpox: State Infirmary 1.

**Minnesota.**

From Collaborating Epidemiologist Bracken, by telegraph, for week ended April 20, 1918:

Smallpox (new foci): Hubbard County, Nevis village; Kittson County, section 14, township 162, range 45; Lyon County, Clifton Township; Mahnomen County, Wauon village; Roseau County, Malung Township; Wabasha County, Greenfield Township; one case each. Two cerebrospinal meningitis reported since March 8.

**Nebraska.**

From the State Board of Health of Nebraska, by telegraph, for week ended April 20, 1918:

Rabies: Cass County. Smallpox: Lincoln, Omaha, Johnson County, Broken Bow, Wakefield. Scarlet fever: Ashland, Culbertson. Cerebrospinal meningitis: Crete 1 case.

**South Carolina.**

From Collaborating Epidemiologist Hayne, by telegraph, for week ended April 22, 1918:

Four cases epidemic meningitis.

**Vermont.**

From Collaborating Epidemiologist Dalton, by telegraph, for week ended April 20, 1918:

Smallpox: Rochester 1. No other outbreak or unusual prevalence.

**Virginia.**

From Collaborating Epidemiologist Traynham, by telegraph, for week ended April 20, 1918.

Five cases smallpox Newport News, 1 Tazewell County, 18 Pulaski, 1 Washington. Two cases cerebrospinal meningitis Newport News, 1 Norfolk, 1 Bedford County, 1 Prince George.

## CURRENT STATE SUMMARIES—Continued.

## Washington.

From Collaborating Epidemiologist Tuttle, by telegraph, for week ended April 20, 1918:

Two cases epidemic cerebrospinal meningitis Camas, Clarke County, onset of cases March 10 and 12. One case in Seattle. Forty scarlet fever in Tacoma. Fourteen cases smallpox Arlington, Snohomish County.

## RECIPROCAL NOTIFICATION.

## Massachusetts.

*Cases of communicable diseases referred during March, 1918, to other State health departments by department of health of the State of Massachusetts.*

Disease and locality of notification.	Referred to health authority of—	Why referred.
Diphtheria; Milton, N. Y..	State department of health, Albany, N. Y., notified Massachusetts department of health.	Two possible diphtheria carriers left Milton, N. Y., for Holyoke.
Lobar pneumonia: Pittsfield.....	State department of health, Albany, N. Y.	Case reported by the Pittsfield board of health. Residence of patient, Braynard, N. Y.
Tuberculosis: Camp Devens.	State department of health, Des Moines, Iowa. State department of health, Hartford, Conn. State department of health, Augusta, Me. State board of health, Concord, N. H.. State department of health, Albany, N. Y. State board of health, Burlington, Vt..	Discharged from Camp Devens and returned to his home in Iowa. 4 cases. Discharged from Camp Devens and returned to their homes in Connecticut. Discharged from Camp Devens and returned to his home in Maine. Discharged from Camp Devens and returned to his home in New Hampshire. 10 cases. Discharged from Camp Devens and returned to their homes in New York. Discharged from Camp Devens and returned to his home in Vermont.
Smallpox: Boston.....	State board of health, Concord, N. H....	Patient came from Groveton, N. H., to Boston February 27. Onset of disease February 17.
Milton.....	State department of health, Hartford, Conn.	Patient was a traveling salesman and had been in Hartford, Waterbury, and Litchfield, Conn., until February 20. Onset of disease February 23 or 24.

## CEREBROSPINAL MENINGITIS.

## State Reports for February and March, 1918.

Place.	New cases reported.	Place.	New cases reported.
California (Mar.):		California—Continued.	
Alameda County .....	4	San Joaquin County—	
Oakland .....	2	Stockton .....	3
Contra Costa County.....	1	Total.....	32
Martinez .....	1		
Los Angeles County.....	2	District of Columbia (Mar.).....	11
Los Angeles.....	4		
Monrovia .....	1	Louisiana (Mar.):	
Riverside County.....	1	Avoyelles Parish.....	1
Perris .....	2	Ascension Parish.....	1
San Bernardino County.....	1	Bienville Parish.....	1
San Bernardino.....	1	Caddo Parish.....	4
San Diego County—		Calcasieu Parish.....	2
San Diego.....	3	Catahoula Parish.....	1
Fort Rosecrans .....	1	De Soto Parish.....	1
San Francisco.....	5		

## CEREBROSPINAL MENINGITIS—Continued.

## State Reports for February and March, 1918—Continued.

Place.	New cases reported.	Place.	New cases reported.
<b>Louisiana—Continued.</b>		<b>Rhode Island (Mar.):</b>	
East Carroll Parish.....	1	Providence County—	
Lincoln Parish.....	4	North Smithfield.....	1
Morehouse Parish.....	2	Providence.....	6
Orleans Parish.....	5	Woonsocket.....	1
Ouachita Parish.....	1	<b>Total.....</b>	<b>8</b>
Pointe Coupee Parish.....	1	<b>Virginia (Feb.):</b>	
Rapides Parish.....	12	Buchanan County.....	2
Richland Parish.....	1	Caroline County.....	1
St. Landry Parish.....	2	Henrico County—	
<b>Total.....</b>	<b>40</b>	Richmond.....	2
<b>Massachusetts (Mar.):</b>		Henry County.....	1
Bristol County—		Lee County.....	2
Fall River.....	2	Loudoun County.....	1
Essex County—		Louisa County.....	1
Danvers (Town).....	1	Montgomery County.....	1
Gloucester.....	1	Nelson County.....	2
Haverhill.....	1	Norfolk County—	
Lawrence.....	2	Portsmouth.....	1
Newburyport.....	1	Prince George County.....	2
Salem.....	3	Camp Lee.....	7
Franklin County—		Hopewell.....	2
Greenfield (Town).....	1	Scott County.....	1
Middlesex County—		Spottsylvania County.....	1
Camp Devens, Ayer.....	1	Sussex County.....	2
Billerica (Town).....	1	Warren County—	
Cambridge.....	2	Front Royal.....	1
Lowell.....	5	Warwick County—	
Malden.....	1	Newport News.....	7
Somerville.....	1	Washington County.....	1
Norfolk County—		<b>Total.....</b>	<b>38</b>
Quincy.....	1	<b>West Virginia (Mar.):</b>	
Plymouth County—		Gilmer County.....	1
Brookton.....	1	Boone County.....	1
Suffolk County—		Roane County.....	1
Boston.....	18	Summers County.....	1
Chelsea.....	3	<b>Total.....</b>	<b>4</b>
Worcester County—			
Winchendon (Town).....	1		
Worcester.....	4		
<b>Total.....</b>	<b>51</b>		

## City Reports for Week Ended Apr. 6, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Albany, N. Y.....	1		Louisville, Ky.....	2	
Atlanta, Ga.....	1	2	Lowell, Mass.....	1	1
Atlantic City, N. J.....	1	1	Marion, Ind.....		2
Augusta, Ga.....	1	1	Memphis, Tenn.....	5	5
Baltimore, Md.....	11	3	Milwaukee, Wis.....	4	2
Birmingham, Ala.....	1		Nashville, Tenn.....	2	1
Boston, Mass.....	4	2	Newark, N. J.....	3	1
Buffalo, N. Y.....	1	1	New Haven, Conn.....	1	
Cambridge, Mass.....	1		New Orleans, La.....	1	1
Chanute, Kans.....	1		New York, N. Y.....	18	7
Charleston, S. C.....	1	1	Norfolk, Va.....		1
Charlotte, N. C.....	1		Oklahoma City, Okla.....	1	1
Chattanooga, Tenn.....	1		Omaha, Nebr.....	1	1
Chelsea, Mass.....	2		Peoria, Ill.....	1	1
Chicago, Ill.....	9	4	Petersburg, Va.....		1
Cincinnati, Ohio.....	2	1	Philadelphia, Pa.....	11	2
Cleveland, Ohio.....	4	3	Pittsburgh, Pa.....	5	1
Columbia, S. C.....	2		Providence, R. I.....	3	3
Columbus, Ohio.....		1	Racine, Wis.....		1
Detroit, Mich.....	1	1	Richmond, Va.....	1	
East Orange, N. J.....	1		Roanoke, Va.....	1	1
Erie, Pa.....	1	1	St. Joseph, Mo.....	1	
Greenville, S. C.....	1		St. Louis, Mo.....	2	1
Hackensack, N. J.....	1		San Francisco, Cal.....	1	
Hartford, Conn.....	1	1	Savannah, Ga.....	2	1
Houston, Tex.....	1		Scranton, Pa.....	1	
Indianapolis, Ind.....	1		Toledo, Ohio.....		1
Johnstown, Pa.....	1		Troy, N. Y.....	1	
Kansas City, Kans.....	2	1	Washington, D. C.....	2	2
Lawrence, Mass.....	1		Wilkes-Barre, Pa.....	2	
Lexington, Ky.....	1		Winston-Salem, N. C.....	3	2
Los Angeles, Cal.....	1	1	Worcester, Mass.....		1

**DIPHTHERIA.**

See Diphtheria, measles, scarlet fever, and tuberculosis, page 631.

**ERYSIPELAS.****City Reports for Week Ended Apr. 6, 1918.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio.....	2	.....	Newark, N. J.....	6	1
Anderson, Ind.....	1	.....	New York, N. Y.....		11
Ann Arbor, Mich.....	1	.....	Oklahoma City, Okla.....	1	1
Baltimore, Md.....	1	.....	Parkersburg, W. Va.....	1	.....
Birmingham, Ala.....		1	Passaic, N. J.....	1	.....
Buffalo, N. Y.....	2	.....	Peoria, Ill.....		1
Chicago, Ill.....	14	1	Philadelphia, Pa.....	7	.....
Cleveland, Ohio.....	7	.....	Pittsburgh, Pa.....	6	1
Colorado Springs, Colo.....	1	.....	Pontiac, Mich.....	1	.....
Columbus, Ohio.....		1	Portland, Oreg.....	3	.....
Corsicana, Tex.....	1	.....	Reading, Pa.....	1	.....
Denver, Colo.....	5	.....	Redlands, Cal.....	1	.....
Detroit, Mich.....	4	2	St. Joseph, Mo.....	2	.....
Easton, Pa.....	1	.....	St. Louis, Mo.....	11	1
El Paso, Tex.....		1	St. Paul, Minn.....	3	1
Fargo, N. Dak.....	1	.....	San Francisco, Cal.....	3	.....
Jackson, Mich.....	1	.....	Somerville, Mass.....		1
Johnstown, Pa.....	1	.....	Stockton, Cal.....	1	.....
Lancaster, Pa.....	1	.....	Superior, Wis.....	1	.....
Lincoln, Nebr.....	1	.....	Syracuse, N. Y.....		1
Los Angeles, Cal.....	5	.....	Trinidad, Ohio.....	1	.....
Louisville, Ky.....	3	.....	Troy, N. Y.....	1	.....
Marshall, Tex.....	1	.....	Wichita, Kans.....	1	.....
Milwaukee, Wis.....		1	Zanesville, Ohio.....		1
Nashville, Tenn.....	4	.....			

