

PUBLIC HEALTH REPORTS.

VOL. XXV.

APRIL 1, 1910.

No. 13.

A PARASITIC AND A PREDATORY ENEMY OF THE FLEA.

By M. B. MITZMAIN, B. S., Assistant, Plague Laboratory, Public Health and Marine-Hospital Service, San Francisco, Cal.,

A suggestion of the presence of a parasite on the flea is advanced by Burnett Ham in "A Report on Plague in Queensland" 1900, page 160. He relates the finding of a mite (*Holaspis sp.*), a *Gamasid*, on the brown rat. Ham states that the occurrence of this mite on rats may be accounted for by the fact that it is predatory on insects and may be partial to rat fleas.

There has come to the writer's notice in the literature on American *Siphonaptera*, a single instance of a parasite of a flea. Passed Asst. Surg. Carroll Fox, of the United States Public Health and Marine-Hospital Service, placed on record (Entomological News, July, 1909) a note describing a new mite, the hypopial stage of a *Gamasus*, found on *Ceratophyllus fasciatus* Bosc., the common brown rat flea of San Francisco. Fox, who examined nearly 20,000 rat fleas found but 3 instances of this unique parasitism in *Siphonaptera*. He made an attempt to transfer this mite from flea host to flea, but unfortunately lost the specimen in the attempt.

Prior to the note in the Entomological News, the writer encountered one instance of the flea mite in an examination of thousands of preserved and live specimens. However, since the appearance of Fox's article, 4 specimens were found on a flea (*C. fasciatus*) of the brown rat in San Francisco. These mites, we learned subsequently, were of the same species as that found previously by the writer. Fox, who compared these mites with those he collected, found that they differed essentially. The mite described by Fox has shorter tarsi and there are fewer bristles on the legs. It is on the average somewhat smaller in size and less globular in form than that observed by the present writer.

Mites of the species under consideration have recently been found on fleas collected from squirrels shot in Solano County, 60 miles from San Francisco. Fifteen fleas of the species, *C. acutus*, were found infested. We doubt not that the fleas in squirrel burrows often harbor these mites under natural conditions.

Nathan Banks identified this mite as a member of the *Tyroglyphidae*, a new species of *Histiostoma*, to be described by him under the name of *H. tarsalis*. This acarologist states that most of the

known species have been taken in decaying matter; one, however, in England, was taken from a mole's nest. In his Revision of the *Tyroglyphidae* of the United States (Bulletin of the Department of Agriculture, Technical Series 13) one species of the genus *Histiostoma*, *H. brevipes* Banks, is recorded as occurring on the larva of the locust borer, *Cyrtene robiniae*. The hypopial stage of another of this genus (*H. muscarum*) is recorded by the same author as being attached to house flies. (A Treatise on the Acarina, or Mites. Proc. U. S. Nat. Mus., vol. 28, No. 1382, p. 82.)

For the benefit of the reader we may give here the transformations through which these *Tyroglyphids* pass. This outline we abstract from the work of Banks:

The young, which hatch from eggs, are 6-legged, obtaining 2 more legs at the initial moult. This is the octopod nymph, which may often pass through what is called a hypopus. The body of the latter is hard and chitinous; there is no mouth orifice and there are no distinct mouth parts. By means of sucking disks the hypopus attaches itself to an insect or other creature and is transported to some other locality, where it may find a suitable breeding place. The hypopus is thus a stage in the life of the mite for the purpose of migration. This molts into an octopod nymph, which will feed and develop into an adult mite. The technical description of our new mite we leave to Nathan Banks. A general description, however, may assist us in the present discussion.

The hypopial stage of the mite under discussion is waxy-white in color, nearly translucent, and fairly covered with long moist filamentous bristles, which project from the body and the slender tarsi. In form it bears a striking resemblance to a scale insect. The tarsi, which are unique in this species of mite, are unusually long and delicate. The hind pairs are held nearly horizontal from the body and the anterior ones are extended above the head almost vertically.

The movement of the hypopus is very deliberate and painstaking, and when it is once fastened by the sucking disks to the host it is extremely difficult to dislodge it. The size of these creatures varies but slightly. The average dimensions of 10 specimens were 0.24 mm. long, by 0.14 mm. wide, by 0.06 mm. thick.

The adult mite, which develops in 4 to 5 weeks from the larval form, is an extremely active *Tyroglyphid*, differing markedly from the younger stage. It has 8 well-formed legs, and the mouth parts, in contrast to the hypopus, are powerful and evidently built for piercing. In color the adult is a light yellow with slightly darker legs and proboscis. The average size, taken from the measurements of 10 specimens, was 0.40 mm. by 0.25 mm.

An attempt was made to breed the new mite. For this purpose a flea infested with the mites was placed with 50 noninfested fleas of the same species (*C. fasciatus*) on a brown rat in a cage trap, inclosed in a breeding box of sawdust.

In a few weeks the bedding of the nest was examined and found swarming with minute forms. These tiny creatures bred in such overwhelming numbers that the breeding cages were soon overrun with myriads of the young mites. Particles of food, which dropped to the breeding nests from the wire cages, were literally covered and alive with the *Tyroglyphids*. It was seen, in a short time, that the invaders formed an impediment in the development of the fleas. We found that a large number of the larvæ of the rat fleas had been developed.

These were examined alive microscopically and many adult fleas were likewise inspected. The fleas were observed to be generally infested with the tiny mites, which were found clinging to the spines of the legs and hairs of the body segments. One was seen securely attached to the base of the antennæ. In this breeding cage the greatest number found on one flea was 10, the average number of mites on 200 fleas examined was 3. The flea larvæ were more extensively infested than the adults, the great majority being almost covered. One larva was selected and the mites were counted while the host was under the influence of ether. There were 26 mites, covering the segments of the body and thorax.

These mites have been seen by us on the adult flea (*C. acutus*, *C. fasciatus*, and *L. cheopis*) in various situations. They have been found on all of the body segments, as well as on the legs, especially the posterior pair. One specimen was found in the antennal groove of a male *C. fasciatus*. The antennæ of the flea were projecting, exposing the ear-like groove in which the hypopus was lodged.

The sucking disks of these mites are extremely tenacious. When the fleas are killed by an anæsthetic, the mites do not lose their hold, though apparently stupefied. They are forced to relinquish their perch only when their hosts are put through the process of clearing and dehydrating.

As far as the flea host is concerned, the mites are not a serious impediment, unless they accumulate in numbers sufficient to obstruct the spiracles. When but a few of the parasites are present, the infested flea appears to be quite unhampered by the addition of the hypopus, which moves clumsily from segment to segment until it forms an attachment on the leathery shell of its host. Under these circumstances the normal activities and length of life do not seem to be influenced by the invading mite.

The following table gives the impression that the fleas slightly infested live as long, under the same conditions, as fleas free of mites:

Day.	Fleas with mites.	Fleas used as a control (free from mites).
First.....	22 fleas used.....	17 fleas used.
Second.....	19 fleas alive.....	15 fleas alive.
Third.....	14 fleas alive.....	
Fourth.....	12 fleas alive.....	11 fleas alive.
Sixth.....		5 fleas alive.
Seventh.....		3 fleas alive.
Eighth.....	3 fleas alive.....	2 fleas alive.
Tenth.....	1 flea alive.....	All dead.

These fleas (*C. acutus*), including the noninfested controls, were removed at the same hour from a squirrel kept in the laboratory to serve as a host for the squirrel fleas. In testing the longevity, the insects were segregated into vials and kept in the dark without food. When the infested fleas died, they were examined microscopically and the extent of the infestation was noted. On the 22 fleas under observation the mites were found to average 3, ranging from 1 to 11 per flea.

Although we have taken adult mites of the *Histiostoma tarsalis* from the fleas, we are not prepared to state that the mite is a true parasite, since we have never seen it in the act of feeding. Extreme

infestation proving fatal often occurs however; the best example of this, which has come to our notice, was seen in a specimen of the squirrel flea, *Ceratophyllus acutus*, found in the breeding nest in a helpless condition, unable to jump. At first glance the flea seemed to be sprinkled with a coat of grayish dust particles. These on close inspection proved to be living forms. When examined microscopically, the identity of the flea seemed to be quite lost in a covering of *Tyroglyphid* parasites, which took full possession of every available space. Every segment harbored rows of them; the legs were clothed with them; and the head and rostrum, even the eyes, were covered with the infesting mites. It was apparent that, aside from the additional weight the flea supported, it was rendered helpless through the obstruction of the tracheal system, the abdominal spiracles of which at least were covered by the barnacle-like forms. The flea selected for this study died in 36 hours after removal from the squirrel nest. While under observation, it did not attempt to walk or jump, but lay helpless on its side, struggling occasionally in an effort to free itself from its unwelcome burden.

It was found by actual count that the host in this instance harbored 98 of the hypopial mites. These at the time of death of the *Pulicid* were almost synchronously aroused to action. In bestirring themselves from their inactive condition one would imagine that a state of demoralization had seized them, for they were seen to pry free the sucking disks, loose their perch, and move away from the dead host. When observed through the lens the mites were found to be in various stages of molting; the majority of them were found to be partially free from the scale-like crust of the integument, dragging the cast-off skin by the caudal portion. When the molted skin was examined, it was seen that besides the other appendages, the sucking disks were molted in their entirety. It was also noticed that the hind legs and mouth parts, which heretofore were mere vestiges, were considerably developed. The bristles on the tarsi were shortened in the molt; the bristles on the last tarsi which, prior to the change were longer than the body, appeared now much shortened. In general, the color of the cuticle was changed to a light brown.

The most significant change in the molting process appears to be the correlation of the shedding of the sucking disks with the change of the hypopus to an octopod nymph. It may be stated here that it has occurred to us that the peculiar hypopial stage spent on the body of the flea may be explained in that an attachment is formed for a very active insect, because it is necessary for the mite to get rid of the hard shell of the body before its full development can be attained. Furthermore, we have observed in the study of these *Tyroglyphids* that although other insects like the flies and beetles are present in various stages in the bedding of the breeding cages, the mite appears to strongly favor the fleas and their larvæ.

RÔLE OF A BEETLE IN THE DESTRUCTION OF FLEAS.

We have now to consider another enemy of the flea, inimical to its life in a more direct manner. Live squirrels which were trapped in San Mateo County, when received at the plague laboratory were accompanied in several instances by a species of *Staphylinus* beetle. Several of these beetles were collected with the fleas at the time the

squirrels were combed of parasites. It was noticed in a short time that when the beetles were placed in the vials with fleas the latter disappeared very rapidly. The vials were more closely observed when it was obvious that the beetles were predatory to a striking degree.

The beetle was observed to run aimlessly in an excited manner toward a group of the squirrel fleas, and when a body's length from the nearest flea was seen to rise on the hind legs and with a darting movement pounce on the quarry; then with a snap of the mandibles tear the flea in two. The body of a flea would then be torn to bits, and the invader prepared in a moment to seize the next victim. The movement of springing was peculiarly snake-like, always accompanied by a quick dart of the head. The beetle at each attack would tear and devour a flea until presumably satiated, and then continue to snap at each flea as it appeared in its way, leaving a trail of mangled and dismembered parasites.

In this fashion 5 beetles were observed to render helpless 97 adult fleas in a period of less than five minutes. A single beetle was starved for one day, then placed in a vial with 20 fleas, and permitted to play havoc with the unresisting parasites. In one minute and forty seconds all of the fleas were rendered helpless, either devoured entirely or fatally mangled.

Ten of the *Staphylinus* were retained for breeding purposes. It was found that a diet exclusively of hard-shelled *Pulicids* was not the most favorable for sustaining life, for on the fourth day the fleas no longer appealed to them as an article of diet, and the beetles did not survive the artificial environments presented. Although other insects were found in the material from the squirrel nest, the adult fleas were the only ones selected for attack; as far as we could determine, no instance was observed where the flea larvæ were molested. The rat flea (*Ceratophyllus fasciatus*) was subject to destruction in substantially the same degree as the squirrel flea (*C. acutus*).

UNITED STATES.

REPORTS TO THE SURGEON-GENERAL, PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

PLAGUE-PREVENTION WORK.

Infected Ground Squirrels.

A second infected ground squirrel was found March 4, 1910, in Oakland Township.

Passed Assistant Surgeon McCoy reports:

Summary of examinations at the plague laboratories at San Francisco and Oakland, Cal.

Week ended March 12. Rodents examined as follows: *Mus norvegicus*, 1,832; *Mus rattus*, 115; *Mus alexandrinus*, 73; *Mus musculus*, 514; ground squirrels, 2,843; gophers, 95; rabbits, 40; weasels, 4; total, 5,516. One infected squirrel was found in Alameda County.

SAN FRANCISCO, CAL.

Last case of human plague sickened January 30, 1908. Last case of rodent plague trapped October 23, 1908. Total number of rats found infected to date, 398.

Week ended March 12, 1910. Premises inspected, 1,361. Houses destroyed, 8. Nuisances abated, 199. Poisons placed, 6,010. Rats trapped, 1,920. Rats found dead, 25. Gophers trapped, 10. Squirrels trapped, 2. Rats identified, 1,945, as follows: *Mus norvegicus*, 1,374; *Mus rattus*, 110; *Mus musculus*, 392; *Mus alexandrinus*, 69. Examined bacteriologically 1,565 rats, 10 gophers, and 2 squirrels. No plague infection found.

OAKLAND, CAL.

Last case of human plague sickened October 26, 1909. Last case of rodent plague trapped December 1, 1908.

Week ended March 12, 1910. Rats found dead, 15. Rats trapped, 574. Rats identified, 589, as follows: *Mus norvegicus*, 458; *Mus rattus*, 5; *Mus musculus*, 122; *Mus alexandrinus*, 4. Rats examined bacteriologically, 449.

ALAMEDA COUNTY, CAL. (Exclusive of Oakland).

Last case of human plague sickened 2 miles southwest of Sunol September 26, 1909. Last plague-infected rodent found March 4, 1910. To the present time 66 ground squirrels and 1 wood rat have been found infected.

Week ended March 12, 1910. Ranches inspected, 14. Ground squirrels shot, 229. Ground squirrels found dead, 1. Gophers trapped, 95. Acres covered with poison, 194. Examined bacteriologically, 300 squirrels and 95 gophers. One plague-infected squirrel was found.

The plague-infected ground squirrel was found in Oakland Township.

FRESNO COUNTY, CAL.

There is no record of human or rodent plague in Fresno County.