**MALARIA.****State Reports for February and March, 1918.**

Place.	New cases reported.	Place.	New cases reported.
California (Mar.):		Louisiana—Continued.	
Alameda County—		St. John Parish.....	2
Berkeley.....	2	St. Martin Parish.....	19
Fresno County.....	2	St. Mary Parish.....	1
Glenn County—		St. Tammany Parish.....	30
Orland.....	1	Union Parish.....	2
Kern County.....	1	Vermilion Parish.....	9
Merced County.....	1	Washington Parish.....	1
San Joaquin County.....	4	W. Feliciana Parish.....	2
Stockton.....	1	Total.....	191
Tracy.....	2		
Tehama County.....	2	Massachusetts (Mar.):	
Tulare County.....	1	Essex County—	
San Francisco County—		Lynn.....	1
Presidio.....	1	Middlesex County—	
Yolo County.....	3	Newton.....	1
Total.....	21	Total.....	2
Louisiana (Mar.):		Virginia (Feb.):	
Acadia Parish.....	2	Accomac County.....	1
Allen Parish.....	1	Chincoteague.....	7
Ascension Parish.....	1	Greenbackville.....	5
Bienville Parish.....	1	Albemarle County.....	2
Concordia Parish.....	3	Augusta County—	
De Soto Parish.....	1	Staunton.....	2
E. Baton Rouge Parish.....	3	Botetourt County.....	2
E. Feliciana Parish.....	5	Buckingham County.....	2
La Salle Parish.....	2	Caroline County.....	9
Madison Parish.....	1	Charles City County.....	3
Natchitoches Parish.....	6	Chesterfield County—	
Pointe Coupee Parish.....	2	Winterpock.....	3
Rapides Parish.....	17	Culpeper County.....	1
St. Charles Parish.....	2	Cumberland County.....	3
St. Helena Parish.....	1		

## MALARIA—Continued.

## State Reports for February and March, 1918—Continued.

Place	New cases reported.	Place.	New cases reported.
<b>Virginia—Continued.</b>		<b>Virginia—Continued.</b>	
Dinwiddie County.....	3	Nottoway County.....	1
Elizabeth City County.....	2	Blackstone.....	2
Essex County.....	3	Burkeville.....	2
Gloucester County.....	4	Crewe.....	1
Greensville County.....	13	Page County.....	1
Halifax County.....	24	Pittsylvania County.....	5
Hanover County.....	7	Powhatan County.....	5
Henrico County.....	9	Prince Edward County—	
Isle of Wright County.....	3	Farmville.....	1
James City County.....	5	Prince George County.....	2
Williamsburg.....	3	Camp Lee.....	1
King William County.....	1	Hopewell.....	6
Lancaster County.....	2	Princess Anne County.....	14
Loudoun County.....	5	Prince William County.....	2
Louisa County.....	2	Southampton County.....	10
Lunenburg County.....	4	Stafford County.....	3
Victoria.....	2	Surry County.....	5
Mecklenburg County.....	4	Sussex County.....	7
Nansemond County.....	1	Wise County.....	1
Suffolk.....	9	York County.....	1
Nelson County.....	2		
Northampton County.....	8	Total.....	243
Northumberland County.....	6		

## City Reports for Week Ended Apr. 6, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alexandria, La.....	1		Little Rock, Ark.....	5	
Birmingham, Ala.....	2	1	Montgomery, Ala.....	63	
Corsicana, Tex.....	6		Petersburg, Va.....	1	1
Hattiesburg, Miss.....	5		Richmond, Va.....	1	

## MEASLES.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 631.

## PELLAGRA.

## State Reports for February and March, 1918.

Place.	New cases reported.	Place.	New cases reported.
<b>California (Mar.):</b>		<b>Massachusetts (Mar.)—Continued.</b>	
San Diego County—		Middlesex County—	
San Diego.....	1	Cambridge.....	1
Oceanside.....	1		
Total.....	2	Total.....	2
<b>Louisiana (Mar.):</b>		<b>Virginia (Feb.):</b>	
Caddo Parish.....	3	Accomac County—	
De Soto Parish.....	2	Tanger.....	1
Natchitoches Parish.....	1	Amherst County.....	1
Orleans Parish.....	1	Chesterfield County.....	1
Rapides Parish.....	4	Floyd County.....	1
St. Mary Parish.....	1	Henry County.....	1
Total.....	12	James City County.....	1
<b>Massachusetts (Mar.):</b>		Orange County.....	3
Hampshire County—		Pittsylvania County—	
Northampton.....	1	Danville.....	2
		Rockbridge County.....	1
		Rockingham County.....	1
		Total.....	13

## PELLAGRA—Continued.

## City Reports for Week Ended Apr. 6, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alexandria, La.....	2	.....	Mobile, Ala.....	.....	1
Birmingham, Ala.....	2	1	Plainfield, N. J.....	.....	4
Hartford, Conn.....	1	.....	Richmond, Va.....	1	1
Houston, Tex.....	2	2	Savannah, Ga.....	.....	1
Lexington, Ky.....	1	1	Worcester, Mass.....	.....	1
Little Rock, Ark.....	.....	1			

## PNEUMONIA.

## City Reports for Week Ended Apr. 6, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alexandria, La.....	1	.....	Lowell, Mass.....	5	2
Altoona, Pa.....	1	.....	Lynn, Mass.....	5	5
Anderson, Ind.....	1	.....	Manchester, N. H.....	1	1
Ann Arbor, Mich.....	1	.....	McKeesport, Pa.....	3	.....
Annisston, Ala.....	2	.....	Medford, Mass.....	1	.....
Atlanta, Ga.....	4	16	Melrose, Mass.....	2	3
Baltimore, Md.....	42	30	Michigan City, Ind.....	2	2
Battle Creek, Mich.....	5	2	Montgomery, Ala.....	1	.....
Berkeley, Cal.....	1	.....	Montpelier, Vt.....	1	1
Billings, Mont.....	1	.....	Morgantown, W. Va.....	1	.....
Boston, Mass.....	24	42	Nashville, Tenn.....	2	7
Braddock, Pa.....	3	.....	Newark, N. J.....	134	42
Bridgeport, Conn.....	6	16	New Bedford, Mass.....	6	1
Brookton, Mass.....	6	2	New Britain, Conn.....	9	2
Buffalo, N. Y.....	12	23	Newburgh, N. Y.....	1	6
Burlington, Vt.....	1	1	Newburyport, Mass.....	1	.....
Butler, Pa.....	3	.....	Newport, Ky.....	3	3
Cambridge, Mass.....	7	2	Newton, Mass.....	4	1
Canton, Ohio.....	6	7	North Adams, Mass.....	1	1
Charleston, W. Va.....	1	4	North Little Rock, Ark.....	4	2
Che sea, Mass.....	12	5	Oak Park, Ill.....	6	.....
Chicago, Ill.....	486	218	Oshkosh, Wis.....	4	3
Chicopee, Mass.....	1	.....	Parkersburg, W. Va.....	1	1
Cincinnati, Ohio.....	1	27	Petersburg, Va.....	1	3
Cleveland, Ohio.....	53	44	Philadelphia, Pa.....	165	102
Clinton, Mass.....	3	1	Pittsburgh, Pa.....	82	84
Corsicana, Tex.....	10	3	Pittsfield, Mass.....	3	.....
Cumberland, Md.....	3	1	Pontiac, Mich.....	5	2
Detroit, Mich.....	25	58	Providence, R. I.....	1	12
Duluth, Minn.....	2	4	Reading, Pa.....	4	4
Elmira, N. Y.....	4	3	Richmond, Va.....	2	7
Everett, Mass.....	1	1	Rochester, N. Y.....	41	15
Fall River, Mass.....	4	1	Rutland, Vt.....	1	1
Grand Rapids, Mich.....	14	1	Sacramento, Cal.....	3	1
Hammond, Ind.....	4	8	St. Paul, Minn.....	1	10
Harrison, N. J.....	2	.....	Salem, Mass.....	2	.....
Hattiesburg, Miss.....	5	.....	San Diego, Cal.....	5	5
Haverhill, Mass.....	7	5	San Francisco, Cal.....	20	16
Holyoke, Mass.....	12	3	Schenectady, N. Y.....	12	5
Houston, Tex.....	4	2	Somerville, Mass.....	7	1
Jackson, Mich.....	5	1	Spartanburg, S. C.....	1	.....
Jacksonville, Fla.....	1	3	Springfield, Mass.....	28	13
Kalamazoo, Mich.....	2	.....	Springfield, Ohio.....	2	2
Kansas City, Kans.....	6	.....	Steubenville, Ohio.....	1	.....
Lawrence, Mass.....	5	5	Stockton, Cal.....	4	.....
Leavenworth, Kans.....	1	1	Topeka, Kans.....	3	.....
Lexington, Ky.....	2	2	Waco, Tex.....	5	1
Lincoln, Nebr.....	1	.....	Waltham, Mass.....	1	.....
Little Rock, Ark.....	15	3	Wichita, Kans.....	10	3
Lorain, Ohio.....	1	.....	Wilkinsburg, Pa.....	3	3
Los Angeles, Cal.....	13	7	Worcester, Mass.....	42	11
Louisville, Ky.....	4	16	York, Pa.....	1	.....

**POLIOMYELITIS (INFANTILE PARALYSIS).****State Reports for February and March, 1918.**

Place.	New cases reported.	Place.	New cases reported.
California (Mar.):		Massachusetts (Mar.):	
Sonoma County.....	1	Bristol County—	
Santa Clara County—		Fall River.....	1
San Jose.....	1	Middlesex County—	
Tulare County.....	1	Cambridge.....	1
Ventura County.....	1	Everett.....	1
Total.....	4	Lowell.....	2
		Suffolk County—	
Louisiana (Mar.):		Boston.....	1
Catahoula Parish.....	1	Total.....	6
Evangeline Parish.....	1		
Total.....	2	Virginia (Feb.):	
		Albemarle County.....	4

**City Reports for Week Ended Apr. 6, 1918.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.....		1	Milwaukee, Wis.....	8	4
Boston, Mass.....	1	1	New York, N. Y.....	3	1
Chicago, Ill.....	1	1	Racine, Wis.....		1
Grand Rapids, Mich.....	1		Springfield, Ill.....	1	
Lowell, Mass.....		1	Waco, Tex.....	1	

**RABIES IN ANIMALS.****City Reports for Week Ended Apr. 6, 1918.**

During the week ended April 6, 1918, one case of rabies in animals was reported at Charlotte, N. C., and one case at Corsicana, Tex.

**SCARLET FEVER.**

See Diphtheria, measles, scarlet fever, and tuberculosis, page, 631.

**SMALLPOX.****State Reports for March, 1918.**

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
California:						
Alameda County.....	3				2	1
Oakland.....	2			1	1	
Butte County.....	1				1	
Colusa County.....	1		1			
Fresno County.....	12				7	5
Fresno.....	7					7
Kern County.....	3				3	
Los Angeles County.....	6			1	5	
Glendale.....	1			1		
Los Angeles.....	11				6	5
Vernon.....	1					1
Madera County.....	1				1	

## SMALLPOX—Continued.

## State Reports for March, 1918—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
California—Continued.						
Nevada County—						
Grass Valley.....	1				1	
Orange County.....	3				3	
Placer County.....	1				1	
Riverside County....	2					2
Blythe.....	1				1	
Sacramento.....	1				1	
San Diego County....	2				1	1
Camp Kearney.....	2					2
San Diego.....	1					1
San Francisco.....	35			3	32	
San Mateo County—						
Camp Fremont.....	1					1
Siskiyou County—						
Dunsmuir.....	1				1	
Stanislaus County..	1					1
Tehama County.....	1				1	
Tulare County.....	4					4
Visalia.....	1					1
Total.....	107		1	6	68	32
District of Columbia.....	1				1	
Massachusetts:						
Middlesex County—						
Marlboro.....	5				5	
Lowell.....	1				1	
Tewksbury State Infirmary.....	1				1	
Norfolk County—						
Milton (town).....	1				1	
Suffolk County—						
Boston.....	1				1	
Worcester County—						
Hardwick (town).....	1			1		
Total.....	10			1	9	

## Miscellaneous State Reports.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
<b>Louisiana (Mar.):</b>			<b>Louisiana (Mar.)—Continued.</b>		
Avoyelles Parish.....	4		Union Parish.....	1	
Bienville Parish.....	1		Vermilion Parish.....	5	
Caddo Parish.....	23		Vernon Parish.....	1	
Calcasieu Parish.....	1		Total.....	153	
Caldwell Parish.....	7		<b>Virginia (Feb.):</b>		
Claiborne Parish.....	3		Alleghany County.....	3	
Evangeline Parish.....	1		Augusta County—		
Iberia Parish.....	7		Basic City.....	6	
Iberville Parish.....	2		Caroline County.....	1	
Jefferson Parish.....	1		Franklin County.....	20	
Lafourche Parish.....	1		Gloucester County.....	9	
Lincoln Parish.....	3		Grayson County.....	2	
Morehouse Parish.....	8		Halifax County.....	6	
Natchitoches Parish.....	2		Montgomery County.....	4	
Orleans Parish.....	51		Northampton County—		
Rapides Parish.....	4		Cape Charles.....	1	
Red River Parish.....	4		Orange County.....	9	
St. Landry Parish.....	1		Pittsylvania County.....	29	
St. Martin Parish.....	10		Princess Anne County.....	10	
St. Tammany Parish.....	11				
Terrebonne Parish.....	1				

## SMALLPOX—Continued.

## Miscellaneous State Reports—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Virginia (Feb.)—Continued.			West Virginia—Continued.		
Prince William County...			Lincoln County.....	7	.....
Roanoke County.....	6	.....	McDowell County.....	6	.....
Roanoke.....	3	.....	Marshall County.....	2	.....
Russell County.....	13	.....	Marion County.....	8	.....
Scott County.....	3	.....	Mercer County.....	10	.....
Tazewell County—			Mingo County.....	2	.....
Pocahontas.....	2	.....	Monongalia County.....	4	.....
Wise County.....	30	.....	Monroe County.....	7	.....
Big Stone Gap.....	6	.....	Morgan County.....	1	.....
Norton.....	5	.....	Nicholas County.....	2	.....
Total.....	172	.....	Ohio County.....	2	.....
West Virginia (Mar.):			Pocahontas County.....	1	.....
Berkeley County.....	1	.....	Raleigh County.....	2	.....
Braxton County.....	1	.....	Roane County.....	3	.....
Cabell County.....	2	.....	Summers County.....	1	.....
Clay County.....	33	.....	Tucker County.....	1	.....
Fayette County.....	14	.....	Taylor County.....	15	.....
Gilmer County.....	8	.....	Wayne County.....	1	.....
Hancock County.....	11	.....	Wirt County.....	3	.....
Harrison County.....	1	.....	Wood County.....	7	.....
Jackson County.....	14	.....	Wyoming County.....	4	.....
Kanawha County.....	7	.....	Total.....	186	.....

## City Reports for Week Ended Apr. 6, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Abilene, Tex.....	16	.....	Greeley, Colo.....	1	.....
Akron, Ohio.....	29	.....	Hammond, Ind.....	3	.....
Alexandria, La.....	2	.....	Harrisburg, Pa.....	3	.....
Alton, Ill.....	24	.....	Houston, Tex.....	1	.....
Anderson, Ind.....	4	.....	Independence, Kans.....	4	.....
Anniston, Ala.....	5	.....	Indianapolis, Ind.....	38	.....
Atlanta, Ga.....	3	.....	Jacksonville, Fla.....	2	.....
Baltimore, Md.....	1	.....	Janesville, Wis.....	2	.....
Battle Creek, Mich.....	3	.....	Johnstown, Pa.....	1	.....
Berlin, N. H.....	5	.....	Kalamazoo, Mich.....	18	.....
Billings, Mont.....	1	1	Kansas City, Kans.....	16	.....
Birmingham, Ala.....	32	.....	Knoxville, Tenn.....	2	.....
Bloomington, Ind.....	1	.....	La Crosse, Wis.....	7	.....
Burlington, Iowa.....	2	.....	Leavenworth, Kans.....	2	.....
Butte, Mont.....	1	.....	Lima, Ohio.....	10	.....
Canton, Ohio.....	1	.....	Lincoln, Nebr.....	9	.....
Chanute, Kans.....	5	.....	Little Rock, Ark.....	10	.....
Charleston, W. Va.....	2	.....	Lorain, Ohio.....	1	.....
Chattanooga, Tenn.....	5	.....	Los Angeles, Cal.....	4	.....
Chicago, Ill.....	9	.....	Louisville, Ky.....	7	.....
Cincinnati, Ohio.....	5	.....	Macon, Ga.....	1	.....
Cleveland, Ohio.....	28	1	Madison, Wis.....	2	.....
Coffeyville, Kans.....	4	.....	Marion, Ind.....	6	.....
Columbus, Ohio.....	2	.....	Marshall, Tex.....	2	.....
Council Bluffs, Iowa.....	11	.....	Mason City, Iowa.....	2	.....
Covington, Ky.....	1	.....	Memphis, Tenn.....	19	.....
Cumberland, Md.....	9	.....	Michigan City, Ind.....	3	.....
Danville, Ill.....	1	.....	Milwaukee, Wis.....	4	.....
Davenport, Iowa.....	2	.....	Minneapolis, Minn.....	11	.....
Dayton, Ohio.....	3	.....	Mobile, Ala.....	3	.....
Decatur, Ill.....	1	.....	Moline, Ill.....	1	.....
Denver, Colo.....	41	.....	Montgomery, Ala.....	5	.....
Des Moines, Iowa.....	12	.....	Morgantown, W. Va.....	2	.....
Detroit, Mich.....	33	1	Muncie, Ind.....	7	.....
Dubuque, Iowa.....	1	.....	Muskogee, Okla.....	11	.....
Eau Claire, Wis.....	4	.....	Nashville, Tenn.....	6	.....
El Paso, Tex.....	.....	2	New Orleans, La.....	6	.....
Erie, Pa.....	1	.....	New York, N. Y.....	2	.....
Evansville, Ind.....	2	.....	Niagara Falls, N. Y.....	2	.....
Fort Scott, Kans.....	2	.....	Norfolk, Va.....	1	.....
Fort Wayne, Ind.....	13	1	North Little Rock, Ark.....	5	.....
Fresno, Cal.....	3	.....	Ogden, Utah.....	2	.....
Galesburg, Ill.....	3	.....	Oklahoma City, Okla.....	7	.....
Grand Forks, N. Dak.....	2	.....	Omaha, Nebr.....	27	.....
Grand Rapids, Mich.....	5	.....	Parkersburg, W. Va.....	2	.....

## SMALLPOX—Continued.

## City Reports for Week Ended Apr. 6, 1918—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Peoria, Ill.....	9	.....	Spartanburg, S. C.....	1	.....
Portsmouth, Va.....	1	.....	Spokane, Wash.....	11	.....
Quincy, Ill.....	10	.....	Springfield, Ill.....	1	.....
Racine, Wis.....	1	.....	Springfield, Mo.....	5	.....
Richmond, Ind.....	3	.....	Springfield, Ohio.....	1	.....
Roanoke, Va.....	3	.....	Steubenville, Ohio.....	1	.....
St. Joseph, Mo.....	23	.....	Superior, Wis.....	3	.....
St. Louis, Mo.....	28	.....	Terre Haute, Ind.....	4	.....
St. Paul, Minn.....	12	.....	Toledo, Ohio.....	3	.....
Salina, Kans.....	10	.....	Topeka, Kans.....	14	.....
Salt Lake City, Utah.....	18	.....	Waco, Tex.....	4	.....
Sandusky, Ohio.....	1	.....	Washington, D. C.....	2	.....
San Francisco, Cal.....	1	.....	Wichita, Kans.....	13	.....
Seattle, Wash.....	12	.....	Woonsocket, R. I.....	1	.....
Shelbyville, Ind.....	2	.....	York, Pa.....	1	.....
Sioux City, Iowa.....	8	.....			

## TETANUS.

## City Reports for Week Ended Apr. 6, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Birmingham, Ala.....	2	.....	New York, N. Y.....	1	2
Buffalo, N. Y.....	.....	1	St. Louis, Mo.....	1	.....
Morristown, N. J.....	.....	1			

## TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 631.

## TYPHOID FEVER.

## State Reports for February and March, 1918.

Place.	New cases reported.	Place.	New cases reported.
California (Mar.):		California (Mar.)—Con.	
Alameda County.....	1	San Joaquin County—	
Oakland.....	2	Stockton.....	1
Colusa County—		Santa Barbara County—	
Colusa.....	2	Santa Barbara.....	1
Glenn County.....	1	Santa Clara County.....	1
Contra Costa County.....	1	Santa Clara.....	1
Richmond.....	1	Shasta County—	
Pinole.....	1	Redding.....	1
Kern County—		Siskiyou County—	
Bakersfield.....	1	Dunsmuir.....	1
Los Angeles County.....	1	Yreka.....	2
Alhambra.....	1	Sonoma County.....	3
Los Angeles.....	12	Solano County.....	1
Marin County.....	3	Rio Vista.....	2
Monterey County.....	1	Riverside County—	
Sacramento County—		Blythe.....	7
Repress.....	1	Total.....	62
San Benito County.....	3		
San Diego County—		District of Columbia.....	5
San Diego.....	1		
San Francisco.....	8		

## TYPHOID FEVER—Continued.

## State Reports for February and March, 1918.

Place.	New cases reported.	Place.	New cases reported.
<b>Louisiana (Mar.):</b>		<b>Rhode Island (Mar.):</b>	
Acadia Parish.....	1	Kent County—	
Allen Parish.....	1	West Warwick (town).....	1
Avoyelles Parish.....	2	Washington County—	
Caddo Parish.....	2	Charlestown (town).....	1
Evangeline Parish.....	1	Total.....	2
Iberville Parish.....	1		
Jefferson Davis Parish.....	1	<b>Virginia (Feb.):</b>	
Lafayette Parish.....	1	Accomac County.....	1
Orleans Parish.....	14	Alleghany County—	
Rapides Parish.....	3	Clifton Forge.....	3
St. Martin Parish.....	3	Covington.....	1
St. Mary Parish.....	1	Amherst County.....	1
Tensas Parish.....	1	Appomattox County.....	1
Terrebonne Parish.....	7	Botetourt County.....	3
Vermilion Parish.....	1	Buchanan County.....	1
West Feliciana Parish.....	1	Culpeper County.....	3
Total.....	41	Elizabeth City County—	
		Phoebus.....	1
<b>Massachusetts (Mar.):</b>		Franklin County.....	1
Bristol County—		Frederick County.....	1
Fall River.....	2	Henrico County—	
New Bedford.....	3	Richmond.....	2
Taunton.....	1	Highland County.....	1
<b>Essex County—</b>		Loudoun County.....	1
Haverhill.....	2	Montgomery County.....	1
Lawrence.....	1	Christiansburg.....	1
Methuen.....	2	Nansemond County—	
<b>Franklin County—</b>		Suffolk.....	2
New Salem (town).....	1	Nelson County.....	1
Orange (town).....	1	Nottoway County—	
<b>Hampshire County—</b>		Crewe.....	1
Holyoke.....	2	Pittsylvania County.....	2
<b>Middlesex County—</b>		Pulaski County.....	3
Everett.....	1	Roanoke County—	
Framingham (town).....	1	Roanoke.....	2
Lowell.....	2	Russell County.....	5
Newton.....	2	Scott County.....	2
North Reading (town).....	1	Southampton County.....	1
Reading (town).....	1	Spotsylvania County.....	1
Somerville.....	1	Tazewell County.....	1
Stoneham (town).....	1	Pocahontas.....	1
<b>Nantucket County—</b>		Washington County.....	4
Nantucket (town).....	2	Westmoreland County.....	4
<b>Norfolk County—</b>		Wise County.....	4
Brookline (town).....	1	Total.....	57
Norwood (town).....	1		
Walpole (town).....	1	<b>West Virginia (Mar.):</b>	
<b>Plymouth County—</b>		Boone County.....	10
Bridgewater (town).....	2	Braxton County.....	1
Brockton.....	2	Fayette County.....	1
<b>Suffolk County—</b>		Jackson County.....	2
Boston.....	3	Kanawha County.....	4
<b>Worcester County—</b>		Marion County.....	2
Clinton (town).....	1	Monongalia County.....	6
Leominster.....	1	Morgan County.....	1
Winchendon (town).....	1	Ohio County.....	3
Worcester.....	1	Roane County.....	1
Total.....	41	Wood County.....	2
		Total.....	33