Week ended March 12. Ranches inspected, 30. Ground squirrels shot, 581. Ground squirrels examined bacteriologically, 575. No plague-infected squirrels found.

MADERA COUNTY, CAL.

There is no record of human or rodent plague in Madera County.

Week ended March 12. Ranches inspected, 7. Ground squirrels shot, 329. Ground squirrels examined bacteriologically, 325. No plague-infected squirrels found.

MERCED COUNTY, CAL.

There is no record of human or rodent plague in Merced County.

Week ended March 12. Ranches inspected, 7. Ground squirrels shot, 251. Rabbits shot, 28. Examined bacteriologically, 248 squirrels and 28 rabbits. No plague infection found.

MONTEREY COUNTY, CAL.

There is no record of human or rodent plague in Monterey County.

Week ended March 12. Ranches inspected, 31. Ground squirrels shot, 420. Ground squirrels examined bacteriologically, 414. No plague infection found.

SAN LUIS OBISPO COUNTY, CAL.

There is no record of human plague in San Luis Obispo County. A plague-infected rodent was found January 29, 1910.

Week ended March 12. Ranches inspected, 23. Ground squirrels shot, 207. Ground squirrels examined bacteriologically, 207. No plague-infected squirrels found.

SAN MATEO COUNTY, CAL.

There is no record of human or rodent plague in San Mateo County.

Week ended March 12. Ranches inspected, 2. Ground squirrels shot, 78. Ground squirrels examined bacteriologically, 78. No plague-infected squirrels found.

SANTA BARBARA COUNTY, CAL.

There is no record of human or rodent plague in Santa Barbara County.

Week ended March 12. Ranches inspected, 28. Ground squirrels shot, 228. Gophers trapped, 20. Examined bacteriologically, 221 squirrels and 20 gophers. No plague infection found.

SANTA CLARA COUNTY, CAL.

There is no record of human plague in Santa Clara County. The last plague-infected rodent was found November 3, 1909. Total number of ground squirrels found infected to date, 9.

Week ended March 12. Ranches inspected, 8. Ground squirrels shot, 139; found dead, 1. Rabbits shot, 4. Ratstrapped, 14. Examined bacteriologically, 136 ground squirrels, 4 rabbits, 14 rats. No plague infection found.

TULARE COUNTY, CAL.

There is no record of human or rodent plague in Tulare County.

Week ended March 12. Ranches inspected, 141. Ground squirrels shot, 419. Rabbits shot, 2. Examined bacteriologically, 414 squirrels and 2 rabbits. No plague infection found.

VENTURA COUNTY, CAL.

There is no record of human or rodent plague in Ventura County.

Week ended March 12. Ranches inspected, 7. Ground squirrels shot, 171. Ground squirrels examined bacteriologically, 165. No plague-infected squirrels found.

SMALLPOX IN THE UNITED STATES.

Reports Received During Week Ended April 1, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
Alabama:				
Mobile.....	Mar. 13-19.....	1		
Montgomery.....	Mar. 13-19.....	9	1	
California:				
Sacramento.....	Feb. 1-28.....	4		
San Francisco.....	Mar. 6-12.....	1		
Florida:				
Duval County.....	Mar. 13-19.....	1		
Louisiana:				
New Orleans.....	Mar. 13-19.....	10		
Mississippi:				
Woodville.....	Mar. 13-19.....	2		
Tennessee:				
Chattanooga.....	Mar. 13-19.....	6		
Memphis.....	Mar. 13-19.....	5		
Nashville.....	Mar. 13-19.....	3		
Texas:				
Galveston.....	Mar. 13-19.....	2	1	
Taylor.....	Mar. 13-19.....	1		
Virginia:				
Lynchburg.....	Mar. 13-19.....	3		

Reports Received from January 1 to March 25, 1910.

[For reports received from June 25, 1909, to December 31, 1909, see PUBLIC HEALTH REPORTS for December 31, 1909. In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.]

Place.	Date.	Cases.	Deaths.	Remarks.
Alabama:				
Birmingham.....	Jan. 9-Feb. 12.....	19		
Mobile.....	Jan. 16-Mar. 12.....	8		
Montgomery.....	Dec. 19-Mar. 12.....	400		
Total for State.....		427		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from January 1 to March 25, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
Arkansas:				
Argenta.....	Jan. 22-Feb. 12.....	11		
Little Rock.....	Jan. 1-Mar. 12.....	92		
Lonoke.....	Jan. 6-20.....	2		
Total for State.....		105		
California:				
Berkeley.....	Dec. 26-Jan. 1.....	1		
Los Angeles.....	Jan. 12-Feb. 12.....	4		
Oakland.....	Dec. 26-Jan. 1.....	1		
Sacramento County.....	Jan. 1-31.....		1	
Sacramento.....	Dec. 12-Jan. 31.....	50		
San Francisco.....	Dec. 19-Mar. 5.....	18		
Total for State.....		74	1	
Colorado:				
Bent County.....	Feb. 1-28.....	10		
Boulder County—				
Boulder.....	Dec. 19-25.....	1		
Chaffee County.....	Jan. 1-31.....	6		
Conejos County.....	Jan. 1-Feb. 28.....	29		
Denver County.....	Jan. 1-Feb. 28.....	18		
Fremont County.....	Feb. 1-28.....	14		
Garfield County.....	Jan. 1-31.....	1		
Huerfano County.....	Jan. 1-Feb. 28.....	12		
Jefferson County.....	Feb. 1-28.....	1		
La Plata County.....	Feb. 1-28.....	4		
Larimer County.....	Jan. 1-31.....	4		
Las Animas County.....	Jan. 1-Feb. 28.....	14		
Logan County.....	Jan. 1-Feb. 28.....	17		
Mesa County.....	Jan. 1-31.....	4		
Fruita district.....	Dec. 26-Jan. 1.....	3		
Montrose County.....	Jan. 1-Feb. 28.....	19		
Morgan County.....	Jan. 1-Feb. 28.....	16		
Otero County.....	Jan. 1-31.....	1		
Ouray County.....	Jan. 1-Feb. 28.....	13		
Pitkin County.....	Feb. 1-28.....	5		
Pueblo County.....	Feb. 1-28.....	2		
Rio Grande County.....	Feb. 1-28.....	1		
San Miguel County.....	Jan. 1-31.....	1		
Summit County.....	Jan. 1-31.....	1		
Weld County.....	Jan. 1-Feb. 28.....	21		
Total for State.....		218		
District of Columbia.....	Dec. 19-Mar. 5.....	21		
Total for District.....		21		
Florida:				
Alachua County.....	Jan. 1-Feb. 26.....	3		
Columbia County.....	Feb. 13-19.....	2		
Duval County.....	Jan. 1-31.....	1		
Jacksonville.....	Jan. 30-Mar. 12.....	4		
Escambia County.....	Feb. 6-Mar. 5.....	31		
Pensacola.....	Feb. 20-26.....	1		
Gadsden County.....	Jan. 1-31.....	2		
Hillsboro County.....	Jan. 1-31.....	1		
Leon County.....	Feb. 20-26.....	1		
Liberty County.....	Jan. 1-31.....	1		
Volusia County.....	Mar. 6-12.....	1		
Walton County.....	Jan. 1-31.....	3		
Total for State.....		51		
Georgia:				
Macon.....	Jan. 1-31.....	51		
Total for State.....		51		
Illinois:				
Alexander County.....	Jan. 1-31.....	6		
Cass County.....	Feb. 1-28.....	1		
Coles County.....	Jan. 1-31.....	4		
Cook County—				
Chicago.....	Dec. 19-Feb. 28.....	3		
Dupage County.....	Feb. 1-28.....			Present.
Edwards County.....	Jan. 1-Feb. 28.....	29		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from January 1 to March 25, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
Illinois—Continued.				
Effingham County.....	Jan. 1-Feb. 28.	82		
Fayette County.....	Jan. 1-Feb. 28.	2		
Franklin County.....	Jan. 1-31.	6		
Gallatin County.....	Feb. 1-28.	2		
Iroquois County.....	Feb. 1-28.	1		
Jackson County.....	Jan. 1-Feb. 28.	3		
Jasper County.....	Feb. 1-28.			Present.
Kane County.....	Jan. 1-31.	1		
Livingston County.....	Feb. 1-28.	3		
Macon County.....	Jan. 1-31.	1		
McLean County.....	Jan. 1-31.	1		
Madison County.....	Feb. 1-28.	1		
Marion County.....	Feb. 1-28.	2		
Montgomery County.....	Jan. 1-Feb. 28.	10		
Pike County.....	Feb. 1-28.	2		
Pulaski County.....	Jan. 1-31.	2		
Sangamon County.....	Jan. 1-31.	4		Do.
Shelby County.....	Jan. 1-Feb. 28.	10		
Wabash County.....	Jan. 1-31.			Do.
Wayne County.....	Jan. 1-31.	5		
Williamson County.....	Jan. 1-Feb. 28.	23		
Total for State.....		204		
Indiana:				
Adams County.....	Oct. 1-31.	4		
Allen County.....	Oct. 1-Jan. 31.	180	1	
Carroll County.....	Nov. 1-Jan. 21.	2		
Clark County.....	Dec. 1-Jan. 31.	20		
Clinton County.....	Dec. 1-Jan. 31.	28		
Crawford County.....	Jan. 1-31.	1		
Daviess County.....	Nov. 1-Jan. 31.	28		
Decatur County.....	Jan. 1-31.	3		
DeKalb County.....	Dec. 1-Jan. 31.	3		
Delaware County.....	Oct. 1-Nov. 30.	20		
Fountain County.....	Jan. 1-31.	1		
Fulton County.....	Jan. 1-31.	4		
Grant County.....	Oct. 1-Jan. 31.	35		
Greene County.....	Oct. 1-31.	6		
Hamilton County.....	Jan. 1-31.	4		
Henry County.....	Jan. 1-31.	2		
Huntington County.....	Jan. 1-31.	1		
Jefferson County.....	Nov. 1-30.	1		
Jennings County.....	Jan. 1-31.	6		
Knox County.....	Oct. 1-31.	7		
Laporte County.....	Dec. 1-31.	1		
Madison County.....	Jan. 1-31.	3		
Marion County.....	Dec. 1-Jan. 31.	3		
Marshall County.....	Oct. 1-Jan. 31.	80		
Martin County.....	Jan. 1-31.	1		
Miami County.....	Jan. 1-31.	3		
Montgomery County.....	Jan. 1-31.	2		
Noble County.....	Nov. 1-Jan. 31.	2		
Randolph County.....	Oct. 1-31.	1		
St. Joseph County.....	Oct. 1-Jan. 31.	21		
Shelby County.....	Dec. 1-Jan. 31.	33		
Stauben County.....	Nov. 1-30.	3		
Tippecanoe County.....	Dec. 1-Jan. 31.	3		
Vanderburg County.....	Oct. 1-31.	8		
Warren County.....	Nov. 1-30.	1		
Washington County.....	Jan. 1-31.	1		
Wayne County.....	Nov. 1-Jan. 31.	1		
Total for State.....		523	1	
Iowa, general.				
Buchanan County.....	Jan. 1-31.	19		
Buchanan County.....	Feb. 1-28.	8		
Buena Vista County.....	Jan. 1-31.	1		
Calhoun County.....	Jan. 1-31.	10		
Cass County.....	Jan. 1-31.	1		
Cedar County.....	Jan. 1-31.	3		
Cherokee County.....	Jan. 1-31.	24		
Clayton County.....	Jan. 1-31.	1		
Dallas County.....	Jan. 1-31.	1		
Delaware County.....	Feb. 1-28.	4		
Dubuque County.....	Jan. 1-Feb. 28.	40		
Floyd County.....	Feb. 1-28.	2		
Grundy County.....	Feb. 1-28.	4		
Jones County.....	Jan. 1-Feb. 28.	3		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from January 1 to March 25, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
Iowa—Continued.				
Linn County.....	Jan. 1-31.....	7		
Cedar Rapids.....	Dec. 1-31.....	7		
Madison County.....	Jan. 1-31.....	1		
Marion County.....	Jan. 1-31.....	2		
Marshall County.....	Jan. 1-Feb. 28.....	5		
Mitchell County.....	Feb. 1-28.....	1		
Monroe County.....	Jan. 1-Feb. 28.....	3		
Polk County.....	Jan. 1-Feb. 28.....	41		
Pottawattamie County.....	Jan. 1-31.....	1		
Poweshiek County.....	Jan. 1-31.....	6		
Scott County.....	Feb. 1-28.....	2		
Sioux County.....	Jan. 1-Feb. 28.....	17		
Story County.....	Feb. 1-28.....	17		
Winnebago County.....	Feb. 1-28.....	5		
Woodbury County.....	Feb. 1-28.....	1		
Sioux City.....	Dec. 1-31.....	2		
Wright County.....	Feb. 1-28.....	1		
Total for State.....		240		
Kansas:				
Allen County.....	Jan. 1-31.....	1		
Barton County.....	Jan. 1-31.....	1		
Bourbon County.....	Jan. 1-31.....	3		
Cherokee County.....	Jan. 1-31.....	8		
Clay County.....	Nov. 1-30.....	1		
Cloud County.....	Nov. 1-30.....	1		
Cowley County.....	Nov. 1-30.....	3		
Crawford County.....	Dec. 1-Jan. 31.....	4		
Pittsburg.....	Jan. 1-31.....	1		
Decatur County.....	Nov. 1-Jan. 31.....	21		
Dickinson County.....	Jan. 1-31.....	4		
Douglas County.....	Dec. 1-31.....	1		
Ellsworth County.....	Jan. 1-31.....	14		
Finney County.....	Jan. 1-31.....	1		
Ford County.....	Jan. 1-31.....	6		
Gove County.....	Dec. 1-31.....	3		
Graham County.....	Nov. 1-Jan. 31.....	40		
Gray County.....	Jan. 1-31.....	18		
Hamilton County.....	Jan. 1-31.....	2		
Jackson County.....	Dec. 1-31.....	5		
Jewell County.....	Nov. 1-Jan. 31.....	44		
Kearny County.....	Jan. 1-31.....	1		
Kiowa County.....	Jan. 1-31.....	2		
Labette County.....	Jan. 1-31.....	5		
Lane County.....	Nov. 1-30.....	1		
Leavenworth County.....	Dec. 1-31.....	1		
Logan County.....	Jan. 1-31.....	2		
Lyon County.....	Dec. 1-31.....	1		
McPherson County.....	Dec. 1-Jan. 31.....	3		
Marshall County.....	Dec. 1-31.....	20		
Miami County.....	Jan. 1-31.....	3		
Montgomery County.....	Nov. 1-Jan. 31.....	109		
Coffeyville.....	Jan. 1-31.....	11		
Nemaha County.....	Jan. 1-31.....	1		
Neosho County.....	Jan. 1-31.....	1		
Ness County.....	Dec. 1-Jan. 31.....	8		
Norton County.....	Nov. 1-Jan. 31.....	38		
Osage County.....	Jan. 1-31.....	11		
Phillips County.....	Jan. 1-31.....	3		
Pottawatomie County.....	Nov. 1-Dec. 31.....	6		
Rawlins County.....	Jan. 1-31.....	5		
Reno County.....	Nov. 1-Jan. 31.....	123		
Rice County.....	Jan. 1-31.....	1		
Riley County.....	Jan. 1-31.....	17		
Rush County.....	Jan. 1-31.....	5		
Russell County.....	Jan. 1-31.....	1		
Saline County.....	Dec. 1-31.....	1		
Scott County.....	Nov. 1-Dec. 31.....	11		
Sedgwick County.....	Dec. 1-31.....	2	1	
Wichita.....	Jan. 1-31.....	1		
Shawnee County.....	Dec. 1-31.....	12		
Topeka.....	Nov. 1-Jan. 31.....	9		
Sheridan County.....	Nov. 1-Jan. 31.....	8		
Smith County.....	Jan. 1-31.....	2		
Sumner County.....	Nov. 1-Jan. 31.....	11		
Thomas County.....	Jan. 1-31.....	1		
Wabaunsee County.....	Nov. 1-30.....	3		
Wilson County.....	Nov. 1-Jan. 31.....	3		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from January 1 to March 25, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
Kansas—Continued.				
Woodson County.....	Jan. 1-31.....	25		
Wyandotte County.....	Dec. 1-Jan. 31.....	91		
Kansas City.....	Jan. 1-31.....	39		
Total for State.....		790	1	
Kentucky:				
Hartford.....	Dec. 12-18.....	2		
Lexington.....	Dec. 12-Jan. 29.....	4		
Paducah.....	Jan. 5-11.....	1		
Total for State.....		7		
Louisiana:				
Caddo Parish—				
Shreveport.....	Jan. 23-Feb. 28.....	5	2	
Iberia Parish.....	Feb. 1-28.....	1		
Natchitoches Parish.....	Feb. 1-28.....	6		
Orleans Parish—				
New Orleans.....	Dec. 26-Mar. 12.....	76		
Morehouse Parish.....	Feb. 1-28.....	2		
St. John Parish.....	Feb. 1-28.....	6		
Tensas Parish.....	Feb. 1-28.....	13		
Total for State.....		109	2	
Maryland:				
Baltimore.....	Dec. 26-Jan. 1.....	1		
Dorchester County.....	Dec. 3-31.....	4		
Garrett County.....	Jan. 8-31.....	1		
Total for State.....		6		
Massachusetts:				
Bristol County.....	Feb. 1-28.....	6		
Essex County.....	Jan. 1-31.....	1		
Middlesex County.....	Jan. 1-Feb. 28.....	76		
Lynn County.....	Jan. 1-31.....	4		
Plymouth County.....	Feb. 1-28.....	4		
Suffolk County.....	Jan. 1-Feb. 28.....	3		
Worcester County.....	Jan. 1-Feb. 28.....	22		
Total for State.....		116		
Michigan:				
Alcona County.....	Nov. 1-Jan. 31.....	26		
Antrim County.....	Nov. 1-Feb. 28.....	33		
Arenac County.....	Nov. 1-Feb. 28.....	136		
Bay County.....	Nov. 1-Feb. 28.....	83		
Berrien County.....	Jan. 1-Feb. 28.....	21		
Calhoun County.....	Feb. 1-28.....	1		
Cass County.....	Feb. 1-28.....	1		
Clare County.....	Feb. 1-28.....	1		
Delta County.....	Dec. 1-31.....	1		
Eaton County.....	Feb. 1-28.....	1		
Emmet County.....	Nov. 1-Feb. 28.....	4		
Genesee County.....	Nov. 1-Feb. 28.....	264		
Gladwin County.....	Nov. 1-Jan. 31.....	8		
Gratiot County.....	Nov. 1-30.....	1		
Houghton County.....	Nov. 1-Feb. 28.....	54		
Huron County.....	Feb. 1-28.....	6		
Ingham County.....	Dec. 1-Feb. 28.....	11		
Ionia County.....	Nov. 1-Feb. 28.....	40		
Iosco County.....	Dec. 1-Feb. 28.....	3	1	
Kent County.....	Dec. 1-Feb. 28.....	5		
Keweenaw County.....	Jan. 1-Feb. 28.....	3		
Lapeer County.....	Nov. 1-Feb. 28.....	7		
Livingston County.....	Nov. 1-Jan. 31.....	18		
Manistee County.....	Feb. 1-28.....	8		
Marquette County.....	Nov. 1-30.....	1		
Mason County.....	Nov. 1-30.....	1		
Mecosta County.....	Jan. 1-Feb. 28.....	11		
Midland County.....	Dec. 1-Feb. 28.....	11		
Missaukee County.....	Jan. 1-Feb. 28.....	33		
Montcalm County.....	Nov. 1-Feb. 28.....	5		
Montmorency County.....	Dec. 1-Feb. 28.....	36		
Oakland County.....	Jan. 1-31.....	1		
Oceana County.....	Jan. 1-31.....	1		
Ogemaw County.....	Jan. 1-Feb. 28.....	6		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from January 1 to March 25, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
Michigan—Continued.				
Ontonagon County.....	Nov. 1–Feb. 28.....	12		
Osceola County.....	Dec. 1–Feb. 28.....	14		
Oscoda County.....	Jan. 1–Feb. 28.....	7		
Otsego County.....	Dec. 1–31.....	1		
Presque Isle County.....	Dec. 1–Jan. 31.....	2		
Roscommon County.....	Jan. 1–31.....	6		
Saginaw County.....	Dec. 1–Feb. 28.....	53		
St. Clair County.....	Jan. 1–Feb. 28.....	16		
Sanilac County.....	Nov. 1–Feb. 28.....	3		
Shiawassee County.....	Dec. 1–Feb. 28.....	8		
Tuscola County.....	Feb. 1–28.....	3		
Wayne County.....	Dec. 1–Feb. 28.....	8		
Total for State.....		975	1	
Minnesota:				
Anoka County.....	Feb. 1–28.....	5		
Becker County.....	Jan. 4–10.....	3		
Beltrami County.....	Dec. 21–Feb. 14.....	3		
Benton County.....	Dec. 14–20.....	7		
Blue Earth County.....	Dec. 21–27.....	1		
Carver County.....	Dec. 7–Jan. 3.....	4		
Chippewa County.....	Jan. 11–17.....	1		
Chisago County.....	Feb. 15–21.....	2		
Cook County.....	Jan. 25–31.....	2		
Dakota County.....	Feb. 1–28.....	4		
Dodge County.....	Jan. 25–31.....	1		
Faribault County.....	Feb. 8–14.....	1		
Freeborn County.....	Jan. 18–Feb. 28.....	18		
Goodhue County.....	Dec. 28–Jan. 31.....	1		
Hennepin County.....	Dec. 28–Feb. 28.....	38		
Houston County.....	Feb. 8–14.....	4		
Isanti County.....	Feb. 21–28.....	1		
Itasca County.....	Dec. 14–Feb. 28.....	2		
Kandiyohi County.....	Dec. 7–13.....	1		
Koochiching County.....	Feb. 1–7.....	1		
Lake County.....	Jan. 18–Feb. 28.....	8		
Mower County.....	Dec. 28–Feb. 28.....	26		
Nicollet County.....	Feb. 15–21.....	1		
Nobles County.....	Jan. 18–25.....	1		
Norman County.....	Jan. 18–25.....	2		
Olmsted County.....	Feb. 8–14.....	1		
Ottertail County.....	Dec. 21–Feb. 28.....	24		
Pine County.....	Feb. 22–28.....	1		
Polk County.....	Dec. 7–13.....	1		
Ramsey County.....	Jan. 11–Feb. 28.....	6		
Red Lake County.....	Dec. 7–Feb. 14.....	4		
Renville County.....	Dec. 7–13.....	1		
Rice County.....	Jan. 11–17.....	1		
Rock County.....	Dec. 7–Feb. 21.....	22		
Roseau County.....	Dec. 7–Feb. 28.....	32		
St. Louis County.....	Dec. 7–Feb. 28.....	21		
Sherburne County.....	Jan. 11–17.....	1		
Sibley County.....	Dec. 28–Feb. 28.....	9		
Stearns County.....	Feb. 1–21.....	4		
Swift County.....	Feb. 8–21.....	3		
Todd County.....	Dec. 28–Jan. 31.....	1		
Wabasha County.....	Dec. 13–Feb. 21.....	29		
Wadena County.....	Feb. 1–21.....	15		
Wilkin County.....	Feb. 15–21.....	1		
Watsonwan County.....	Dec. 28–Jan. 31.....	1		
Wright County.....	Dec. 7–Feb. 28.....	41		
Yellow Medicine County.....	Feb. 22–28.....	9		
Total for State.....		366		
Mississippi:				
Biloxi.....	Jan. 2–Feb. 3.....	5		
Gulfport.....	Jan. 26–Mar. 9.....	9		
Holly Springs.....	Jan. 2–29.....	6		
Marshall County.....	Jan. 30–Mar. 5.....	4	1	
Natchez.....	Dec. 26–Feb. 26.....	90	2	
Claiborne County— Port Gibson.....	Dec. 19–25.....	1		
Woodville.....	Feb. 27–Mar. 5.....	25	1	
Total for State.....		140	4	