## TYPHOID FEVER—Continued.

City Reports for Week Ended Apr. 6, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Albany, N. Y.	1		Minneapolis, Minn.	11	7
Alton, Ill.	1		Moline, Ill.	4	
Atlanta, Ga.	2		Morgantown, W. Va.	1	
Baltimore, Md.	8	1	Nashville, Tenn.	4	
Birmingham, Ala.	1	1	Newark, N. J.	2	
Boston, Mass.	1		New Britain, Conn.	3	
Buffalo, N. Y.	1		Newburgh, N. Y.	3	
Chanute, Kans.	3		New Castle, Pa.	2	
Charleston, W. Va.	4		New Orleans, La.	1	1
Charlotte, N. C.	1		New York, N. Y.	21	
Chattanooga, Tenn.	2		Norfolk, Va.	3	
Chicago, Ill.	2		Oakland, Cal.	1	
Cleveland, Ohio	1	1	Philadelphia, Pa.	5	2
Covington, Ky.	1		Pittsburgh, Pa.	1	3
Danville, Ill.	1		Portland, Oreg.	2	
Decatur, Ill.	1		Reno, Nev.	1	
Denver, Colo.	1		Richmond, Va.	2	
Detroit, Mich.	3		Rochester, N. Y.	1	
Duluth, Minn.	1		Sacramento, Cal.	1	
East Chicago, Ind.	2	1	Saginaw, Mich.	1	
Erie, Pa.	1	1	St. Louis, Mo.	4	1
Evansville, Ind.	2	1	St. Paul, Minn.	1	
Fall River, Mass.	1		San Francisco, Cal.	1	
Fort Wayne, Ind.	1		Savannah, Ga.	1	
Fresno, Cal.	1		Seattle, Wash.	1	
Grand Rapids, Mich.	2	3	Steubenville, Ohio.	1	
Hammond, Ind.	4	1	Syracuse, N. Y.	1	
Hartford, Conn.	1		Toledo, Ohio.	2	
Hoquiam, Wash.	1		Trenton, N. J.	1	
Independence, Kans.	1		Waco, Tex.	5	
Indianapolis, Ind.	3	1	Waltham, Mass.	1	
Jackson, Mich.	1		Washington, Pa.	1	
Johnstown, Pa.	1		Washington, D. C.	1	
Kansas City, Kans.	1		Watertown, N. Y.	2	
Knoxville, Tenn.	1	1	Wheeling, W. Va.	3	
La Fayette, Ind.	1	1	Wilkes-Barre, Pa.	1	
Lawrence, Mass.	1		Wilmington, Del.		1
Long Beach, Cal.	1		Winston-Salem, N. C.	3	
Los Angeles, Cal.	2		Woonsocket, R. I.	2	
Louisville, Ky.		1	Zanesville, Ohio:	1	1
Milwaukee, Wis.	6	2			

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

State Reports for February and March, 1918.

State.	Cases reported.			State.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.		Diphtheria.	Measles.	Scarlet fever.
California (March)...	295	5,273	379	Rhode Island (March).....	79	271	62
District of Columbia (March).....	49	2,090	161	Virginia (February)	111	3,808	114
Louisiana (March).....	51	644	13	West Virginia (March).....	19	340	25
Massachusetts (March).....	747	4,018	537				

# DIPHThERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS— Continued.

City Reports for Week Ended Apr. 6, 1918.

City.	Popula- tion as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md.	589,621	322	17	.....	458	4	10	.....	62	43
Boston, Mass.	756,476	283	61	8	262	5	28	.....	57	28
Chicago, Ill.	2,497,722	879	89	16	67	2	55	2	365	86
Cleveland, Ohio.	674,073	211	15	1	25	1	6	.....	31	31
Detroit, Mich.	571,784	258	46	2	56	3	37	1	48	32
Los Angeles, Cal.	503,812	131	25	.....	232	1	7	.....	49	31
New York, N. Y.	5,602,841	2,160	280	41	1,388	36	153	6	366	233
Philadelphia, Pa.	1,709,518	697	48	15	679	2	39	3	179	92
Pittsburgh, Pa.	579,090	276	17	2	344	2	15	1	41	22
St. Louis, Mo.	757,309	229	38	6	116	.....	34	.....	55	18
From 300,000 to 500,000 in- habitants:										
Buffalo, N. Y.	468,558	176	7	1	101	1	16	.....	35	22
Cincinnati, Ohio.	410,476	199	12	.....	27	.....	7	.....	29	33
Jersey City, N. J.	306,345	.....	8	1	43	1	12	.....	16	9
Milwaukee, Wis.	436,535	103	4	1	313	1	25	.....	42	8
Minneapolis, Minn.	363,454	.....	20	2	35	.....	22	.....	.....	8
Newark, N. J.	408,894	180	27	4	471	8	16	.....	54	22
New Orleans, La.	371,747	144	9	.....	10	1	1	.....	37	36
San Francisco, Cal.	463,516	140	2	.....	81	.....	9	.....	31	13
Seattle, Wash.	348,639	.....	3	.....	46	.....	10	.....	.....	.....
Washington, D. C.	363,980	150	7	.....	553	4	39	3	24	12
From 200,000 to 300,000 in- habitants:										
Columbus, Ohio.	214,878	79	1	.....	21	.....	20	.....	7	8
Denver, Colo.	260,800	109	13	3	95	.....	43	1	.....	21
Indianapolis, Ind.	271,708	.....	20	2	45	.....	37	1	15	13
Louisville, Ky.	238,910	104	9	.....	15	.....	5	.....	21	17
Portland, Oreg.	295,463	54	.....	.....	291	.....	4	1	5	2
Providence, R. I.	254,960	110	12	3	159	.....	7	.....	2	10
Rochester, N. Y.	256,417	82	10	1	58	.....	24	.....	23	6
St. Paul, Minn.	247,232	83	18	.....	15	.....	31	4	15	5
From 100,000 to 200,000 inhabit- ants:										
Albany, N. Y.	104,199	.....	.....	.....	16	.....	.....	.....	3	.....
Atlanta, Ga.	190,558	61	1	.....	12	.....	3	.....	21	7
Birmingham, Ala.	181,762	.....	1	.....	8	1	.....	.....	6	5
Bridgeport, Conn.	121,579	45	10	.....	7	.....	2	.....	6	4
Cambridge, Mass.	112,981	32	19	.....	44	1	2	.....	3	6
Camden, N. J.	106,233	.....	5	.....	16	.....	5	.....	6	.....
Dallas, Tex.	124,527	.....	2	.....	28	.....	.....	.....	.....	6
Dayton, Ohio.	127,224	.....	3	.....	10	.....	2	.....	.....	3
Des Moines, Iowa	101,598	.....	.....	.....	2	.....	19	.....	.....	.....
Fall River, Mass.	128,366	35	1	.....	3	.....	5	.....	11	5
Grand Rapids, Mich.	128,291	39	3	1	7	.....	5	.....	1	1
Hartford, Conn.	110,500	60	6	1	7	.....	2	.....	9	4
Houston, Tex.	112,307	52	.....	.....	15	.....	4	.....	4	4
Lawrence, Mass.	100,560	32	3	2	29	.....	.....	.....	2	6
Lowell, Mass.	113,245	46	2	1	7	.....	4	.....	6	7
Lynn, Mass.	102,425	22	4	.....	19	.....	5	.....	11	2
Memphis, Tenn.	148,995	46	4	.....	9	.....	2	.....	32	8
Nashville, Tenn.	117,057	49	1	.....	13	.....	2	.....	4	2
New Bedford, Mass.	118,158	46	.....	.....	11	.....	.....	.....	20	9
New Haven, Conn.	149,685	.....	1	.....	3	.....	1	.....	6	7
Oakland, Cal.	198,604	50	.....	.....	37	.....	1	.....	8	7
Omaha, Nebr.	165,470	51	4	.....	17	.....	16	.....	.....	5
Reading, Pa.	109,381	44	5	.....	40	.....	2	.....	6	4
Richmond, Va.	156,687	52	4	.....	64	1	4	.....	9	4
Salt Lake City, Utah.	117,399	39	.....	.....	20	1	7	.....	.....	1
Scranton, Pa.	146,811	41	6	1	8	.....	3	.....	.....	3
Spokane, Wash.	150,323	.....	.....	.....	.....	.....	1	.....	.....	.....
Springfield, Mass.	105,942	44	4	.....	39	.....	4	.....	6	3
Syracuse, N. Y.	155,624	77	3	1	146	2	11	.....	5	5
Tacoma, Wash.	112,770	.....	.....	.....	1	.....	6	.....	.....	.....
Toledo, Ohio.	191,554	78	2	.....	31	.....	4	.....	10	13
Trenton, N. J.	111,563	80	3	.....	4	.....	1	.....	7	9
Worcester, Mass.	163,311	55	4	1	7	1	5	.....	6	.....

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

City Reports for Week Ended Apr. 6, 1918.—Continued.

City.	Popula- tion as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 50,000 to 100,000 inhabit- ants:										
Akron, Ohio.....	85,625	.....	6	.....	18	.....	8	.....	5	.....
Altoma, Pa.....	58,659	.....	1	.....	9	.....	2	.....	.....	.....
Atlantic City, N. J.....	57,660	.....	.....	.....	26	.....	.....	.....	1	.....
Augusta, Ga.....	50,245	12	.....	.....	14	.....	2	.....	.....	2
Bayonne, N. J.....	69,893	.....	2	.....	115	.....	1	.....	1	.....
Berkeley, Cal.....	57,653	13	.....	.....	1	.....	.....	.....	3	.....
Binghamton, N. Y.....	53,973	24	2	.....	9	.....	10	.....	1	3
Brockton, Mass.....	67,449	17	1	.....	16	.....	11	.....	3	3
Canton, Ohio.....	60,852	25	.....	.....	3	.....	1	.....	.....	.....
Charleston, S. C.....	60,734	23	3	1	3	.....	.....	.....	.....	3
Chattanooga, Tenn.....	60,075	6	.....	.....	.....	.....	.....	.....	1	3
Covington, Ky.....	57,144	33	1	.....	7	.....	1	.....	.....	8
Duluth, Minn.....	94,495	20	2	.....	3	.....	1	.....	6	3
Elizabeth, N. J.....	86,690	34	4	1	44	4	8	1	3	5
El Paso, Tex.....	63,705	36	1	.....	16	.....	1	.....	.....	12
Erie, Pa.....	75,195	26	.....	1	23	.....	2	.....	4	3
Evansville, Ind.....	76,078	27	.....	.....	12	.....	3	.....	2	3
Fort Wayne, Ind.....	76,183	35	6	1	16	.....	3	.....	2	2
Harrisburg, Pa.....	72,015	34	2	.....	29	.....	6	.....	1	1
Hoboken, N. J.....	77,214	23	1	.....	6	.....	1	.....	6	2
Holyoke, Mass.....	65,286	23	1	.....	5	.....	1	.....	3	2
Jacksonville, Fla.....	76,101	32	.....	.....	17	.....	.....	.....	2	1
Johnstown, Pa.....	68,529	28	3	.....	.....	.....	11	.....	.....	.....
Kansas City, Kans.....	99,437	.....	2	.....	16	.....	3	.....	3	.....
Lancaster, Pa.....	50,853	.....	.....	.....	19	.....	5	.....	3	.....
Little Rock, Ark.....	57,343	6	3	.....	4	.....	6	.....	.....	1
Malden, Mass.....	51,155	19	4	2	17	.....	6	.....	1	3
Manchester, N. H.....	78,283	16	4	.....	32	.....	.....	.....	7	1
Mobile, Ala.....	58,221	17	.....	.....	.....	1	.....	.....	.....	5
New Britain, Conn.....	53,794	18	4	.....	27	.....	2	.....	9	1
Norfolk, Va.....	89,612	.....	1	.....	39	.....	6	.....	.....	6
Oklahoma City, Okla.....	92,943	28	.....	.....	18	.....	2	.....	7	1
Passaic, N. J.....	71,744	21	3	.....	8	.....	1	.....	4	2
Pawtucket, R. I.....	59,411	26	.....	.....	3	1	1	.....	.....	1
Peoria, Ill.....	71,458	21	1	.....	5	.....	1	.....	.....	1
Portland, Me.....	63,867	21	.....	1	4	.....	1	.....	.....	.....
Rockford, Ill.....	55,185	14	.....	.....	13	.....	.....	.....	.....	2
Sacramento, Cal.....	66,895	31	.....	.....	74	.....	3	.....	5	4
Saginaw, Mich.....	55,642	24	1	.....	.....	.....	.....	.....	9	1
St. Joseph, Mo.....	85,236	36	2	2	6	1	.....	.....	2	.....
San Diego, Cal.....	53,330	28	2	1	40	.....	3	.....	5	4
Savannah, Ga.....	68,805	25	1	.....	5	.....	.....	.....	2	4
Schenectady, N. Y.....	99,519	20	3	.....	3	.....	1	.....	6	.....
Sioux City, Iowa.....	57,078	.....	.....	.....	.....	.....	13	1	.....	1
Somerville, Mass.....	87,039	30	8	4	55	.....	3	.....	4	1
South Bend, Ind.....	68,946	19	.....	.....	6	.....	.....	.....	.....	3
Springfield, Ill.....	61,120	16	1	.....	97	1	1	.....	.....	3
Springfield, Ohio.....	51,550	21	.....	.....	3	.....	1	.....	2	3
Terre Haute, Ind.....	66,083	27	3	.....	2	.....	.....	.....	2	2
Troy, N. Y.....	77,916	39	1	1	1	.....	4	1	2	5
Wichita, Kans.....	70,722	.....	1	.....	33	.....	4	.....	5	1
Wilkes-Barre, Pa.....	76,776	20	6	.....	27	.....	3	.....	1	1
Wilmington, Del.....	94,265	46	1	1	38	.....	1	.....	.....	1
York, Pa.....	51,656	.....	.....	.....	8	.....	2	.....	3	.....
From 25,000 to 50,000 inhabit- ants:										
Alameda, Cal.....	27,732	5	3	.....	38	.....	2	.....	1	1
Austin, Tex.....	34,814	10	3	.....	.....	.....	3	.....	.....	.....
Battle Creek, Mich.....	29,460	.....	1	.....	73	.....	1	.....	.....	.....
Beaumont, Tex.....	27,711	12	.....	.....	.....	.....	.....	.....	.....	.....
Bellingham, Wash.....	32,985	.....	.....	.....	1	.....	.....	.....	.....	.....
Brookline, Mass.....	32,730	3	1	.....	31	.....	2	.....	1	.....
Burlington, Iowa.....	25,030	7	.....	.....	.....	.....	.....	.....	.....	.....
Butler, Pa.....	27,632	14	7	.....	20	.....	1	.....	.....	.....
Butte, Mont.....	43,425	57	1	.....	1	.....	1	.....	.....	.....
Central Falls, R. I.....	25,636	.....	1	.....	2	.....	.....	.....	.....	.....
Charleston, W. Va.....	29,941	13	1	.....	14	1	.....	.....	.....	1
Charlotte, N. C.....	39,823	14	1	.....	4	.....	.....	.....	.....	3
Chelsea, Mass.....	46,192	21	7	.....	43	.....	1	.....	4	1

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

City Reports for Week Ended Apr. 6, 1918—Continued.

City.	Popula- tion as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabit- ants—Continued.										
Chicopee, Mass.	29,319	12	4				2		2	5
Clinton, Iowa	27,366				3		1			
Colorado Springs, Colo.	32,971	14	2		22				3	1
Columbia, S. C.	34,611		1		2					
Council Bluffs, Iowa	31,484	18			2		1			
Cumberland, Md.	26,074	5			13		8		3	
Danville, Ill.	32,261	5	1		57					1
Davenport, Iowa.	43,811				2		6			
Decatur, Ill.	39,631	11			17				2	1
Dubuque, Iowa	39,873		1	2						
Durham, N. C.	25,061	6			2					2
East Chicago, Ind.	28,743	14			6					2
Easton, Pa.	30,530	10	1		29					
East Orange, N. J.	42,458	9	2		60		2	1	3	
Elgin, Ill.	28,203	6			1					
Elmira, N. Y.	33,120	8	1		30				14	4
Evanston, Ill.	28,591	4							1	
Everett, Mass.	39,233	11		2	8				4	2
Fitchburg, Mass.	41,781	18	1		7		1		1	4
Fresno, Cal.	34,958	5	1		22					
Galveston, Tex.	41,863	8	1		4				1	1
Green Bay, Wis.	29,353	9			3		1			
Hammond, Ind.	26,171	21	1				1			1
Haverhill, Mass.	48,477				45				4	
Jackson, Mich.	35,363	16	1		10		35		4	1
Joliet, Ill.	38,010				4		1		2	
Kalamazoo, Mich.	48,886	22			12				1	1
Kenosha, Wis.	31,576	8	3		2		4		1	
Knoxville, Tenn.	38,676		1		10				5	5
La Crosse, Wis.	31,677	7	2						1	1
Lexington, Ky.	41,097	31			20				18	5
Lima, Ohio.	35,384	15			2					
Lincoln, Nebr.	46,515	7	1		1		4			
Long Beach, Cal.	27,587	7	1		20				1	
Lorain, Ohio.	36,964		1						1	
Lynchburg, Va.	32,940	9			6				1	1
Macon, Ga.	45,757	8			1		1		1	1
Madison, Wis.	30,699	10			1		2			1
McKeesport, Pa.	47,521		1		11		1			
Medford, Mass.	26,234	6	5		7		3		1	2
Moline, Ill.	27,451	11	5	1	16		1			1
Montclair, N. J.	26,318	4			36				1	
Montgomery, Ala.	43,285	11	1		4					
Mount Vernon, N. Y.	37,009	10	4		6		1		1	
Muncie, Ind.	25,424	8			2		2		1	1
Muskogee, Okla.	44,218		1		1					
Nashua, N. H.	27,327	6	1		3					1
Newburgh, N. Y.	29,603	19			3					1
New Castle, Pa.	41,133		1		6				3	
Newport, Ky.	31,927	11								
Newport, R. I.	30,108	6	2				3		5	1
Newton, Mass.	43,715	16			18					1
Niagara Falls, N. Y.	37,353	20	4	1			5		2	1
Norristown, Pa.	31,401	6			1					1
Oak Park, Ill.	26,654	6	7		21				2	2
Ogden, Utah	31,404	17			45		3			
Orange, N. J.	33,080	14	1		34				1	1
Oshkosh, Wis.	36,065	5			4		1		3	
Pasadena, Cal.	46,450	7			234		1			
Perth Amboy, N. J.	41,185	20		1						1
Petersburg, Va.	25,582		1		8				3	1
Pittsfield, Mass.	38,629	11					7		4	2
Portsmouth, Va.	39,651	14	1		10		3		1	1
Poughkeepsie, N. Y.	30,390	13			114		1		4	2
Quincy, Ill.	36,798	13	4		14					1
Quincy, Mass.	38,136	11			63				3	
Racine, Wis.	46,486	15			57		1		4	3
Roanoke, Va.	43,284	24			40				4	2
Rock Island, Ill.	28,926	11	1		19		3		1	

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

City Reports for Week Ended Apr. 6, 1918—Continued.

City.	Popula- tion as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabit- ants—Continued.										
Salem, Mass.	48,562	19	1		20	1	1		4	3
San Jose, Cal.	38,902				15					
Sheboygan, Wis.	28,559	9	2				1		2	3
Springfield, Mo.	40,341	10			1		2	1		2
Steubenville, Ohio	27,445	16					2		2	
Stockton, Cal.	35,358	14	3		56				1	
Superior, Wis.	46,226	6					3			
Taunton, Mass.	36,283	14	1						5	2
Topeka, Kans.	48,726	1	1				24		1	
Waco, Tex.	33,385	8			6		1			
Walla Walla, Wash.	25,136						1			
Waltham, Mass.	30,570	10	1		15				1	
Watertown, N. Y.	29,894				62					1
West Hoboken, N. J.	43,139	13			8		2		2	
Wheeling, W. Va.	43,377	20			6				1	
Williamsport, Pa.	33,809	9	2				3			
Wilmington, N. C.	29,892	8			32					
Winston-Salem, N. C.	31,155	25			11		1		4	
Zanesville, Ohio.	30,863	16							1	1
From 10,000 to 25,000 inhabitants:										
Abilene, Tex.	14,238	4			2		2			
Alexandria, La.	15,333	5	1							1
Alton, Ill.	22,874	11	1							
Anderson, Ind.	23,996	7			6		1		1	
Ann Arbor, Mich.	15,010	13	1		36		3			
Anniston, Ala.	14,112						1		2	
Appleton, Wis.	17,834						3	1		
Asbury Park, N. J.	14,007	2								1
Barre, Vt.	12,169	4								
Beaver Falls, Pa.	13,532						2			
Bedford, Ind.	10,349	2								1
Beloit, Wis.	18,072				12		2			1
Berlin, N. H.	13,599	3								
Billings, Mont.	14,422				8		3			
Bloomington, Ind.	11,383	6								
Braddock, Pa.	21,685	5			1			1		
Burlington, Vt.	21,617	6	1				3			
Cairo, Ill.	15,794	14			1					2
Chanute, Kans.	12,455				4				1	
Chillicothe, Ohio.	15,470	3			17		3			
Clinton, Mass.	13,075	3			11		1		2	
Coffeyville, Kans.	17,548		1		3					
Concord, N. H.	22,669	13			1					
Corpus Christi, Tex.	10,432	1	1						1	
Corsicana, Tex.	10,022	5	1		15					1
Crawfordsville, Ind.	11,164	2	6							
Dover, N. H.	13,272	6								
East Providence, R. I.	18,113				1					
Eau Claire, Wis.	18,807				36					
Elwood, Ind.	11,028				1					
Fargo, N. Dak.	17,389	3	1		2					
Fort Scott, Kans.	10,550	12			4					
Galesburg, Ill.	24,276	10			12					1
Grand Forks, N. Dak.	15,837	14								
Greeley, Colo.	11,420	5					5			
Greensboro, N. C.	19,577	2							2	
Greenville, S. C.	18,181	6								
Hackensack, N. J.	16,945	7	1		10		2			
Harrison, N. J.	16,950		2		2					
Hattiesburg, Miss.	16,482						1		6	
Independence, Kans.	14,506	3								1
Janesville, Wis.	14,339	4			1		4			
Kearny, N. J.	23,539	10			24		1			
Kokomo, Ind.	20,930	5	3							2
La Fayette, Ind.	21,286	8	1		1				1	
Leavenworth, Kans.	19,363	6	3		13		3		1	
Lincoln, R. I.	10,383	2								1

<sup>1</sup> Population Apr. 15, 1910; no estimate made.

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

City Reports for Week Ended Apr. 6, 1918—Continued.