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from January 1 to March 25, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
Missouri:				
Andrew County.....	Jan. 23-Feb. 26....	5		
Joplin.....	Jan. 16-22.....	1		
Kansas City.....	Jan. 2-Feb. 19....	16	1	
St. Joseph.....	Jan. 2-Feb. 5.....	7		
St. Louis.....	Dec. 26-Mar. 12....	23		
Springfield.....	Jan. 1-31.....	4		
Total for State.....		56	1	
Montana:				
Beaverhead County.....	Dec. 1-Feb. 28....	5		
Broadwater County.....	Feb. 1-28.....	2		
Carbon County.....	Jan. 1-31.....	1		
Chouteau County.....	Jan. 1-31.....	6		
Custer County.....	Feb. 1-28.....	1		
Dawson County.....	Nov. 1-Jan. 31....	6		
Deerlodge County.....	Feb. 1-28.....	1		
Flathead County.....	Oct. 1-Nov. 30....	6		
Gallatin County.....	Dec. 1-Feb. 28....	3		
Jefferson County.....	Nov. 1-30.....	1		
Lewis and Clark County.....	Oct. 1-Feb. 28....	31		
Madison County.....	Jan. 1-Feb. 28....	2		
Meagher County.....	Feb. 1-28.....	2		
Missoula County.....	Oct. 1-Feb. 28....	73		
Park County.....	Nov. 1-Jan. 31....	14		
Powell County.....	Nov. 1-Feb. 28....	2		
Ravalli County.....	Nov. 1-Feb. 28....	5		
Sanders County.....	Jan. 1-Feb. 28....	4		
Silverbow County.....	Oct. 1-Feb. 28....	190		
Butte.....	Dec. 19-31.....	14		
Yellowstone County.....	Jan. 1-31.....	2		
Total for State.....		371		
Nebraska:				
Lincoln.....	Jan. 1-Feb. 28....	5		
South Omaha.....	Dec. 5-11.....	3		
Total for State.....		8		
New Hampshire (entire State).				
	Jan. 1-Feb. 28....	7		
New Jersey:				
Bergen County.....	Feb. 1-28.....	1		
Passaic County.....	Jan. 1-31.....	1		
Trenton.....	Jan. 30-Feb. 5....	1		
Total for State.....		3		
New York (entire State).				
	Sept. 1-Nov. 30...	33	1	
Cattaraugus County.....	Dec. 1-31.....	1		
Cayuga County.....	Dec. 1-31.....	1		
Erie County.....	Dec. 1-31.....	17		
Jefferson County.....	Dec. 1-31.....	1		
Lewis County.....	Dec. 1-Jan. 31....	2		
Niagara County.....	Dec. 1-Jan. 31....	40		
Onondaga County.....	Dec. 1-Jan. 31....	2		
St. Lawrence County.....	Jan. 1-31.....	9		
Ulster County.....	Jan. 1-31.....	2		
Westchester County.....	Jan. 1-31.....	1		
Total for State.....		109	1	
North Carolina:				
Alamance County.....	Jan. 1-Feb. 28....	86		
Beaufort County.....	Jan. 1-Feb. 28....	11		
Bertie County.....	Jan. 1-31.....	6		
Bladen County.....	Nov. 1-Jan. 31....	21		
Burke County.....	Jan. 1-31.....	20		
Cabarrus County.....	Jan. 1-Feb. 28....	15		
Caldwell County.....	Jan. 1-Feb. 28....	31		
Carteret County.....	Jan. 1-Feb. 28....	3		
Catawba County.....	Oct. 1-Feb. 28....	62		
Chatham County.....	Jan. 1-31.....	2		
Chowan County.....	Oct. 1-Feb. 28....	17		
Cleveland County.....	Oct. 1-Feb. 28....	4		
Craven County.....	Nov. 1-Feb. 28....	10		
Currituck County.....	Oct. 1-Feb. 28....	5		
Davidson County.....	Oct. 1-Feb. 28....	50		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from January 1 to March 25, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
North Carolina—Continued.				
Davie County.....	Jan. 1-Feb. 28.....	29		
Duplin County.....	Nov. 1-Feb. 28.....	24		
Durham County.....	Jan. 1-31.....	3		
Edgecombe County.....	Jan. 1-Feb. 28.....	24		
Forsyth County.....	Oct. 1-Feb. 28.....	101		
Franklin County.....	Oct. 1-Feb. 28.....	185		
Gaston County.....	Nov. 1-Feb. 28.....	26		
Greene County.....	Nov. 1-Feb. 28.....	50		
Gulford County.....	Nov. 1-Feb. 28.....	112		
Iredell County.....	Jan. 1-Feb. 28.....	5		
Johnston County.....	Nov. 1-Jan. 31.....	23		
Jones County.....	Oct. 1-Nov. 30.....	12		
Lee County.....	Feb. 1-28.....	3		
Lenoir County.....	Jan. 1-Feb. 28.....	37		
Lincoln County.....	Jan. 1-Feb. 28.....	8		
McDowell County.....	Nov. 1-Feb. 28.....	75		
Mecklenburg County.....	Nov. 1-Feb. 28.....	102	1	
Nash County.....	Jan. 1-Feb. 28.....	125		Nov. 1-30, many cases.
New Hanover County.....	Feb. 1-28.....	1		
Onslow County.....	Jan. 1-Feb. 28.....	7		
Orange County.....	Feb. 1-28.....	2		
Pamlico County.....	Feb. 1-28.....	40		Jan. 1-31, present.
Perquimans County.....	Jan. 1-31.....	4		
Pitt County.....	Jan. 1-Feb. 28.....	70		
Randolph County.....	Jan. 1-31.....	2		
Richmond County.....	Feb. 1-28.....	1		
Robeson County.....	Oct. 1-Feb. 28.....	19		
Rockingham County.....	Nov. 1-Feb. 28.....	50		
Rowan County.....	Nov. 1-Feb. 28.....	21		
Rutherford County.....	Nov. 1-Feb. 28.....	61		
Sampson County.....	Jan. 1-Feb. 28.....	3		
Stokes County.....	Jan. 1-Feb. 28.....	160		
Surry County.....	Oct. 1-Feb. 28.....	16		
Union County.....	Oct. 1-Feb. 28.....	66		
Wake County.....	Nov. 1-Feb. 28.....	61		
Washington County.....	Feb. 1-28.....	2		
Wayne County.....	Nov. 1-Feb. 28.....	28		
Wilkes County.....	Jan. 1-Feb. 28.....	39		
Wilson County.....	Nov. 1-Feb. 28.....	224		
Yadkin County.....	Oct. 1-Feb. 28.....	11		
Yancey County.....	Oct. 1-Feb. 28.....	35		
Total for State.....		2,210	1	
North Dakota:				
Billings County.....	Jan. 1-Feb. 28.....	11		
Bottineau County.....	Oct. 1-31.....	1		
Cass County.....	Dec. 1-31.....	1		
Grand Forks County.....	Jan. 1-Feb. 28.....	2		
McLean County.....	Dec. 1-Jan. 31.....	4		
Nelson County.....	Feb. 1-28.....	12		
Steele County.....	Feb. 1-28.....	6		
Williams County.....	Feb. 1-28.....	6		
Walsh County.....	Jan. 1-31.....	39		
Total for State.....		82		
Ohio:				
Allen County.....	Jan. 1-Feb. 28.....	26		
Adams County.....	Jan. 1-31.....	1		
Auglaize County.....	Feb. 1-28.....	8		
Belmont County.....	Jan. 1-Feb. 28.....	7		
Brown County.....	Jan. 1-Feb. 28.....	19		
Clermont County.....	Jan. 1-31.....	1		
Cuyahoga County—				
Cleveland.....	Dec. 19-26.....	1		
Darke County.....	Jan. 1-31.....	3		
Franklin County.....	Jan. 1-Feb. 28.....	7		
Hamilton County.....	Jan. 1-Feb. 28.....	2		
Jackson County.....	Jan. 1-Feb. 28.....	36		
Knox County.....	Feb. 1-28.....	1		
Miami County.....	Jan. 1-Feb. 28.....	2		
Montgomery County.....	Jan. 1-Feb. 28.....	3		
Portage County.....	Feb. 1-28.....	10		
Ross County.....	Jan. 1-31.....	16		
Scioto County.....	Feb. 1-28.....	3		
Seneca County.....	Feb. 1-28.....	3		
Shelby County.....	Jan. 1-Feb. 28.....	7		
Van Wert County.....	Jan. 1-Feb. 28.....	27		
Wayne County.....	Jan. 1-31.....	1		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from January 1 to March 25, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
Ohio—Continued.				
Williams County—				
Stryker.....	Dec. 19-25.....	1		
Wyandot County.....	Feb. 1-28.....	4		
Total for State.....		189		
Oklahoma:				
Beckham County.....	Nov. 1-30.....	1		
Blaine County.....	Dec. 1-31.....	7		
Coal County.....	Aug. 1-Sept. 30.....	10		
Comanche County.....	Nov. 1-30.....	1		
Creek County.....	Oct. 1-Nov. 30.....	3		
Garfield County.....	Nov. 1-30.....	1		
Grant County.....	Aug. 1-31.....	1		
Harmon County.....	Aug. 1-31.....	2		
Hughes County.....	Aug. 1-31.....	3		
Jackson County.....	Aug. 1-Nov. 30.....	19		
Kingfisher County.....	Oct. 1-31.....	2		
Le Flore County.....	Oct. 1-31.....	1		
Lincoln County.....	Aug. 1-31.....	3		
McIntosh County.....	Sept. 1-30.....	2		
Marshall County.....	Oct. 1-31.....	1		
Muskogee County.....	Oct. 1-31.....	1		
Okfuskee County.....	Oct. 1-31.....	1		
Oklahoma County.....	Aug., Sept., and Nov.....	14	1	
Osage County.....	Sept. 1-Oct. 31.....	9		
Pawnee County.....	Aug. 1-31.....	1		
Pottawatomie County.....	Sept. 1-Nov. 30.....	41		
Pushmataha County.....	Sept. 1-30.....	1		
Seminole County.....	Oct. 1-Nov. 30.....	7		
Sequoyah County.....	Aug. 1-Sept. 30.....	2		
Tulsa County.....	Nov. 1-30.....	3		
Washington County.....	Nov. 1-30.....	1		
Woodward County.....	Nov. 1-30.....	1		
Total for State.....		139	1	
Oregon (entire State).....				
Portland.....	Sept. 1-Dec. 31.....	89		
	Nov. 1-30.....	2		
Total for State.....		91		
Pennsylvania (entire State).....				
	Dec. 1-Feb. 28.....	57		
South Carolina:				
Clover.....	Jan. 23-29.....	3		
Total for State.....		3		
Tennessee:				
Davidson County—				
Nashville.....	Feb. 20-26.....	1		
Dekalb County.....	Dec. 12-Jan. 1.....	9		
Hamilton County—				
Chattanooga.....	Dec. 26-Mar. 12.....	51		
Knox County—				
Knoxville.....	Jan. 2-Mar. 5.....	44		
Shelby County.....	Nov. 1-Jan. 31.....	28		
Memphis.....	Nov. 1-Mar. 12.....	161		
Washington County.....	Dec. 26-Feb. 5.....	11		
Total for State.....		305		
Texas:				
Amarillo.....	Jan. 16-22.....	16		
Atascosa County.....	Jan. 31-Feb. 19.....	6		
Denton County.....	Dec. 26-Feb. 27.....	106	15	
El Paso.....	Nov. 1-Jan. 22.....	5	1	
Fort Worth.....	Nov. 1-Feb. 28.....	52	4	
Galveston.....	Feb. 6-26.....	3	4	
Hale County.....	Jan. 9-15.....	7		
Normanna.....	Jan. 1-31.....	12	5	
Rockdale.....	Feb. 13-19.....	3		
San Antonio.....	Dec. 5-Feb. 12.....	16	1	
Taylor.....	Feb. 27-Mar. 5.....	1		
Waco.....	Jan. 1-Feb. 28.....	3		
Walnut Springs.....	Jan. 12-18.....	2		
Wills Point.....	Jan. 1-Feb. 28.....	5	2	
Total for State.....		237	28	