City.	Popula- tion as of July 1, 1914 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 10,000 to 25,000 inhabit- ants—Continued.										
Logansport, Ind.	21,046	9			1				1	
Long Branch, N. J.	15,395	1								
Manitowoc, Wis.	13,805	2								
Marinette, Wis.	14,610	1	1				1			
Marion, Ind.	19,834	3			3					
Marshall, Tex.	13,712	5	1						1	
Martinsburg, W. Va.	12,666		2							
Mason City, Iowa.	14,457	1	1		2					
Melrose, Mass.	17,445	9			2		1		1	
Michigan City, Ind.	21,512	8	1				4	1		
Mishawaka, Ind.	16,385		1		3					
Missoula, Mont.	18,214	8					1			1
Morgantown, W. Va.	13,709	6								
Morristown, N. J.	13,284	7					1			
Moundsville, W. Va.	11,153	1								
Nanticoke Pa.	23,126	10	1							
New Albany, Ind.	23,629	10								3
Newburyport, Mass.	15,243	5			2				1	
New Castle, Ind.	13,241	3					3			
New London, Conn.	20,985	13	1		1		3		1	
North Adams, Mass.	12,019	9							4	
Northampton, Mass.	19,926	10							1	
North Little Rock, Ark.	14,907				1					1
North Yakima, Wash.	20,951				4		2		3	
Parkersburg, W. Va.	20,612	9			2		1			
Plainfield, N. J.	23,805	12			9				1	1
Pontiac, Mich.	17,524	8	1		5					1
Portsmouth, N. H.	11,666		1		5	1	4			
Raleigh, N. C.	20,127	8			8				1	1
Redlands, Cal.	14,000	3			31					
Reno, Nev.	14,869	5	1							
Richmond, Ind.	24,697	9			1				3	
Rocky Mount, N. C.	12,067	7			1				1	2
Rutland, Vt.	14,831	5							1	1
Sandusky, Ohio.	20,193	10								1
Saratoga Springs, N. Y.	13,821	3			1					
Shelbyville, Ind.	10,965	4								
Spartanburg, S. C.	21,365	10			4				1	
Steelton, Pa.	15,548	3			2					
Trinidad, Colo.	13,875				3					
Vancouver, Wash.	13,180				30		1			
Wausau, Wis.	19,239	3			28			1		
Washington, Pa.	21,618				44					
West Orange, N. J.	13,650	3	1		26					2
Wilksburg, Pa.	23,228	13	1		25		2			1
Woburn, Mass.	15,969	7								

<sup>1</sup> Population Apr. 15, 1910; no estimate made.

## FOREIGN.

### CHINA.

#### Plague—Anhwei Province.

An outbreak of pneumonic plague was reported February 27, 1918, in Anhwei Province, China, with 9 fatal cases notified at Fengyanghsien, and 1 fatal case at Pengpu.

### GUATEMALA.

#### Yellow Fever—Retalhuleu.

Yellow fever was reported present in Guatemala, April 22, at Retalhuleu, a town situated on the Guatemala Central Railroad and about 25 miles from the port of Champerico.

### MEXICO.

#### Yellow Fever—Merida.

A fatal case of yellow fever was notified at Merida, State of Yucatan, Mexico, April 18, 1918.

### PORTUGAL.

#### Further Relative to Typhus Fever—Oporto.<sup>1</sup>

Typhus fever has been reported at Oporto, Portugal, as follows: Month of December, 1917, 23 cases; period January 1 to March 8, 1918, 1,811 cases.

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

### Reports Received During Week Ended Apr. 26, 1918.<sup>2</sup>

#### CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
<b>India:</b>				
Calcutta.....	Oct. 7-Nov. 10.....		43	
Madras.....	Jan. 13-19.....	6	3	
<b>Philippine Islands:</b>				
Provinces.....				
Bohol.....	Mar. 10-16.....	39	32	Mar. 10-16, 1918: Cases, 75; deaths, 57.
Capiz.....	do.....	3	1	
Davao.....	do.....	10	8	
Leyte.....	do.....	6	3	
Misamis.....	do.....	17	13	

<sup>1</sup> Public Health Reports, Mar. 1, 1918, p. 301.

<sup>2</sup> 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 Apr. 26, 1918—Continued.**

## **PLAGUE.**

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Bahia.....	Feb. 17-23.....	1	1	
China:				
Anhui Province—				
Fengyanghsien.....	Feb. 27.....	.....	9	Pneumonic.
Pengpu.....	do.....	.....	1	Do.
Ecuador:				
Babahoyo.....	Feb. 1-15.....	1	.....	
Duran.....	do.....	1	1	
Guayaquil.....	do.....	44	18	
Do.....	Mar. 1-15.....	20	7	
India:				
Madras Presidency.....	Jan. 13-19.....	1,746	1,368	Oct. 21-27, 1917: Cases, 1,188; deaths, 902. Nov. 18-24, 1917: Cases, 1,304; deaths, 1,057.
Indo-China:				
Cochin China—				
Saigon.....	Feb. 18-24.....	19	13	
Java:				
East Java.....				
Kediri.....	Oct. 8-Dec. 31.....	1	1	Oct. 8-Dec. 31, 1917: Cases, 196; deaths, 193.
Madioen.....	do.....	49	49	
Samarang.....	do.....	110	109	
Surabaya.....	do.....	25	23	
Surakarta.....	do.....	11	11	

## **SMALLPOX.**

Algeria:				
Algiers.....	Feb. 1-28.....	11	1	
Canada:				
British Columbia—				
Winnipeg.....	Mar. 24-30.....	1	.....	
Nova Scotia—				
Halifax.....	Mar. 31-Apr. 6....	2	.....	
Quebec—				
Montreal.....	Mar. 31-Apr. 6....	2	.....	
China:				
Chungking.....	Feb. 3-16.....	.....	.....	Present.
Dairen.....	Mar. 10-16.....	8	1	
Hankow.....	Feb. 25-Mar. 3....	1	.....	
Nanking.....	Feb. 24-Mar. 16....	.....	.....	Epidemic.
Tientsin.....	Feb. 10-16.....	2	.....	
Ecuador:				
Guayaquil.....	Feb. 1-15.....	3	3	
France:				
Paris.....	Feb. 25-Mar. 2....	3	1	
Great Britain:				
Hull.....	Mar. 17-23.....	1	.....	
Greece:				
Saloniki.....	Mar. 3-16.....	.....	2	
India:				
Madras.....	Jan. 13-19.....	16	4	Nov. 19-24, 1917: Cases, 2.
Indo-China:				
Cochin-China—				
Saigon.....	Feb. 18-24.....	114	46	
Mexico:				
Mazatlan.....	Mar. 27-Apr. 2....	.....	1	
Mexico City.....	Mar. 10-30.....	29	.....	
Philippine Islands:				
Manila.....	Mar. 10-16.....	5	2	Varioloid, 23.
Porto Rico:				
San Juan.....	Mar. 23-31.....	1	.....	Varioloid.
Spain:				
Valencia.....	Jan. 27-Feb. 2....	1	.....	

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

**Reports Received During Week Ended Apr. 26, 1918—Continued.**

## **TYPHUS FEVER.**

Place.	Date.	Cases.	Deaths.	Remarks.
Egypt:				
Alexandria.....	Feb. 26-Mar. 11...	186	44	
Great Britain:				
Belfast.....	Mar. 17-30.....	4		
Dublin.....	Mar. 24-30.....	3		
Glasgow.....	Mar. 17-23.....	3	1	
Greece:				
Saloniki.....	Mar. 3-16.....		5	
Italy:				
San Remo.....	Mar. 10-16.....	2		
Mexico:				
Aguascalientes.....	Apr. 1-7.....		1	
Mexico City.....	Mar. 10-30.....	99		
Portugal:				
Oporto.....	Dec. 1-31.....	23	4	
Do.....	Jan. 1-Mar. 8.....	1,811	161	
Tunisia:				
Tunis.....	Mar. 9-15.....	29	4	Of these, 26 in outbreak in prison.
Union of South Africa:				
Cape of Good Hope State...	Sept. 10-Jan. 27...	4,248	866	European cases, 32; deaths, 5.

## **YELLOW FEVER.**

Place.	Date.	Cases.	Deaths.	Remarks.
Ecuador:				
Babahoyo.....	Feb. 1-15.....	1	1	
Guayaquil.....	do.....	1		
Do.....	Mar. 1-15.....	1	1	
Milagro.....	Feb. 1-15.....	1	1	
Guatemala:				
Retalhuleu.....	Apr. 22.....			Present. About 25 miles from Champerico, Pacific port.
Mexico:				
Yucatan, State—				
Merida.....	Apr. 18.....	1	1	

**Reports Received from Dec. 29, 1917, to Apr. 19, 1918.**

## **CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Antung.....	Nov. 26-Dec. 2....	3	1	
India:				
Bombay.....	Oct. 28-Dec. 15....	19	14	
Do.....	Dec. 30-Jan. 26....	200	170	
Calcutta.....	Sept. 16-Dec. 15....		92	
Do.....	Dec. 30-Jan. 26....		24	
Karachi.....	do.....	25	6	
Madras.....	Nov. 25-Dec. 22....	2	2	
Do.....	Dec. 30-Feb. 2....	29	14	
Rangoon.....	Nov. 4-Dec. 22....	5	5	
Do.....	Dec. 30-Jan. 5....	1	1	
Indo-China:				
Provinces.....				Sept. 1-Nov. 30, 1917: Cases, 152; deaths, 89.
Anam.....	Sept. 1-Nov. 30....	18	13	
Cambodia.....	do.....	72	52	
Cochin-China.....	do.....	50	22	
Saigon.....	Nov. 22-Dec. 9....	4	3	
Do.....	Feb. 4-17.....	4		
Kwang-Chow-Wan.....	Sept. 1-30.....	10	2	
Java:				
East Java.....	Oct. 23-Nov. 3....	1	1	
West Java.....				Oct. 19-Dec. 27, 1917: Cases, 102; deaths, 56. Dec. 23, 1917-Jan. 31, 1918: Cases, 27; deaths, 7.
Batavia.....	Oct. 19-Dec. 27....	49	23	
Do.....	Dec. 23-Jan. 31....	24	1	

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

**Reports Received from Dec. 29, 1917, to Apr. 19, 1918—Continued.**

## **CHOLERA—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Persia:</b>				
Mazanderan Province				July 30-Sept. 3, 1917: Cases, 384; deaths, 276.
Achraf	July 30-Aug. 16	90	88	Present.
Astrabad	July 31			
Barfrush	July 1-Aug. 16	39	25	
Chahmirzad				25 cases reported July 31, 1917.
Chahrastagh	June 15-July 25	10	8	
Charoud	Aug. 26-Sept. 3	4	2	
Damghan	Aug. 26			Present.
Kharek	May 28-June 11	21	13	
Meched	Aug. 18-Sept. 2	174	82	
Ouzoun Dare	Aug. 8			Do.
Sabzevar	Aug. 24			Do.
Sari	July 3-29	273	144	
Semman	Aug. 31-Sept. 2	14	5	
Yekchambe-Bazar	June 3	6		
<b>Philippine Islands:</b>				
Provinces				Nov. 18-Dec. 29, 1917: Cases, 1,053; deaths, 603. Dec. 30, 1917-Mar. 2, 1918: Cases, 1,258; deaths, 798.
Antique	Nov. 18-Dec. 1	48	32	
Do.	Feb. 3-9	4	4	
Bohol	Nov. 18-Dec. 29	169	111	
Do.	Dec. 30-Mar. 2	339	274	
Capiz	Nov. 25-Dec. 29	27	21	
Do.	Dec. 30-Mar. 2	202	168	
Cebu	Dec. 23-29	3		
Do.	Dec. 30-Mar. 2	79	42	
Iloilo	Nov. 25-Dec. 29	179	135	
Do.	Dec. 30-Mar. 2	97	63	
Leyte	Nov. 25-Dec. 22	13	12	
Do.	Feb. 3-Mar. 2	38	33	
Mindanao	Nov. 25-Dec. 29	337	196	
Do.	Dec. 30-Feb. 9	351	220	
Misamis	Feb. 24-Mar. 2	33	21	
Occidental Negros	Nov. 25-Dec. 22	177	123	
Do.	Jan. 13-Mar. 2	88	57	
Oriental Negros	Nov. 25-Dec. 29	99	62	
Do.	Dec. 30-Feb. 16	17	14	
Romblon	Nov. 25-Dec. 1	1	1	
Surigao	Feb. 24-Mar. 2	8	5	
Zamboanga	do	12	7	
<b>Siam:</b>				
Bangkok	Sept. 16-22	1	1	
<b>Turkey in Asia:</b>				
Bagdad	Nov. 1-15		40	

## **PLAGUE.**

<b>Brazil:</b>				
Bahia	Nov. 4-Dec. 15	4	4	
Do.	Dec. 30-Jan. 12	3	2	
Rio de Janeiro	Dec. 23-29	1		
Do.	Jan. 6-12	1	1	
<b>British Gold Coast:</b>				
Axim	Jan. 8			Present.
<b>Ceylon:</b>				
Colombo	Oct. 14-Dec. 1	14	13	
Do.	Dec. 30-Jan. 19	7	5	
<b>China:</b>				
North China				Present in January, 1918; pneumonic form.
Chili Province—Kalgan				Vicinity. Present in February, 1918.
Shansi Province				Present in February, 1918; 116 cases estimated.
<b>Ecuador:</b>				
Guayaquil	Sept. 1-30	3	1	Sept. 1-Nov. 30, 1917: Cases, 68; deaths, 24. Reported outbreak occurring about Jan. 17, 1918.
Do.	Oct. 1-31	20	8	
Do.	Nov. 1-30	45	15	
<b>Egypt:</b>				
Alexandria	Jan. 14-28	1	2	Jan. 1-Nov. 15, 1917: Cases, 728; deaths, 398.
Port Said	July 23-29	1	2	

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

**Reports Received from Dec. 29, 1917, to Apr. 19, 1918—Continued.**

## **PLAGUE—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>India:</b>				
Bassein.....	Dec. 9-29.....	.....	8	Sept. 16-Dec. 29, 1917: Cases, 228,834; deaths, 174,743. Dec. 30, 1917-Jan. 26, 1918: Cases, 123,934; deaths, 98,950.
Do.....	Dec. 30-Jan. 19.....	.....	14	
Bombay.....	Oct. 28-Dec. 29.....	147	123	
Do.....	Dec. 30-Jan. 26.....	81	59	
Calcutta.....	Sept. 16-29.....	.....	2	
Do.....	Dec. 30-Jan. 12.....	.....	3	
Henzada.....	Oct. 21-27.....	.....	1	
Do.....	Jan. 5-19.....	.....	5	
Karachi.....	Oct. 21-Dec. 29.....	27	20	
Do.....	Dec. 30-Jan. 26.....	16	14	
Madras Presidency.....	Oct. 31-Nov. 17.....	3,294	2,560	
Do.....	Jan. 6-Feb. 2.....	5,314	4,060	
Mandalay.....	Oct. 14-Nov. 17.....	.....	89	
Do.....	Dec. 30-Jan. 12.....	.....	236	
Myingyan.....	do.....	.....	110	
Prome.....	Jan. 5-12.....	.....	1	
Rangoon.....	Oct. 21-Dec. 22.....	.....	56	
Do.....	Dec. 30-Jan. 26.....	79	74	
Toungoo.....	Dec. 9-29.....	.....	5	
Do.....	Dec. 30-Jan. 19.....	.....	4	
<b>Indo-China:</b>				
Provinces:				Sept. 1-Nov. 30, 1917: Cases, 89; deaths, 68.
Anam.....	Sept. 1-Nov. 30.....	28	25	
Cambodia.....	do.....	39	28	
Cochin-China.....	do.....	22	15	
Saigon.....	Oct. 31-Dec. 23.....	17	6	
Do.....	Dec. 31-Feb. 17.....	55	18	
<b>Java:</b>				
East Java.....				Oct. 27-Dec. 31, 1917: Cases, 221; deaths, 217.
Do.....				Jan. 1-14, 1918: Cases, 22; deaths, 21.
Surabaya.....	Nov. 4-Dec. 31.....	6	6	
Do.....	Jan. 7-14.....	10	10	
West Java.....				Nov. 25-Dec. 9, 1917: Cases, 45; deaths, 45.
				Dec. 1, 1917-Jan. 15, 1918: Cases, 106.
<b>Peru:</b>				
Ancachs Department—				
Casma.....	Dec. 1-Jan. 15.....	2	.....	
Lambayeque Department.....	do.....	22	.....	At Chiclayo, Ferrenafe, Jayanca, Lambayeque.
Libertad Department.....	do.....	72	.....	At Guadalupe, Mansiche, Pacasmayo, Salaverry, San Jose, San Pedro, and country district of Trujillo.
Lima Department.....	do.....	9	.....	City and country.
Piura Department—				
Catacaos.....	do.....	1	.....	
<b>Senegal:</b>				
St. Louis.....	Feb. 2.....	.....	.....	Present.
<b>Siam:</b>				
Bangkok.....	Sept. 16-Dec. 23.....	13	9	
Do.....	Jan. 13-Feb. 9.....	15	11	
<b>Straits Settlements:</b>				
Singapore.....	Oct. 28-Dec. 29.....	5	7	
Do.....	Jan. 6-Feb. 16.....	29	28	

## **SMALLPOX.**

<b>Algeria:</b>				
Algiers.....	Nov. 1-Dec. 31.....	3	1	
Do.....	Jan. 1-31.....	2	.....	
<b>Australia:</b>				
New South Wales.....				July 12-Dec. 20, 1917: Cases, 36.
Abermain.....	Oct. 25-Nov. 29.....	3	.....	Jan. 4-17, 1918: Case, 1.
Cessnock.....	July 12-Oct. 11.....	7	.....	Newcastle district.
Eumangla.....	Aug. 13.....	1	.....	
Kurri Kurri.....	Dec. 5-20.....	2	.....	
Mungindi.....	Aug. 13.....	1	.....	
Warren.....	July 12-Oct. 25.....	22	.....	
Do.....	Jan. 1-17.....	1	.....	

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

**Reports Received from Dec. 29, 1917, to Apr. 19, 1918—Continued.**

## **SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Brasil:</b>				
Bahia.....	Nov. 10-Dec. 8....	3	.....	
Pernambuco.....	Nov. 1-15.....	1	.....	
Rio de Janeiro.....	Sept. 30-Dec. 29....	703	180	
Do.....	Dec. 30-Mar. 9.....	231	83	
Sao Paulo.....	Oct. 29-Nov. 4.....	.....	2	
<b>Canada:</b>				
British Columbia—				
Vancouver.....	Jan. 13-Mar. 9.....	5	.....	
Victoria.....	Jan. 7-Feb. 2.....	2	.....	
Winnipeg.....	Dec. 30-Jan. 5.....	1	.....	
New Brunswick—				
Kent County.....	Dec. 4.....	.....	.....	Outbreak. On main line Canadian Ry., 25 miles north of Moncton.
Do.....	Jan. 22.....	40	.....	In 7 localities.
Northumberland County.....	.....do.....	41	.....	In 5 localities.
Restigouche County.....	Jan. 18.....	60	.....	
St. John County—				
St. John.....	Mar. 3-Apr. 6.....	5	.....	
Victoria County.....	Jan. 22.....	10	.....	At Limestone and a lumber camp.
Westmoreland County—				
Moncton.....	Jan. 20-Apr. 6.....	16	.....	
York County.....	Jan. 22.....	8	.....	
Nova Scotia—				
Halifax.....	Feb. 24-Mar. 30....	3	.....	
Sydney.....	Feb. 3-Apr. 6.....	15	.....	
Ontario.....				
Arnprior.....	Mar. 31-Apr. 6.....	.....	1	
Hamilton.....	Dec. 16-22.....	1	.....	
Do.....	Jan. 13-19.....	2	.....	
Ottawa.....	Mar. 4-24.....	5	.....	
Sarnia.....	Dec. 9-15.....	1	.....	
Do.....	Jan. 6-Mar. 30....	32	.....	
Toronto.....	Feb. 10-Apr. 6.....	2	.....	
Windsor.....	Dec. 30-Jan. 5.....	1	.....	
Prince Edward Island—				
Charlottetown.....	Feb. 7-13.....	1	.....	
Quebec—				
Montreal.....	Dec. 16-Jan. 5.....	5	.....	
Do.....	Jan. 6-Mar. 30....	10	.....	
<b>China:</b>				
Amoy.....	Oct. 22-Dec. 30....	.....	.....	Present.
Do.....	Dec. 31-Feb. 10....	.....	.....	Do.
Antung.....	Dec. 2-23.....	13	2	
Do.....	Jan. 7-Feb. 17....	6	2	
Changsha.....	Jan. 28-Mar. 10....	.....	1	
Chefoo.....	Jan. 27-Feb. 9.....	.....	.....	Do.
Chungking.....	Nov. 11-Dec. 29....	.....	.....	Do.
Do.....	Dec. 30-Feb. 2.....	.....	.....	Do.
Dairen.....	Nov. 18-Dec. 22....	3	1	
Do.....	Dec. 30-Mar. 2.....	39	2	
Harbin.....	May 14-June 30....	20	.....	Chinese Eastern Ry.
Do.....	July 1-Dec. 2.....	7	.....	Do.
Hongkong.....	Dec. 23-29.....	1	.....	
Do.....	Jan. 26-Feb. 9.....	6	1	
Hungtshotze Station.....	Oct. 28-Nov. 4.....	1	.....	Do.
Manchuria Station.....	May 14-June 30....	6	.....	Do.
Do.....	July 1-Dec. 2.....	3	.....	Do.
Mukden.....	Nov. 11-24.....	.....	.....	Present.
Nanking.....	Feb. 3-23.....	.....	.....	Epidemic.
Shanghai.....	Nov. 18-Dec. 23....	41	91	Cases, foreign; deaths among natives.
Do.....	Dec. 31-Mar. 10....	36	106	Do.
Swatow.....	Jan. 18.....	.....	.....	Unusually prevalent.
Tientsin.....	Nov. 11-Dec. 22....	13	.....	
Do.....	Dec. 30-Mar. 9.....	25	.....	
Tsingtau.....	Feb. 4-23.....	3	.....	
<b>Cuba:</b>				
Habana.....	Jan. 7.....	1	.....	Nov. 8, 1917: 1 case from Coruna; Dec. 5, 1917, 1 case.
Marianao.....	Jan. 8.....	1	.....	6 miles distant from Habana.