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received from January 1 to March 25, 1910.

Place.	Date.	Cases.	Deaths.	Remarks.
Utah:				
Boxelder County.....	Dec. 1-Jan. 31.....	46		
Cache County.....	Dec. 1-Jan. 31.....	21		
Carbon County.....	Dec. 1-Jan. 31.....	6		
Davis County.....	Dec. 1-Jan. 31.....	28		
Juab County.....	Jan. 1-31.....	16		
Plute County.....	Dec. 1-31.....	1		
Rich County.....	Jan. 1-31.....	1		
Salt Lake County.....	Dec. 1-Jan. 31.....	68		
Sanpete County.....	Dec. 1-Jan. 31.....	9		
Sevier County.....	Dec. 1-Jan. 31.....	3		
Summit County.....	Jan. 1-31.....	12		
Tooele County.....	Dec. 1-31.....	1		
Uintah County.....	Dec. 1-Jan. 31.....	21		
Utah County.....	Dec. 1-Jan. 31.....	69		
Wasatch County.....	Dec. 1-Jan. 31.....	7	1	
Weber County.....	Dec. 1-Jan. 31.....	28		
Total for State.....		337	1	
Virginia:				
Lynchburg.....	Jan. 30-Mar. 12.....	32	1	
Petersburg.....	Dec. 26-Jan. 26.....	2		
Portsmouth.....	Jan. 16-29.....	2		
Richmond.....	Dec. 1-31.....	1		
Total for State.....		37	1	
Washington:				
Kitsap County.....	Jan. 1-31.....	1		
Seattle.....	Jan. 2-22.....	6		
Spokane.....	Dec. 19-Jan. 29.....	22		
Tacoma.....	Jan. 2-31.....	2		
Wahkiakum County.....	Dec. 1-31.....	8		
Total for State.....		39		
West Virginia:				
Berkeley Springs.....	Dec. 27-Feb. 17.....	6		
Wheeling.....	Jan. 30-Feb. 5.....	1		
Total for State.....		7		
Wisconsin:				
Buffalo County.....	Feb. 1-28.....	3		
Chippewa County.....	Jan. 1-31.....	3		
Clark County.....	Jan. 1-Feb. 28.....	14		
Crawford County.....	Feb. 1-28.....	7		
Dane County.....	Feb. 1-28.....	1		
Douglas County.....	Jan. 1-Feb. 28.....	13		
Superior.....	Dec. 19-Jan. 1.....	6		
Grant County.....	Feb. 1-28.....	1		
Jefferson County.....	Jan. 1-Feb. 28.....	19		
Juneau County.....	Jan. 1-31.....	1		
La Crosse County.....	Jan. 1-Feb. 28.....	14		
La Crosse.....	Dec. 10-Jan. 1.....	2		
Langlade County.....	Jan. 1-Feb. 28.....	3		
Milwaukee County.....	Jan. 1-Feb. 28.....	19		
Milwaukee.....	Dec. 10-Jan. 1.....	2		
Price County.....	Feb. 1-28.....	1		
Walworth County.....	Feb. 1-28.....	1		
Winnebago County.....	Jan. 1-31.....	2		
Total for State.....		112		
Grand total for the United States.....		8,812	44	

MORBIDITY AND MORTALITY.

WEEKLY MORBIDITY AND MORTALITY TABLE, CITIES OF THE UNITED STATES.

[For smallpox see special tables.]

Cities.	Week ended—	Esti- mated popula- tion 1909.	Total deaths from all causes.	Tuber- culosis.		Ty- phoid fever.		Scarlet fever.		Diph- theria.		Measles.		Whoop- ing cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Altoona, Pa.	Mar. 19	50,814	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Ashtabula, Ohio	do.	16,648	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Baltimore, Md.	do.	576,023	215	204	28	12	2	33	.....	14	4	44	2	15	2
Bath, Me.	do.	12,055	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Bayonne, N. J.	do.	49,894	.....	1	1	.....	.....	2	.....	2	.....	.....	.....	.....	.....
Beaver Falls, Pa.	do.	10,341	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Berkeley, Cal.	Mar. 12	19,700	5	.....	2	1	.....	3	.....	1	.....	27	.....	.....	.....
Biddeford, Me.	Mar. 19	17,676	8	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Mar. 12	45,855	21	.....	.....	.....	.....	.....	.....	1	.....	8	.....	.....	.....
Do.	Mar. 19	.....	19	2	1	.....	.....	1	.....	.....	.....	7	1	.....	.....
Boston, Mass.	do.	622,970	241	76	25	4	.....	34	1	51	3	96	4	5	.....
Boulder, Colo.	do.	.....	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Braddock, Pa.	Mar. 12	21,000	5	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Do.	Mar. 19	.....	10	.....	.....	.....	.....	1	.....	2	.....	2	.....	.....	.....
Bridgeport, Conn.	do.	90,913	31	4	5	.....	.....	21	1	5	2	.....	.....	2	.....
Brockton, Mass.	do.	53,978	20	3	3	.....	.....	6	.....	.....	.....	1	.....	.....	.....
Butte, Mont.	do.	49,892	15	.....	5	.....	.....	6	.....	.....	.....	.....	.....	.....	.....
Cambridge, Mass.	do.	101,872	41	10	8	.....	.....	1	.....	12	.....	7	.....	.....	.....
Cambridge, Ohio	do.	11,733	6	.....	.....	.....	.....	.....	.....	.....	.....	45	.....	.....	.....
Camden, N. J.	do.	89,305	31	.....	2	2	.....	3	.....	5	1	.....	.....	.....	.....
Carbondale, Pa.	Mar. 21	15,698	4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Charlotte, N. C.	Mar. 19	35,101	7	1	.....	1	.....	.....	.....	.....	.....	3	.....	1	.....
Chattanooga, Tenn.	do.	34,654	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chelsea, Mass.	do.	39,862	13	3	.....	.....	.....	1	.....	.....	.....	3	.....	.....	.....
Chicago, Ill.	do.	2,224,491	750	106	92	9	4	135	8	92	11	333	5	74	6
Chicopee, Mass.	do.	20,010	8	1	1	.....	.....	3	.....	3	.....	4	.....	.....	.....
Cincinnati, Ohio.	do.	351,212	131	31	16	2	.....	7	.....	3	.....	124	2	6	.....
Cleveland, Ohio.	Mar. 18	506,938	177	35	20	1	1	19	.....	8	1	225	4	9	1
Coffeyville, Kans.	Mar. 19	.....	4	.....	.....	.....	.....	3	.....	1	.....	8	.....	.....	.....
Columbus, Ga.	do.	17,893	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Columbus, Ohio.	do.	155,340	72	5	16	.....	.....	3	.....	2	.....	99	.....	5	.....
Concord, N. H.	Mar. 12	21,997	7	.....	.....	.....	.....	.....	.....	.....	.....	11	.....	.....	.....
Do.	Mar. 19	.....	9	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....
Covington, Ky.	do.	51,715	21	.....	5	2	.....	.....	.....	.....	.....	.....	.....	1	.....
Danville, Ill.	do.	27,387	11	2	2	.....	.....	.....	.....	.....	.....	46	.....	1	.....
Detroit, Mich.	do.	384,855	196	.....	.....	.....	.....	25	1	15	.....	.....	.....	.....	.....
Duluth, Minn.	Mar. 12	74,520	22	3	.....	1	.....	25	1	4	.....	10	.....	.....	.....
Do.	Mar. 19	.....	28	2	1	1	1	14	.....	6	.....	10	.....	.....	.....
Dunkirk, N. Y.	do.	18,061	6	.....	.....	.....	.....	1	.....	.....	.....	15	.....	.....	.....
Elizabeth, N. J.	Mar. 12	67,470	18	.....	2	.....	.....	10	.....	2	.....	13	.....	7	.....
Do.	Mar. 19	.....	12	.....	.....	.....	.....	12	.....	1	.....	6	.....	.....	.....
Elmira, N. Y.	do.	35,765	15	.....	.....	1	.....	1	.....	2	.....	3	.....	.....	.....
El Paso, Tex.	do.	22,911	26	6	6	.....	.....	.....	.....	.....	.....	50	.....	3	1
Elyria, Ohio.	Mar. 12	11,653	8	.....	.....	1	.....	.....	.....	1	.....	.....	.....	2	.....
Erie, Pa.	Mar. 19	63,652	25	5	1	11	.....	5	.....	2	.....	5	.....	.....	.....
Evansville, Ind.	do.	66,948	15	2	2	3	1	1	.....	2	.....	12	.....	.....	.....
Everett, Mass.	do.	32,931	13	2	2	.....	.....	2	.....	1	.....	2	.....	4	.....
Fall River, Mass.	do.	106,481	41	6	3	.....	.....	.....	.....	1	1	1	.....	.....	.....
Fort Wayne, Ind.	Mar. 12	54,180	12	.....	.....	.....	.....	2	.....	1	.....	114	.....	2	.....
Do.	Mar. 19	.....	26	1	3	.....	.....	1	.....	2	.....	150	1	2	.....
Galesburg, Ill.	do.	21,615	15	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	do.	36,964	4	2	2	1	.....	.....	.....	1	1	.....	.....	.....	.....
Grand Rapids, Mich.	do.	105,909	32	5	3	8	.....	29	1	1	.....	8	.....	6	.....
Harrison, N. J.	do.	14,604	3	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....
Haverhill, Mass.	do.	38,354	24	6	1	1	.....	4	.....	1	.....	9	1	2	.....
Homestead, Pa.	Mar. 7	17,145	11	.....	1	.....	.....	2	1	.....	.....	2	.....	6	.....
Do.	Mar. 14	.....	6	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....
Hyde Park, Mass.	Mar. 19	15,522	8	1	1	1	.....	2	.....	.....	.....	1	.....	.....	.....
Jacksonville, Fla.	do.	40,798	11	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jersey City, N. J.	Mar. 20	253,711	84	1	13	.....	1	25	2	8	1	16	.....	.....	.....
Johnstown, Pa.	Mar. 19	46,520	16	.....	.....	.....	.....	3	.....	.....	.....	57	.....	.....	.....
Kansas City, Kans.	do.	85,742	31	1	3	2	1	3	.....	6	1	59	1	1	.....
Kansas City, Mo.	Mar. 5	191,685	118	14	17	5	17	4	8	2	.....	288	5	1	.....
Kearny, N. J.	do.	15,765	3	1	.....	.....	.....	1	.....	.....	.....	8	.....	.....	.....
Kingston, N. Y.	do.	26,110	12	.....	2	.....	.....	3	.....	1	.....	.....	.....	.....	.....
Knoxville, Tenn.	do.	37,758	16	.....	2	.....	.....	.....	.....	1	.....	1	.....	.....	.....
Lackawanna, N. Y.	do.	.....	.....	.....	.....	.....	.....	9	1	1	.....	11	3	.....	.....
La Crosse, Wis.	do.	29,224	7	1	1	1	.....	.....	.....	.....	.....	4	.....	.....	.....

• Estimated population, 1906; no estimate for 1909.

MORBIDITY AND MORTALITY—Continued.

Weekly morbidity and mortality table, cities of the United States—Continued.

Cities.	Week ended—	Esti- mated popu- lation 1909.	Total deaths from all causes.	Tuber- culosis.		Ty- phoid fever.		Scarlet fever.		Diph- theria.		Measles.		Whoop- ing cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
La Fayette, Ind.....	Mar. 19	19,801	8	1	1		1					4			
Lancaster, Pa.....	do.	49,962	10	1	4		4		2			30			
Lawrence, Mass.....	do.	76,042	31	4	7	3	1	4	3	1		31	1		
Lebanon, Pa.....	do.	20,295						3							
Do.....	Mar. 26		8	1	2			4	2	5	2				
Lexington, Ky.....	Mar. 19	30,690	7	1	2			2				4			
Los Angeles, Cal.....	Mar. 12	103,000	83	10	12	2		12	1	3		587	2	6	
Lowell, Mass.....	Mar. 19	95,125	42	1	3		1	5	1	3		73	1		
Lynchburg, Va.....	do.	29,457		1	1			3				1			
Lynn, Mass.....	do.	83,865	22	4	3	5	1	8		4	1	2			
Madison, Ind.....	do.		1	1								1			
Malden, Mass.....	do.	41,535	16		2			6	1	3		1			
Manchester, N. H.....	do.	68,561	19	2	2		1			2	1	2			
Mansfield, Ohio.....	do.	21,390				1						10			
Marquette, Wis.....	do.	14,682	5	1	1										
Marlboro, Mass.....	do.	14,444						2		1		44			
Massillon, Ohio.....	do.	13,610	3		1			8		1		68			
Medford, Mass.....	do.	20,839	5							1		11			
Melrose, Mass.....	Mar. 12	15,361	1	1				4		1					
Do.....	Mar. 19		4					1		3		1			
Memphis, Tenn.....	do.	136,363	58	6	6			4	1	2					
Milwaukee, Wis.....	do.	332,495	124	22	11	23	3	42	2	14	2	60	1	13	2
Mobile, Ala.....	Mar. 5	45,122	16	1	1										
Do.....	Mar. 12		22		4										
Moline, Ill.....	Mar. 19	23,081	7		1			2		3					
Montclair, N. J.....	do.	18,296	8	1				7		2		6			
Montgomery, Ala.....	do.	43,927	24		4									6	
Monticello, Ind.....	do.														
Morristown, N. J.....	do.	12,849	12							1	1	5			
Mount Vernon, N. Y.....	do.	27,891	2	1		2		1				4			
Muskegon, Mich.....	do.	20,995		2						1		1			
Nanticoke, Pa.....	Mar. 21		4												
Nashville, Tenn.....	Mar. 19	106,476	29	4	1			1							
Nebraska City, Nebr.....	do.		1					1				4			
Newark, N. J.....	do.	308,669	110	13	14		1	42		26	3				
New Bedford, Mass.....	do.	83,898	38	4	1			6				42			
Newburyport, Mass.....	do.	14,832	8		2							95			
New Orleans, La.....	do.	327,662	144	37	14	3	1	44	2	11		157	1		
Newport, Ky.....	do.	31,345	12		2										
New York, N. Y.....	do.	4,450,963	1,642	760	198	24	11	708	27	447	60	1,620	20	34	4
Niagara Falls, N. Y.....	do.	32,012	20		1	3	1	2		2		56			
Norristown, Pa.....	Mar. 12	24,491	8	15				2		1					
Do.....	Mar. 19		9			2		4		1					
North Adams, Mass.....	do.	20,510	4					1							
Northampton, Mass.....	do.	21,008	7												
North Weymouth, Mass.....	do.	11,793				1									
Orange, N. J.....	do.	27,669	7	5	1			3		2		7	1		
Palmer, Mass.....	Mar. 5		6					3	2					2	
Do.....	Mar. 12		5					2	2	2					
Peekskill, N. Y.....	Mar. 19	15,473	3		1							1			
Philadelphia, Pa.....	do.	1,491,082		88	72	25	8	38	4	63	7	41		19	3
Pittsburg, Pa.....	do.	27,589	237	42	30	12	5	12	1	13	5	175	2	27	2
Plainfield, N. J.....	do.	20,947	4	2	1										
Plymouth, Pa.....	do.	17,524	4					1				13			
Portsmouth, N. H.....	do.	11,336													
Pottstown, Pa.....	do.	14,065	7		2			2				12			
Providence, R. I.....	do.	217,065	105	4	10	1	1	13	1	9	1	18	1		2
Racine, Wis.....	do.	34,840	12	1	1					1	1				
Reading, Pa.....	Mar. 21	97,231	26	3		7		7		3		54		10	
Rock Island, Ill.....	Mar. 19	24,766	12	3	2			9		2					
Sacramento, Cal.....	Mar. 12	31,889	13							2		26			
Do.....	do.		23		3					1		26			
Saginaw, Mich.....	Feb. 26	51,941	13			2				2		4			
Do.....	Mar. 12		12							1		1			
Do.....	Mar. 5		12	1	1					2					
St. Louis, Mo.....	Mar. 19	686,369	262	40	27	6	4	64	6	20	2	51		25	2
Sandusky, Ohio.....	do.		4												
San Francisco, Cal.....	Mar. 5	342,782	118	25	17	5	3	8		16		68		13	
Do.....	Mar. 12		151	34	23	1		11		15	1	24	7	3	2
San Jose, Cal.....	do.	24,596	8												

* Population, 1900. No estimate 1909.

* Estimated population 1906. No estimate 1909.

MORBIDITY AND MORTALITY—Continued.

Weekly morbidity and mortality table, cities of the United States—Continued.

Cities.	Week ended—	Esti- mated popula- tion 1909.	Total deaths from all causes.	Tuber- culosis.		Ty- phoid fever.		Scarlet fever.		Diph- theria.		Measles.		Whoop- ing cough.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Schenectady, N. Y.	Mar. 19	73, 037	24	1	3			7	1	3	1	36			
Somerville, Mass.	do.	75, 375	24	1	1					2		3			
South Bend, Ind.	do.	49, 321	8					5							
South Bethlehem, Pa.	do.	15, 886	5	1		1		1		2	1	15			
South Omaha, Nebr.	do.	42, 146	1			1	1	1							
Spokane, Wash.	Mar. 12	47, 066	22		2			2		2		18	1		1
Springfield, Mass.	Mar. 19	82, 724	41	4	2		1	8	3	8		13	1	1	1
Springfield, Ohio	do.	43, 975	10		2					2		78			
Steelton, Pa.	do.	14, 769	6	2				6		5	2	4		1	
Superior, Wis.	do.	40, 919	12				1	6	1	1					
Tacoma, Wash.	Mar. 12	37, 714	19		1	1		7		1					
Taunton, Mass.	Mar. 19	30, 926	11					1				2			
Terre Haute, Ind.	do.	55, 509	24	2	1			1				53			
Titusville, Pa.	do.	8, 397	2												
Toledo, Ohio	Feb. 19		47		2	7	1	6				70			
Do	Feb. 26		38		2	4	1	1		6	3	166			1
Do	Mar. 5		37		5	6	1	10	1	3	2	132			
Do	Mar. 12		49		4	5	2	5		3	1	132			
Topeka, Kans.	Mar. 19		0												
Trenton, N. J.	Feb. 19	92, 878	6	5	4	1		9		3	2				
Utica, N. Y.	do.	69, 458	21	2	1			3				34		1	
Waltham, Mass.	do.	28, 522	10	2		1				1		1			
Washington, D. C.	Mar. 23	322, 212	160	21	28	3	1	38	1	4		10		20	
West Newton, Mass.	do.	39, 419	12	1				3				3			
Wichita, Kans.	do.	39, 612	17							1		40			
Wilkes-Barre, Pa.	do.	64, 323	19	3	1			7		3	1	1		6	
Wilksburg, Pa.	do.	19, 999	8	1	1			1				1			
Williamsport, Pa.	do.	30, 220	10		3	1		10		2		16			
Wilmington, Del.	do.	88, 980	34		4										
Woburn, Mass.	do.	14, 520	5			1						2			
Yonkers, N. Y.	do.	72, 200	25	3	1			10	1	7	2	3			
York, Pa.	do.	41, 895	6		3	2		1		3		1			
Zanesville, Ohio.	do.	25, 614	6			31				1					

α Estimated population 1906. No estimate 1909.

STATISTICAL REPORTS OF MORBIDITY AND MORTALITY, STATES AND CITIES OF THE UNITED STATES (untabulated).

CALIFORNIA—*Sacramento*.—Month of February, 1910. Population, 55,000. Total number of deaths from all causes 53, including measles 1, tuberculosis 12. Cases reported: Typhoid fever 3, smallpox 4, measles 50, scarlet fever 2, diphtheria 3, tuberculosis 3.

FLORIDA.—Week ended March 19, 1910. Reports from the state board of health show typhoid fever present in 2 localities with 2 cases; smallpox in 1 county (Duval) with 1 case; diphtheria in 3 localities with 3 cases; tuberculosis in 5 localities with 5 cases.

Tampa.—Month of February, 1910. Population, 28,410. Total number of deaths from all causes 42, including typhoid fever 1, measles 2, tuberculosis 4. Cases reported: Typhoid fever 1, measles 27, diphtheria 6.

ILLINOIS—*Quincy*.—Month of February, 1910. Population, 43,000. Total number of deaths from all causes, 50, including diphtheria 1, tuberculosis 3. Cases reported: Typhoid fever 4, measles 1, scarlet fever 6, diphtheria 12.

INDIANA.—Month of January, 1910. Reports from the state board of health show a total of 2,883 deaths, urban population 1,074,289, deaths 1,426, rural population 1,690,240, deaths 1,457, including typhoid fever 47, scarlet fever 16, tuberculosis 392. Cases reported: Typhoid fever 131 in 40 counties, smallpox 189 in 25 counties, scarlet fever 616 in 63 counties.

IOWA—*Cedar Rapids*.—Month of February, 1910. Population, 35,000. Total number of deaths from all causes 28, including typhoid fever 2, tuberculosis 1. Cases reported: Scarlet fever 2.

MARYLAND.—Month of December, 1909. Population 1,319,132. Total number of deaths from all causes 776, including typhoid fever 17, measles 6, scarlet fever 4, diphtheria 9, tuberculosis 88. Cases reported: Typhoid fever 83, smallpox 4, measles 98, scarlet fever 62, diphtheria 61. The typhoid fever cases were distributed as follows: Potomac River watershed 35, Patapsco River watershed 5, Patuxent River watershed 10.