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

**Reports Received from Dec. 29, 1917, to Apr. 19, 1918—Continued.**

## **SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Ecuador.....				Sept. 1-Nov. 30, 1917: Cases, 26; deaths, 2.
Guayaquil.....	Sept. 1-30.....	8		
Do.....	Oct. 1-31.....	14	1	
Do.....	Nov. 1-30.....	4	1	
Egypt:				
Alexandria.....	Nov. 12-18.....	2	1	
Do.....	Jan. 8-Feb. 28.....	5		
Cairo.....	July 23-Nov. 18.....	6	1	
France:				
Lyon.....	Nov. 18-Dec. 16.....	6	3	
Do.....	Jan. 7-Feb. 17.....	11	2	
Marseille.....	Jan. 1-31.....		2	
Paris.....	Jan. 27-Feb. 23.....	2		
Great Britain:				
Cardiff.....	Feb. 3-9.....	4		
Greece:				
Saloniki.....	Jan. 27-Feb. 9.....		7	
Honduras:				
Santa Barbara Department	Jan. 1-7.....			Present in interior.
India:				
Bombay.....	Oct. 21-Dec. 29.....	50	12	
Do.....	Dec. 31-Jan. 26.....	26	5	
Karachi.....	Nov. 18-Dec. 29.....	4	2	Nov. 11-16, 1917: 10 cases with 4 deaths; imported on s. s. Mc-nesa from Basreh.
Madras.....	Oct. 31-Dec. 29.....	18	8	
Do.....	Dec. 30-Feb. 2.....	80	23	
Rangoon.....	Oct. 28-Dec. 22.....	6	1	
Do.....	Dec. 30-Jan. 26.....	7	2	
Indo-China:				
Provinces.....				Sept. 1-Nov. 30, 1917: Cases, 546; deaths, 146.
Anam.....	Sept. 1-Nov. 30.....	163	25	
Cambodia.....	do.....	16	8	
Cochin-China.....	do.....	353	108	
Saigon.....	Oct. 20-Dec. 30.....	120	26	
Do.....	Dec. 31-Feb. 17.....	290	100	
Laos.....	Oct. 1-31.....	1		
Do.....	Jan. 26-Feb. 3.....	1	1	
Tonkin.....	Sept. 1-Oct. 31.....	9	4	
Do.....	Jan. 26-Feb. 3.....	3		
Italy:				
Castellamare.....	Dec. 10.....	2		Among refugees.
Florence.....	Dec. 1-15.....	17	4	
Genoa.....	Dec. 2-31.....	11	3	
Do.....	Jan. 2-31.....	30	2	
Leghorn.....	Jan. 7-Mar. 10.....	32	7	
Messina.....	Jan. 3-19.....	1		
Milan.....				Oct. 1-Dec. 31, 1917: Cases, 32.
Naples.....	To Dec. 10.....	2		Among refugees.
Taormina.....	Jan. 20-Feb. 9.....	6		
Turin.....	Oct. 29-Dec. 29.....	123	120	
Do.....	Jan. 21-Mar. 3.....	56	3	
Japan:				
Nagasaki.....	Jan. 14-Mar. 10.....	6	2	
Taihoku.....	Dec. 15-21.....	1		Island of Taiwan (Formosa).
Do.....	Jan. 8-Mar. 11.....	25	5	Do.
Tokyo.....	Feb. 11-Mar. 6.....	26		City and suburbs.
Yokohama.....	Jan. 17-Feb. 3.....	4		
Java:				
East Java.....	Oct. 7-Dec. 23.....	50		Dec. 25-31, 1917: Cases, 7. Jan. 1-14, 1918: Cases, 3.
Surabaya.....	Dec. 25-31.....	1		Oct. 10-Dec. 26, 1917: Cases, 86; death, 1. Dec. 28, 1917-Jan. 23, 1918: Cases, 23.
Mid-Java.....				Oct. 19-Dec. 27, 1917: Cases, 231; deaths, 36. Dec. 28, 1917-Jan. 31, 1918: Cases, 116; deaths, 17.
Samarang.....	Nov. 6-Dec. 12.....	4	1	
West Java.....				
Batavia.....	Nov. 2-8.....	1		
Mexico:				
Aguaascalientes.....	Feb. 4-17.....		2	
Ciudad Juarez.....	Mar. 3-23.....	2	1	
Mazatlan.....	Dec. 5-11.....		1	
Do.....	Jan. 29-Mar. 5.....	4	3	
Mexico City.....	Nov. 11-Dec. 29.....	16		
Do.....	Dec. 30-Mar. 9.....	61		
Piedras Negras.....	Jan. 11.....	200		
Vera Cruz.....	Jan. 20-Mar. 2.....	7	3	

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

**Reports Received from Dec. 29, 1917, to Apr. 19, 1918—Continued.**

## **SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Newfoundland:				
St. Johns.....	Dec. 8-Jan. 4.....	29	.....	
Do.....	Jan. 5-Mar. 29.....	61	.....	
Trepassey.....	Jan. 4.....	.....	.....	Outbreak with 11 cases reported.
Philippine Islands:				
Manila.....	Oct. 28-Dec. 8.....	5	.....	
Do.....	Jan. 13-Mar. 2.....	15	2	Varioloid, 33.
Porto Rico:				
San Juan.....	Jan. 28-Mar. 17.....	32	.....	Varioloid.
Portugal:				
Lisbon.....	Nov. 4-Dec. 15.....	2	.....	
Do.....	Dec. 30-Mar. 16.....	6	.....	
Portuguese East Africa:				
Lourenço Marques.....	Aug. 1-Dec. 31.....	.....	16	
Russia:				
Archangel.....	Sept. 1-Oct. 31.....	7	.....	
Moscow.....	Aug. 26-Oct. 6.....	22	2	
Petrograd.....	Aug. 31-Nov. 18.....	76	3	
Siam:				
Bangkok.....	Nov. 25-Dec. 1.....	1	1	
Do.....	Jan. 6-19.....	1	1	
Spain:				
Coruna.....	Dec. 2-15.....	.....	4	
Do.....	Jan. 20-Feb. 23.....	.....	5	
Madrid.....	.....	.....	.....	Jan. 1-Dec. 31, 1917: Deaths, 77
Seville.....	Oct. 1-Dec. 30.....	.....	66	
Do.....	Jan. 1-31.....	.....	20	
Straits Settlements:				
Singapore.....	Nov. 25-Dec. 1.....	1	1	
Do.....	Dec. 30-Jan. 5.....	1	.....	
Tunisia:				
Tunis.....	Dec. 14-20.....	1	.....	
Turkey in Asia:				
Bagdad.....	.....	.....	.....	Present in November, 1917.
Union of South Africa:				
Cape of Good Hope State.....	Oct. 1-Dec. 31.....	28	.....	
East Liverpool.....	Jan. 20-26.....	1	.....	Varioloid.
Venezuela:				
Maracaibo.....	Dec. 2-8.....	.....	1	

## **TYPHUS FEVER.**

Algeria:				
Algiers.....	Nov. 1-Dec. 31.....	2	1	
Argentina:				
Rosario.....	Dec. 1-31.....	.....	1	
Australia:				
South Australia.....	.....	.....	.....	Nov. 11-17, 1917: Cases, 1.
Brazil:				
Rio de Janeiro.....	Oct. 28-Dec. 1.....	7	.....	
Canada:				
Ontario—				
Kingston.....	Dec. 2-8.....	3	.....	
Quebec—				
Montreal.....	Dec. 16-22.....	2	1	
China:				
Antung.....	Dec. 3-30.....	13	1	
Do.....	Dec. 31-Jan. 27.....	2	2	
Chosen (Formosa):				
Seoul.....	Nov. 1-20.....	1	.....	
Do.....	Feb. 1-28.....	3	2	
Egypt:				
Alexandria.....	Nov. 8-Dec. 28.....	57	15	
Do.....	Jan. 8-Feb. 25.....	223	54	
Cairo.....	July 23-Dec. 16.....	137	70	
Port Said.....	July 30-Nov. 11.....	5	5	
France:				
Marseille.....	Dec. 1-31.....	.....	1	
Great Britain:				
Belfast.....	Feb. 10-Mar. 16.....	17	3	
Glasgow.....	Dec. 21.....	1	.....	
Do.....	Jan. 20-Mar. 9.....	9	.....	
Manchester.....	Dec. 2-8.....	1	.....	

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

**Reports Received from Dec. 29, 1917, to Apr. 19, 1918—Continued**

## **TYPHUS FEVER—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Greece:</b>				
Arta.....	Feb. 19.....	2	.....	
Janina.....	Feb. 14.....	110	.....	Jan. 27, epidemic.
Saloniki.....	Nov. 11-Dec. 29.....	.....	72	
Do.....	Dec. 30-Mar. 2.....	.....	22	
<b>Japan:</b>				
Nagasaki.....	Nov. 26-Dec. 16.....	5	5	
Do.....	Jan. 7-Mar. 10.....	13	5	
<b>Java:</b>				
East Java.....				Oct. 15-Dec. 31, 1917: Cases, 39;
Surabaya.....	Dec. 17-31.....	9	1	deaths, 7. Jan. 1-14, 1918:
Do.....	Jan. 1-14.....	10	1	Cases, 11; deaths, 2.
Mid-Java.....				Oct. 10-Dec. 26, 1917: Cases, 63;
Samarang.....	Oct. 9-Dec. 26.....	20	2	deaths, 2. Dec. 28, 1917-Jan.
Do.....	Dec. 27-Jan. 15.....	18	.....	23, 1918: Cases, 11.
West Java.....				Oct. 19-Dec. 27, 1917: Cases, 94;
Batavia.....	Oct. 19-Dec. 27.....	59	15	deaths, 17. Dec. 28, 1917-Jan.
Do.....	Dec. 28-Jan. 31.....	27	1	31, 1918: Cases, 53; death, 1.
<b>Mexico:</b>				
Aguascalientes.....	Dec. 15.....	.....	2	
Do.....	Jan. 21-Mar. 30.....	.....	14	
Durango State—				
Guanacevi.....	Feb. 11.....	.....	.....	Epidemic.
Mexico City.....	Nov. 11-Dec. 29.....	476	.....	
Do.....	Dec. 30-Mar. 9.....	528	.....	
<b>Norway:</b>				
Bergen.....	Feb. 1-16.....	3	.....	
<b>Portugal:</b>				
Lisbon.....	Mar. 3-16.....	8	.....	Feb. 21: Present.
Oporto.....	Feb. 21.....	.....	.....	Epidemic. Dec. 24, 1917-Mar. 9,
				1918: About 250 cases reported.
<b>Russia:</b>				
Archangel.....	Sept. 1-14.....	7	2	
Moscow.....	Aug. 26-Oct. 6.....	49	2	
Petrograd.....	Aug. 31-Nov. 18.....	32	.....	
Do.....	Feb. 2.....	.....	.....	Present.
Vladivostok.....	Oct. 29-Nov. 4.....	12	1	
<b>Spain:</b>				
Corcubion.....	Apr. 11.....	.....	.....	Present. Province of Coruna,
				west coast.
<b>Sweden:</b>				
Goteborg.....	Nov. 18-Dec. 15.....	2	.....	
<b>Switzerland:</b>				
Basel.....	Jan. 6-19.....	1	1	
Zurich.....	Nov. 9-15.....	2	.....	
Do.....	Jan. 13-19.....	2	.....	
<b>Tunisia:</b>				
Tunis.....	Nov. 30-Dec. 6.....	.....	1	
Do.....	Feb. 9-Mar. 8.....	6	1	
<b>Union of South Africa:</b>				
Cape of Good Hope State.....	Sept. 10-Dec. 30.....	4,035	830	Sept. 10-Nov. 25, 1917: Cases,
				3,724 (European, 31; native,
				3,693); deaths, 761 (European,
				5; native, 756). Total to Jan.
				13, 1918: Cases, 4,158 (European,
				32; native, 4,126); deaths, 854
				(European, 5; native, 849).
Natal.....				From date of outbreak in De-
				cember, 1917, to Jan. 27, 1918:
				Cases, 34; deaths, 10.

## **YELLOW FEVER.**

<b>Ecuador</b> .....				Sept. 1-Nov. 30, 1917: Cases, 5;
Guayaquil.....	Sept. 1-30.....	1	1	deaths, 3.
Do.....	Oct. 1-31.....	1	.....	
Do.....	Nov. 1-30.....	2	2	
Yaguachi.....	do.....	1	.....	
<b>Honduras:</b>				
Tegucigalpa.....	Dec. 16-22.....	.....	1	
Do.....	Jan. 6-19.....	.....	1	