MASSACHUSETTS.—Week ended January, 1910. Population of reporting towns 2,401,701. Total number of deaths from all causes 911, including typhoid fever 10, measles 1, scarlet fever 5, diphtheria 13, tuberculosis 84. Week ended January 8, 1910. Total number of deaths from all causes 853, including typhoid fever 3, measles 4, scarlet fever 3, tuberculosis 68. Week ended January 15, 1910. Total number of deaths from all causes 771, including typhoid fever 4, measles 4, scarlet fever 2, diphtheria 12, tuberculosis 58. Week ended January 22, 1910. Total number of deaths from all causes 893, including typhoid fever 3, measles 5, scarlet fever 3, diphtheria 19, tuberculosis 81. Week ended January 29, 1910. Total number of deaths from all causes 807, including measles 5, scarlet fever 1 diphtheria 14, tuberculosis 94.

MINNESOTA—*St. Paul*.—Month of December, 1909. Population 230,000. Total number of deaths from all causes 211, including typhoid fever 6, measles 1, diphtheria 13, tuberculosis 21. Cases reported: Smallpox 1, measles 13, scarlet fever 87, diphtheria 119.

MISSOURI—*Springfield*.—Month of February, 1910. Population 35,000. Total number of deaths from all causes 54, including diphtheria 1, tuberculosis 6. Cases reported: Scarlet fever 8, diphtheria 2.

NEW YORK.—Month of February, 1910. Population 8,871,720. Total number of deaths from all causes 12,863, including typhoid fever 87, measles 166, scarlet fever 225, diphtheria 259, tuberculosis 1,371. Cases reported: Typhoid fever 456, smallpox 38, measles 9,726, scarlet fever 3,655, diphtheria 2,018, tuberculosis 2,416.

Auburn.—Month of February, 1910. Population 38,500. Total number of deaths from all causes 49, including tuberculosis 5. Cases reported: Typhoid fever 1, scarlet fever 16, diphtheria 2, tuberculosis (pulmonary) 8.

FOREIGN AND INSULAR.

CHINA.

AMOY—Smallpox.

Acting Assistant Surgeon Moorhead reports, February 21:

Week ended February 19. Smallpox is present in the international settlement of Kulangsu, and smallpox deaths among children are reported from the mission districts of Amoy. A case of smallpox among the foreign crew of a regular passenger steamship running between Amoy and Hongkong was landed at Hongkong. It is believed that the infection was acquired in Amoy.

SHANGHAI—Smallpox—Inspection of Vessels.

Acting Assistant Surgeon Ransom reports, February 24 and March 2:

Week ended February 19. The weekly report of the municipal health officer shows 1 new case of smallpox among foreigners and 5 deaths from smallpox among natives. During the corresponding period of last year there was but 1 death from smallpox among natives. Reports from Hankow show smallpox present in the native city.

Week ended February 26. Two deaths from smallpox were reported among natives at Shanghai. Supplemental bills of health were granted to 3 steamships having an aggregate personnel of 733. Vessels inspected, 2; members of crews and steerage passengers inspected, 132 and 9, respectively; manifests viséed for 8,256 pieces of freight, of which 88 pieces consisted of human and other hair, and hides, disinfected; 11 pieces of baggage disinfected.

CUBA.

CIENFUEGOS—Inspection of Vessels.

Acting Assistant Surgeon Suarez reports, March 16:

Week ended March 12. Vessels inspected, 3; bills of health issued, 3; members of crews of outgoing vessels inspected, 77.

No quarantinable disease reported.

HABANA—Inspection of Vessels.

Acting Assistant Surgeon Villoldo reports, March 22:

Week ended March 19. Bills of health issued, 32; vessels inspected, 27; members of crews of outgoing vessels inspected, 1,490; passengers of outgoing vessels inspected, 1,342.

No quarantinable disease reported.

MATANZAS—Inspection of Vessels.

Acting Assistant Surgeon Nuñez reports, March 21:

Week ended March 19. Bills of health granted to 10 vessels clearing for United States ports.

No quarantinable disease reported. The department of sanitation reports the inspection of 3,759 houses from March 1 to 10.

SANTIAGO—Inspection of Vessels.

Acting Assistant Surgeon Wilson reports, March 15 and 16:

Week ended March 5. Bills of health issued to 8 vessels. Week ended March 12. Bills of health issued to 8 vessels. These vessels were all bound for the United States and its dependencies.

The department of sanitation reports for the week ended March 5, 2,714 houses inspected, and for week ended March 12, 1,800 houses inspected.

No quarantinable disease was reported.

INDIA.**CALCUTTA—Cholera, Plague, and Smallpox.**

Acting Assistant Surgeon Allan reports, February 24:

Week ended February 12. At Calcutta, there were 51 deaths from cholera and 13 from plague; in all Bengal, 2,498 cases of plague with 2,120 deaths; in all India, 17,412 cases of plague with 15,286 deaths.

ITALY.**NAPLES—Examination of Emigrants—Smallpox.**

Surgeon Geddings reports, March 7:

Vessels inspected at Naples and Palermo week ended March 5.

NAPLES.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of baggage inspected and passed.	Pieces of baggage disinfected.
Mar. 2	Roma	New York	880	80	1,150
2	Duca di Genova	do.	1,292	105	1,580
3	Italia	do.	373	35	650
4	Batavia	do.	986	50	1,270
4	San Giorgio	do.	523	40	870
4	König Albert	do.	1,291	120	1,650
4	Saxsonia	do.			
5	Canopic	Boston	1,168	115	1,320
	Total		6,518	545	8,490

PALERMO.

Mar. 4	Italia	New York	610	1,150	350
5	San Giorgio	do.	511	700	300
	Total		1,121	1,850	650

Rejections recommended.

NAPLES.

Date.	Name of ship.	Trachoma.	Favus.	Suspected trachoma.	Suspected favus.	Small-pox.	Other causes.	Total.
Mar. 2	Roma.....	7	2	7			3	19
2	Duca di Genova.....	15	5	6		1	12	39
3	Italia.....	4	4	3			5	16
4	Batavia.....	12	3	11			7	33
4	San Giorgio.....	17	1	6	1		4	29
4	König Albert.....	13	5	8	1		8	35
4	Saxsonia.....							
5	Canopic.....	14	5	10			2	31
	Total.....	82	25	51	2	1	41	202

PALERMO.

Mar. 4	Italia.....	29		32			2	63
5	San Giorgio.....	26		48			3	77
	Total.....	55		80			5	140

Smallpox in Naples.—During the week ended March 6, 23 cases of smallpox with 4 deaths were reported at the health office of the city of Naples.

A case of smallpox was discovered at the examination of steerage passengers for the steamship *Duca di Genova* March 2. The patient was sent to the Cotugno Hospital for contagious diseases. Fifteen contacts were revaccinated and placed under observation and their boarding house was disinfected.

JAPAN.

YOKOHAMA—Inspection of Vessels—Plague Rats at Kobe.

Surgeon Irwin reports, February 28:

Week ended February 26. Vessels inspected: Steamships *Ning Chow*, for Manila, crew 96, steerage passengers 52, and *Korea* for San Francisco, crew 281, cabin passengers 68, steerage passengers, 549.

At Kobe 13 cases of plague have been reported since January 1, and plague-infected rats continue to be found.

Smallpox is reported present in the village of Ilmyonkyo, Province of South Choule, Korea.

KOBE—Inspection of Vessels—Plague.

Acting Assistant Surgeon Smith reports, March 2:

Week ended February 26. Supplemental bills of health issued to 4 steamships; members of crews inspected, 498; steerage passengers inspected, 560; members of crews and steerage passengers bathed, 2 and 265, respectively; pieces of baggage and bedding steamed, 768 and 530; manifests viséed for 48,899 pieces of freight amounting to 3,629 tons.

Emigrants inspected and passed.—Per steamship *Korea* for Honolulu, 260; for San Francisco, 5. Twenty Japanese and 150 Russians were 7 days in quarantine detention at Ono before embarkation; 95 Russians were landed direct from ship at quarantine detention station (1 day in quarantine) and transferred from Ono detention station to steamship *Korea*.

The official returns of infectious disease show 1 case of plague.

MEXICO.

Report from the Superior Board of Health of Mexico.

In compliance with articles 1 and 2 of the International Sanitary Convention held at Washington, October 9-14, 1905, the president of the Superior Board of Health of Mexico reports, March 21, that no case of yellow fever and no death from the said disease were registered in the Mexican Republic during the week ended March 19, and that the prophylactic measures reported under date of September 28, 1908, continue to be carried out.

COATZACOALCOS—Inspection of Vessels.

Acting Assistant Surgeon Thompson reports, March 17:

Week ended March 16. Vessels inspected: March 14, steamship *Texas* for Galveston via Veracruz; March 15, steamship *San Cristobal* for Mobile; March 16, steamships *Massachusetts* for Delaware Breakwater, *Californian* for Veracruz, and *Hermann Menzell* for Texas City.

PERU.

CALLAO—Fumigation of Vessels—Plague.

Acting Assistant Surgeon Castro-Gutierrez reports, February 24 and March 9:

Week ended February 19. Three steamships and 2 sailing vessels having an aggregate personnel of 217 and carrying 63 cabin and 9 steerage passengers were fumigated. Week ended February 26. Three steamships, crews 205, cabin and steerage passengers 120 and 47 respectively, inspected; two of these vessels were fumigated.

Two cases of plague have occurred at Callao, 1 on February 2 and 1 February 7. At Mollendo 6 cases of plague with 2 deaths were reported February 25 as having occurred during the previous 2 weeks and mortality among rats was observed in certain parts of the town. Plague is reported present at Lomas, Peru.

On February 18 the steamship *Ammon* arrived at Callao with a case of plague on board among the crew. The *Ammon* had previously been dispatched, after fumigation, from Callao for Guayaquil, where the vessel took on cargo, proceeding to Salina Cruz via Mexican and Central American ports and leaving Salina Cruz for Callao January 31. The patient was taken ill February 10. The disease was recognized as plague on inspection at Callao and the patient was removed to the lazaretto at Lima. The vessel was fumigated and the clothing and bedding of the crew were disinfected on shore. The *Ammon* then continued her voyage to Pisco, Peru, where the port physician declared the existence of a second case on board. It is believed that infected rats were taken on with the cargo at Guayaquil.

PHILIPPINE ISLANDS.

Passed Assistant Surgeon Victor G. Heiser, chief quarantine officer for the Philippine Islands, reports, February 1 and 10:

Cholera Outbreak from Infection on Lighter.

There has been a steady decline in the number of cholera cases in Manila and throughout the provinces. With one exception the disease has been occurring only in isolated and scattered form over a widely distributed section of the country.

The importance, however, of the constant vigilance which is necessary in order to avoid a general outbreak is well shown by the experience of a few weeks ago. A casco (lighter) proceeded from Limay, Bataan, to Cawit, Cavite, with 12 persons on board.

This is a trip across Manila Bay of but a few hours' duration and between ports in which no quarantine inspection takes place. One of the persons was suffering from cholera at the time he embarked, and at the time the casco reached Cawit a number of cases had occurred. These were surreptitiously landed, and the presence of the disease was concealed from the authorities. A period of 3 days passed before the presence of cholera became known, and, during this period, more than 50 cases occurred. Most energetic measures were at once instituted to eradicate the infection, and the number of cases has now been reduced to about 2 per day, with every prospect of the disease being completely eliminated within a very short time.

Experiences of this kind again demonstrate the necessity of maintaining at least a certain amount of vigilance over the shipping of the Philippine Islands, and show that the time has not yet arrived when the inspection of vessels can be entirely confined to arrivals from foreign ports.

Cholera in the Provinces.

WEEK ENDED JANUARY 29.

Province.	Cases.	Deaths.
Bataan.....	19	16
Bohol.....	2	3
Cavite.....	59	42
Misamis.....	2	1
Pampanga.....	15	13
Total.....	97	75

WEEK ENDED FEBRUARY 5.

Bataan.....	37	29
Bohol.....	5	2
Cavite.....	36	37
Cebu.....	35	25
Misamis.....	20	11
Pampanga.....	7	6
Total.....	140	110

WEEK ENDED FEBRUARY 12.

Bataan.....	4	1
Bohol.....	5	3
Cavite.....	6	4
Misamis.....	7	10
Pampanga.....	3	.....
Total.....	25	18

Quarantine Diseases in Manila.

Week ended January 29. In the city of Manila 6 cases of cholera with 6 deaths, and 4 cases of smallpox were reported; week ended February 5, 5 cases of cholera with 5 deaths, and 2 cases of smallpox; week ended February 12, 3 cases of cholera with 3 deaths, and 1 case of smallpox.

Inspection of Vessels.

January 24, the Norwegian steamship *Standard*, with 39 in crew, en route from Phnom Penh to Iloilo, granted a supplemental bill of health. January 25, the American steamship *Minnesota*, with 269 in crew and 102 cabin and 64 steerage passengers, granted a bill of health for Seattle via Hongkong and Japan ports. Cargo inspected and passed before loading, and cargo manifests signed. Personnel inspected at hour of sailing. January 29, the Norwegian steamship *Solstad*, with 40 in crew, en route from Phnom Penh to Iloilo, granted a supplemental bill of health. February 5, the American steamship *Korea*, with 281 in crew and 58 cabin and 317 steerage passengers, granted a bill of health for San Francisco via Hongkong and Japan ports. Cargo inspected and passed during loading. Manifests for same signed. February 5, the British steamship *Oceano*, with 58 in crew, granted a bill of health for Seattle via Cebu, Hongkong, and Japan ports. Cargo taken on at this port inspected and passed prior to loading, and manifests for same signed. February 12, Norwegian steamship *Rygja* with 42 in crew granted a bill of health for Portland, Oreg., via Hongkong, Japan ports, and Honolulu. Cargo inspected and passed prior to loading and manifests for same signed. Vessel fumigated throughout while in port. Quarantine regulations for incoming interisland vessels at the port of Manila were modified during the week ended February 12.

RUSSIA.

Typhus Fever—Examination of Emigrants.

Acting Assistant Surgeon De Forest, at Libau, reports, March 14: Week ended March 12. At Riga from March 7 to 12, 102 cases of typhus fever with 20 deaths were reported; from January 30 to March 12, 692 cases. At Reval 1 case of typhus fever was reported March 7.

The plague outbreak in the government of Astrakhan is extinct.

For the steamship *Litwania* sailing for New York, March 15, 912 emigrants were examined. Six cases of smallpox were found among them. The cases were isolated and the remaining emigrants vaccinated.

VENEZUELA.

LA GUAIRA—Inspection of Vessels.

Acting Assistant Surgeon Kellogg reports, March 6:

Week ended March 5. Vessels inspected: February 28, steamship *Zulia* for New York, crew 51; March 2, steamship *Wm. Cliff* for Galveston, crew 45, passengers in transit 3; March 4, steamship *Prins Willem V*, for New York, crew 89, passengers in transit 6, taken on at this port 9.

No quarantinable diseases were reported at La Guaira or Maiquetia.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.

Reports Received During Week Ended April 1, 1910.

[These tables include cases and deaths recorded in reports received by the Surgeon-General, Public Health and Marine-Hospital Service, from American consuls through the Department of State and from other sources.]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Ceylon:				
Colombo.....	Feb. 13-19.....	5		
India:				
Bombay.....	Feb. 16-22.....		2	
Philippine Islands:				
Manila.....	Jan. 23-Feb. 12....	14	14	
Provinces—				
Bataan.....	Jan. 23-Feb. 12....	60	46	
Bohol.....	Jan. 23-Feb. 12....	12	8	
Cebu.....	Jan. 30-Feb. 4.....	35	25	
Cavite.....	Jan. 23-Feb. 12....	101	83	Jan. 1-Feb. 12, 50 cases from a coasting vessel.
Misamis.....	Jan. 23-Feb. 12....	29	22	
Pampanga.....	Jan. 23-Feb. 12....	25	19	

PLAGUE.

Brazil:				
Bahia.....	Jan. 30-Feb. 11....	5	3	
Santos.....	Feb. 2.....			Present.
Chile:				
Iquique.....	Feb. 24.....			Endemic.
China:				
Hankow.....	Feb. 1.....			Present.
India:				
Bombay.....	Feb. 16-22.....		88	
Kurrachee.....	Feb. 13-19.....	86	78	
Japan:				
Kobe.....	Feb. 20-26.....	1		
Peru:				
Callao.....	Feb. 2-7.....		2	
Lima.....	Feb. 11-25.....	1		In lazaretto from s. s. Ammon.
Mollendo.....	Feb. 11-25.....	6	2	
Pisco.....	Feb. 19.....	1		From s. s. Ammon.
Siam:				
Bangkok.....	Dec. 26-Jan. 22....	6	5	
Turkey in Asia:				
Jiddah.....	Mar. 2-6.....	12	12	

SMALLPOX.

Abyssinia:				
Adis Ababa.....	Feb. 19.....			Epidemic.
Austria:				
Bohemia.....	Feb. 20-26.....	1		
Galicia.....	Feb. 20-26.....	8		
Brazil:				
Bahia.....	Jan. 30-Feb. 11....	45	29	
Pernambuco.....	Jan. 1-15.....		44	
Rio de Janeiro.....	Feb. 11-27.....	2		
Canada:				
Ontario—				
Port Arthur.....	Mar. 11-19.....	5		
Ceylon:				
Colombo.....	Feb. 6-12.....	5		
China:				
Amoy.....	Feb. 6-12.....		1	
Canton.....	Jan. 21-Feb. 23....	55	9	
Hankow.....	Feb. 12.....			Present.
Hongkong.....	Jan. 30-Feb. 19....	7	2	
Shanghai.....	Feb. 9-27.....	2	9	Deaths among natives.
Egypt:				
Cairo.....	Feb. 27-Mar. 4.....		1	
Germany, general:				
Bremen.....	Mar. 6-12.....	6		
Bremen.....	Feb. 27-Mar. 5.....	1		
Great Britain:				
London.....	Jan. 31-Mar. 5.....	1		
Newcastle-on-Tyne.....	Jan. 31-Mar. 5.....		1	
Greece:				
Athens.....	Feb. 20-26.....		2	

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

Reports Received During Week Ended April 1, 1910.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Italy, general.....	Feb. 28-Mar. 6....	9		
Naples.....	Feb. 28-Mar. 6....	23	4	
India:				
Bombay.....	Feb. 16-22.....		34	
Madras.....	Feb. 12-18.....		1	
Kurrachee.....	Feb. 13-19.....	2		
Japan:				
Formosa.....	Feb. 13-19.....	7	2	
Java:				
Batavia.....	Feb. 6-12.....	1		
Korea:				
Ilmyokyo.....	Feb. 26.....			Present.
Mexico:				
Aguascalientes.....	Mar. 6-12.....		3	
Guadalajara.....	Mar. 5-11.....		1	
Philippine Islands:				
Manila.....	Jan. 23-Feb. 12....	7		
Portugal:				
Lisbon.....	Feb. 26-Mar. 5....	27		
Russia:				
Libau.....	Feb. 29-Mar. 6....	6		
Odesa.....	Feb. 20-Mar. 5....	1		
Riga.....	Feb. 28-Mar. 5....	66	14	
St. Petersburg.....	Feb. 20-26.....	50	14	
Warsaw.....	Jan. 9-22.....		42	
Siberia:				
Vladivostok.....	Jan. 28-Feb. 5....	3		
Singapore:				
Straits Settlements.....	Feb. 6-12.....		2	
Spain:				
Barcelona.....	Mar. 1-7.....		1	
Vigo.....	Feb. 27-Mar. 5....			Present in vicinity.
Turkey in Asia:				
Trebizond.....	Mar. 5.....			Present.

Reports Received from January 1 to March 25, 1910.

For reports received from June 25, 1909, to December 31, 1909, see PUBLIC HEALTH REPORTS for December 31, 1909. In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Germany:				
Heydekrug.....	Nov. 19-Dec. 4....	2		
Niedrung.....	Nov. 16-22.....	1		
India:				
Bombay.....	Nov. 24-Feb. 8....		19	
Calcutta.....	Nov. 14-Feb. 5....		410	
Madras.....	Jan. 1-Feb. 4....		2	
Rangoon.....	Nov. 14-Jan. 22...		41	
Java:				
Batavia.....	Nov. 14-Mar. 5....	388	111	
Norway:				
Friedershald.....	Dec. 31-Jan. 3....	1	1	From a vessel from Riga.
Persia:				
Astara.....	Dec. 1-15.....	36	22	
Philippine Islands:				
Manila.....	Nov. 7-Jan. 22....	95	81	Third quarter, 1909. Cases 82, deaths 61.
Provinces.....				Third quarter, 1909. Cases 3,946, deaths 2,609.
Albay.....	Nov. 7-20.....	6	6	
Bataan.....	Nov. 7-Jan. 22....	155	106	
Bohol.....	Nov. 7-Jan. 22....	35	20	
Bulacan.....	Nov. 7-Jan. 1....	32	27	
Camarines.....	Nov. 7-20.....	5	5	
Capiz.....	Nov. 21-Dec. 18...	3	2	
Cavite.....	Nov. 7-Jan. 22....	105	76	
Cebu.....	Nov. 7-Jan. 22....	288	226	Nov. 20, 1 case on s. s. Yapticco.
Laguna.....	Dec. 19-25.....	4	4	
Leyte.....	Nov. 21-Jan. 15...	36	32	

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

Reports Received from January 1 to March 25, 1910.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Philippine Islands—Continued.				
Provinces—Continued.				
Misamis.....	Jan. 16-22.....	11	11	
Oriental Negros.....	Nov. 7-20.....	10	5	
Pampanga.....	Nov. 7-Jan. 22.....	157	124	
Rizal.....	Nov. 7-Jan. 22.....	11	7	
Tarlac.....	Nov. 7-13.....	9	5	
Russia, general.....	Nov. 21-Jan. 29.....	440	203	
Baku, government.....	Nov. 21-Dec. 25.....	22	22	
Baku.....	Nov. 21-Jan. 15.....	27	17	
Don, territory.....	Nov. 28-Jan. 29.....	19	12	
Ekaterinslav, government.....	Nov. 21-Jan. 1.....	23	7	
Jaroslav, government.....	Nov. 21-27.....	1	1	
Kaluga.....	Dec. 26-Jan. 1.....	1		
Kostroma, government.....	Nov. 21-27.....	3	4	
Kovna, government.....	Nov. 21-27.....	8	3	
Kursk, government.....	Nov. 21-Dec. 11.....	6		
Moscow, government—				
Moscow.....	Nov. 29-Jan. 22.....	256	115	
Pskov, government.....	Nov. 21-27.....	10		
St. Petersburg, government.....	Nov. 21-Dec. 18.....	14	12	
St. Petersburg.....	Nov. 21-Jan. 1.....	53	12	
Taurida, government.....	Nov. 21-Dec. 25.....	66	28	
Vitebsk, government.....	Nov. 21-27.....	2		
Siam:				
Bangkok.....	Oct. 28-Jan. 22.....	12	12	
Siberia:				
Vladivostok.....	Nov. 16-21.....	1		
Straits Settlements:				
Singapore.....	Dec. 19-Jan. 15.....		4	
Sumatra:				
Palembang.....	Sept. 20-Oct. 20.....	936	675	
Turkey in Asia:				
Trebizond.....	Nov. 28.....	1		On a vessel from Batum.

YELLOW FEVER.

Brazil:				
Manaos.....	Nov. 21-Feb. 26.....		48	
Para.....	Nov. 28-Feb. 26.....	66	52	
Ecuador:				
Babahoyo.....	Jan. 1-Feb. 15.....	4		
Guayaquil.....	Dec. 1-Feb. 15.....	107	31	
Peru:				
Callao.....	Nov. 2-Dec. 2.....	1	1	From s. s. Loa.
Mexico:				
Yucatan—				
Merida.....	Dec. 20-21.....	1	1	
Santa Cruz de Bravo.....	Dec. 20.....	1	1	
Panama:				
Canal Zone—				
Ancon.....	Jan. 24.....		1	At Ancon hospital, from s. s. Barbadian.
Culebra Island.....	Mar. 1-8.....	1	1	At Culebra quarantine station, from s. s. Huallago.
Trinidad:				
Port of Spain.....	Nov. 28-Dec. 4.....	1	1	

PLAGUE.

Arabia:				
Aden.....	Jan. 21-23.....	1	1	From an Austrian mail steamer from Bombay.
Brazil:				
Bahia.....	Nov. 20-Feb. 28.....	49	25	
Para.....	Nov. 28-Feb. 19.....	12	9	
Pernambuco.....	Oct. 15-Dec. 31.....		21	
Rio de Janeiro.....	Nov. 2-Jan. 23.....	16	2	
Santos.....	Nov. 1-Dec. 29.....	5	3	One case from bark Amazone Dec. 1.
Chile:				
Iquique.....	Feb. 12.....			Present in endemic form.
Taltal.....	Jan. 15.....	2	1	

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

Reports Received from January 1 to March 25, 1910.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Hankow.....	Nov. 27-Dec. 7....	20	20	
Hongkong.....	Nov. 21-27.....	1	1	
Ecuador:				
Babahoyo.....	Dec. 16-Feb. 15....	18	6	
Guayaquil.....	Dec. 1-Feb. 15....	210	87	
Milagro.....	Jan. 1-Feb. 15....	15	3	
Egypt:				
Alexandria.....	Nov. 19-Dec. 15....	3	2	
Port Said.....	Nov. 30-Dec. 22....	2	1	
Provinces—				
Assiout.....	Sept. 29-Feb. 17....	30	11	
Beherach.....	Dec. 8-14.....	1	1	
Beni Souef.....	Dec. 16-Feb. 17....	19	8	
Fayoum.....	Jan. 20-Feb. 12....	4	3	
Galloobeh.....	Jan. 11-Feb. 3....	3	1	
Garbieh.....	Feb. 2.....	1	1	
Girgeh.....	Dec. 19-26.....	2	1	
Ghizeh.....	Dec. 19-Jan. 2....	2	1	
Kena.....	Feb. 3.....	1	1	
Menouf.....	Nov. 28-Dec. 15....	17	6	
Minieh.....	Dec. 21-27.....	3	1	
German East Africa:				
Mpwapwa.....	Sept. 19-Oct. 5....	7	1	
Hawaii:				
Hilo.....	Mar. 12-22.....	4	4	
Honokaa.....	Mar. 14-15.....	2	2	
India:				
Bombay.....	Nov. 24-Feb. 8....	.....	135	
Calcutta.....	Nov. 14-Jan. 29....	.....	8	
Kurrachee.....	Jan. 2-15.....	5	.....
Madras.....	Dec. 18-Jan. 21....	.....	3	
Rangoon.....	Nov. 20-Jan. 29....	.....	38	
Bombay Presidency and Sind.....	Nov. 7-Jan. 22....	11,137	7,821	
Madras Presidency.....	Nov. 7-Jan. 22....	1,011	705	
Bengal.....	Nov. 7-Jan. 22....	8,109	6,509	
United provinces.....	Nov. 7-Jan. 22....	36,037	33,019	
Punjab.....	Nov. 7-Jan. 22....	14,277	11,704	
Burma.....	Nov. 7-Jan. 22....	898	766	
Central provinces, includ- ing Berar.....	Nov. 7-Jan. 22....	10,322	8,355	
Coorg.....	Nov. 14-27.....	5	1	
Mysore State.....	Nov. 7-Jan. 22....	1,388	1,020	
Hyderabad State.....	Nov. 7-Jan. 22....	155	126	
Central India.....	Nov. 7-Jan. 22....	850	638	
Rajputana and Ajmer-Mer- wara.....	Nov. 7-Jan. 22....	4,157	3,674	
Kashmir.....	Nov. 7-Jan. 22....	165	110	
Grand total.....	.....	88,511	74,448	
Indo-China:				
Saigon.....	Nov. 7-Dec. 25....	5	4	
Japan:				
Kobe.....	Nov. 28-Feb. 12....	24	20	
Shikoku Island.....	Jan. 30-Feb. 5....	1	.....
Paraguay.....	Dec. 10.....	.....	30	In the northern part.
Peru:				
Arequipa, department.....	Dec. 10-16.....	1	.....
Mollendo.....	Dec. 20-Jan. 1....	1	.....
Callao, department— Callao.....	Jan. 17-25.....	3	.....
Lambayeque, department.....	Oct. 1-Dec. 16....	39	13	
Libertad, department.....	Nov. 19-Dec. 16....	32	3	
Lima, department.....	Oct. 22-Dec. 16....	10	6	
Russia:				
Astrakan, government.....	Dec. 5-Feb. 27....	134	120	
Naurzali-Tchagil.....	Jan. 17-Feb. 2....	26	26	
Beiskulak.....	Dec. 10-16.....	18	16	
Bodai.....	Mar. 1.....	9	.....
Dshedda.....	Jan. 7.....	.....	.....	Present.
Libau.....	Dec. 3-9.....	1	1	
Uralsk, district.....	Nov. 25-Jan. 12....	208	202	
Siam:				
Bangkok.....	Oct. 28-Nov. 27....	5	5	
Straits Settlements:				
Singapore.....	Dec. 25-Jan. 1....	2	2	

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

Reports Received from January 1 to March 25, 1910.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Turkey in Asia:				
Beirut.....	Nov. 29-Dec. 14....	3		
Jiddah.....	Jan. 5-Feb. 27.....	8	7	
Venezuela:				
Puerto Cabello.....	Feb. 24.....	2		
Zanzibar.....	Nov. 9-17.....	2	2	

SMALLPOX.

Algeria, general.....	Dec. 1-15.....	22		
Algiers.....	Nov. 1-Jan. 31.....		3	
Bona.....	Dec. 1-Jan. 31.....	11	9	
Argentina:				
Buenos Aires.....	Oct. 1-Dec. 31.....		85	
Austria:				
Gallcia.....	Jan. 1-29.....	3		
Vienna.....	Jan. 9-29.....	2		
Brazil:				
Bahia.....	Nov. 20-Jan. 28....	205	135	
Pernambuco.....	Oct. 16-Jan. 15.....		205	
Rio de Janeiro.....	Nov. 2-Feb. 13.....	23	1	
Sao Paulo.....	Nov. 1-21.....		2	
Canada:				
British Columbia—				
Vancouver.....	Jan. 1-31.....	3		
Nova Scotia—				
Halifax.....	Dec. 19-Mar. 5.....	3		
Windsor.....	Dec. 1-Jan. 31.....	40		
Chile:				
Antofagasta.....	Jan. 1.....			Present. Feb. 12, 8 cases in lazaretto.
Quillota.....	Nov. 28-Dec. 4.....			Present.
Valparaiso.....	Nov. 20-Jan. 1.....			Do.
China:				
Amoy.....	Nov. 28-Feb. 5.....		7	
Canton.....	Dec. 12-Jan. 29.....	50	3	
Chang Cheun.....	Dec. 11.....			Do.
Chio Be.....	Dec. 11.....			Do.
Hankow.....	Jan. 2-15.....	1	1	Dec. 19-Feb. 5, present among natives.
Hongkong.....	Feb. 5.....	1		
Shanghai.....	Nov. 1-Feb. 8.....	1	9	Deaths among natives.
Cuba:				
Habana.....	Dec. 3-9.....	1		From S. S. La Navarre.
Ecuador:				
Guayaquil.....	Jan. 1-31.....	3		
Egypt, general.....	Nov. 5-Jan. 21.....	562	150	
Alexandria.....	Nov. 5-Jan. 21.....	20	19	
Cairo.....	Nov. 26-Feb. 18....	13	3	
France:				
Nantes.....	Jan. 1-31.....	1		
Paris.....	Dec. 5-Mar. 5.....	98	12	
Germany, general.....	Dec. 5-Mar. 5.....	79		
Konigsberg.....	Dec. 12-Jan. 15....	2	2	In vicinity.
Great Britain:				
Bristol.....	Feb. 6-12.....	1		
Greenock.....	Feb. 6-12.....	1		
Hull.....	Jan. 16-22.....	2		
Liverpool.....	Dec. 19-Feb. 5.....	9		
London.....	Nov. 28-Feb. 26....	20		
Newcastle-on-Tyne.....	Feb. 13-19.....	3		
Nottingham.....	Jan. 16-26.....	4	1	
Plymouth.....	Nov. 12-18.....		1	
Southampton.....	Nov. 12-18.....	1		
South Shields.....	Feb. 13-19.....	1		
Greece:				
Athens.....	Nov. 22-Feb. 19....	4	15	
Hawaii:				
Honolulu.....	Jan. 31-Feb. 4.....	3	1	2 cases Jan. 31 from U. S. S. Washington from Yokohama. 1 case Feb. 2 on s. s. Makura.
India:				
Bombay.....	Nov. 24-Feb. 15.....		173	
Calcutta.....	Nov. 14-Feb. 12.....		10	
Kurrachee.....	Jan. 2-Feb. 12.....	6		
Madras.....	Dec. 18-Jan. 21.....		3	
Rangoon.....	Nov. 20-Feb. 5.....		55	

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

Reports Received from January 1 to March 25, 1910.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Indo-China:				
Saigon.....	Dec. 7-13.....	1		
Italy, general.....	Nov. 29-Feb. 27.....	224		
Genoa.....	Dec. 1-Feb. 28.....	19	1	
Milan.....	Jan. 1-16.....	1		
Naples.....	Dec. 6-Feb. 27.....	204	37	
Japan:				
Formosa.....	Feb. 6-12.....	3	2	
Kobe.....	Dec. 12-25.....	1	1	
Java:				
Batavia.....	Dec. 12-Feb. 5.....	8	1	
Korea:				
Fusan.....	Feb. 1-12.....	6	1	
Liberia:				
Monrovia.....	Nov. 28-Dec. 4.....	6		
Malta:				
Valetta.....	Dec. 12-Jan. 15.....	3	1	
Manchuria:				
Tie-ling.....	Feb. 19.....			Present.
Mexico:				
Aguascalientes.....	Dec. 12-Mar. 5.....		30	
Chihuahua.....	Dec. 13-Mar. 14.....	14	8	
Guadalajara.....	Jan. 29-Feb. 18.....		5	
Mexico.....	Nov. 14-Feb. 19.....		16	
Monterey.....	Nov. 13-Feb. 20.....		2	
Veracruz.....	Feb. 13-19.....	1		
Netherlands:				
Rotterdam.....	Dec. 5-11.....	7		
Persia:				
Arabistan.....	Dec. 6-31.....			Do.
Hamadan.....	Nov. 15-Dec. 31.....			Do.
Kurdistan.....	Dec. 6-31.....			Do.
Sultanabad.....	Nov. 15.....			Do.
Teheran.....	Nov. 1-Dec. 2.....			Do.
Peru:				
Callao.....	Dec. 6-12.....			Do.
Philippine Islands:				
Manila.....	Nov. 14-Jan. 22.....	16		Third quarter, 1909—Cases, 5; deaths, 0.
Portugal:				
Lisbon.....	Dec. 5-Feb. 26.....	182		
Porto Rico, general.....	July 1-Dec. 31.....	72	12	
Russia:				
Batoum.....	Dec. 1-31.....	5		
Libau.....	Dec. 6-Feb. 13.....	28		
Moscow.....	Nov. 21-Feb. 19.....	160	53	
Odessa.....	Nov. 21-Feb. 19.....	230	60	
Riga.....	Dec. 5-Feb. 26.....	43		Oct. 1-Dec. 31, 26 deaths.
St. Petersburg.....	Nov. 28-Feb. 19.....	553	168	
Warsaw.....	Oct. 24-Jan. 8.....		150	
Siam:				
Bangkok.....	Nov. 28-Jan. 22.....	5	4	
Siberia:				
Vladivostok.....	Jan. 15-28.....	2	2	
Spain:				
Almeria.....	Nov. 1-Dec. 31.....		10	
Barcelona.....	Dec. 14-Feb. 28.....		32	
Cadiz.....	Jan. 1-31.....		1	
Huelva.....	Nov. 1-Dec. 31.....		17	
Madrid.....	Dec. 1-Jan. 31.....		59	
Seville.....	Dec. 1-Jan. 31.....		10	
Tarragona.....	Feb. 20-26.....		1	
Valencia.....	Jan. 9-Feb. 19.....	4		
Vigo.....	Jan. 23-29.....		1	
Straits Settlements:				
Singapore.....	Jan. 22-Feb. 5.....		3	
Tripoli:				
Tripoli.....	Nov. 14-Dec. 25.....	242	24	
Turkey:				
Constantinople.....	Jan. 2-Feb. 6.....		2	
Turkey in Asia:				
Bagdad.....	Nov. 21-Jan. 31.....			Present.
Salonica.....	Jan. 1-31.....		3	
Smyrna.....	Nov. 5-Dec. 31.....		42	
Uruguay:				
Montevideo.....	Oct. 1-Dec. 31.....		36	

MORTALITY—Continued.

Weekly mortality table, foreign and insular cities—Continued.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—												
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Typhoid fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.		
Palermo.....	Feb. 12	335,000	192	8								1	6			
Do.....	Feb. 19		218	3								1	1	11		
Do.....	Feb. 26		175	7								2	1	3		
Paris.....	Feb. 5	2,776,354	958	207						1		2	9	14		8
Do.....	Mar. 5		970	210				6				4	9	24		6
Port of Spain.....	do.....	60,000	42	3												
Rio de Janeiro.....	Feb. 27	850,000	176									3		4		4
Rotterdam.....	Mar. 12	419,100	118									1				
St. Petersburg.....	Feb. 26	1,678,000	935	132				14	1	24	21	24	57	15		
Salaverry.....	Mar. 9	1,800								1						
Santa Cruz de Teneriffe.....	Mar. 5	46,000	31	4							1	3	1			
Singapore.....	Feb. 12	271,060	225	25				2		1						
South Shields.....	Mar. 12	117,737	30	8												1
Stettin.....	Mar. 5	239,000	86	6								4	2	1		
Stockholm.....	Feb. 19	339,582	110	28								1	1	6		2
Smyrna.....	Jan. 7	400,000	67	13				1			3					
Do.....	Jan. 14		99	14							3					1
Do.....	Jan. 21		103	16							1			2		
Do.....	Jan. 28		71	13				1			2			1		
Do.....	Feb. 4		79	9							2					
Do.....	Feb. 11		85	12										1		
Do.....	Feb. 18		108	17				1			2					1
Sunderland.....	Mar. 5	160,796	59	6										2		
Do.....	Mar. 12		56	6											1	3
Turin.....	Feb. 24	391,968	143	18								1	1	1		
Valencia.....	Mar. 5	240,000	135	7										2		
Vladivostok.....	Feb. 5	85,004	23	1						1	2					
Warsaw.....	Jan. 15	764,054	289	57				21		4	7			6		4
Do.....	Jan. 22		283	52				19	1	7	2			3	2	5
West Hartlepool.....	Mar. 12	66,750	13											1		
Winnipeg.....	do.....	122,000	25	2										1		
Yokohama.....	Feb. 28	392,870										1				

MORTALITY—FOREIGN AND INSULAR—COUNTRIES AND CITIES
(untabulated).

ALGERIA—*Algiers*.—Month of February, 1910.—Population, 157,000. Total number of deaths from all causes, 313, including typhus fever 9, typhoid fever 1, tuberculosis 44.

AUSTRALIA—*Sydney*.—Month of December, 1909. Population, 592,100. Total number of deaths from all causes, 565, including typhoid fever 6, measles 1, diphtheria 1, tuberculosis 64.

BRAZIL—*Ceara*.—Month of January, 1910. Population, 40,790. Total number of deaths from all causes, 157, including typhoid fever 8, tuberculosis 12.

CANADA—*Vancouver*.—Month of February, 1910. Population, 78,900. Total number of deaths from all causes, 70, including typhoid fever 2, tuberculosis 10.

FRANCE—*Calais*.—Month of January, 1910. Population, 75,000. Total number of deaths from all causes, 115, including typhoid fever 1, scarlet fever 1, diphtheria 2, tuberculosis 29.

Month of February, 1910. Total number of deaths from all causes, 90, including typhoid fever 1, tuberculosis 20.

Nantes.—Month of February, 1910. Population 122,800. Total number of deaths from all causes, 295, including typhoid fever 2, tuberculosis 75.

GREAT BRITAIN.—Week ended February 26, 1910.

England and Wales.—The deaths registered in 76 great towns correspond to an annual rate of 14.7 per 1,000 of the aggregate population which is estimated at 16,713,617.

Ireland.—The deaths registered in 21 principal town districts correspond to an annual rate of 22.8 of the aggregate population, which is estimated at 1,151,790. The lowest rate was recorded in Galway, viz, 3.9 and the highest in Newry, viz, 46.2 per 1,000 of the population.

Scotland.—The deaths registered in 8 principal towns having an aggregate estimated population of 1,864,194 correspond to an annual rate of 16.2 per 1,000. The lowest rate was recorded in Paisley, viz, 12.8, and the highest in Greenock, viz, 24.1 per 1,000. The total number of deaths from all causes was 588, including typhoid fever 4, scarlet fever 8, measles 40, diphtheria 8, whooping cough 8.

INDIA—*Rangoon*.—Month of January, 1910. Population, 295,803. Total number of deaths from all causes 809, including typhoid fever 1, smallpox 28, tuberculosis 27, plague 12.

ITALY—*Milan*.—Period, February 16 to 28, 1910. Population, 900,000. Total number of deaths from all causes 65, including typhoid fever 1, scarlet fever 1, diphtheria 1, tuberculosis 60.

MALTA.—Two weeks ended February 26, 1910. Population, 212,888. Total number of deaths from all causes 102, including typhoid fever 7, tuberculosis 5.

NEW ZEALAND—*Auckland*.—Month of December, 1909. Population, 93,544. Total number of deaths from all causes 74, including typhoid fever 1, diphtheria 2, tuberculosis 7.

Christchurch.—Month of December, 1909. Population, 76,709. Total number of deaths from all causes 50, including tuberculosis 3.

Dunedin.—Month of December, 1909. Population, 61,279. Total number of deaths from all causes 44, including tuberculosis, 2.

Wellington.—Month of December, 1909. Population, 73,367. Total number of deaths 73, including diphtheria 1, tuberculosis 8.

PORTO RICO.—Month of December, 1909. Population, 1,053,963. Total number of deaths from all causes 3,022, including typhoid fever 15, measles 28, diphtheria 3, tuberculosis 217.

RUSSIA—*Riga*.—Month of December, 1909. Population, 355,000. Total number of deaths from all causes 569, including typhus fever 12, typhoid fever 9, smallpox 9, measles 1, scarlet fever 34, diphtheria 11.

SOUTH EAST AFRICA—*Lourenço Marquez*.—Month of January, 1910. Population, 10,000. Total number of deaths from all causes 31, including tuberculosis 9.

By authority of the Secretary of the Treasury:

WALTER WYMAN,

Surgeon-General,

United States Public Health and Marine-Hospital Service.