## PUBLIC HEALTH REPORTS.

### UNITED STATES.

Report of the commission appointed by the Secretary of the Treasury for the independent investigation of plague in San Francisco.

SAN FRANCISCO, CAL., February 26, 1901.

SIR: The special commission appointed by the honorable the Secretary of the Treasury for the purpose of ascertaining the existence or nonexistence of bubonic plague in San Francisco, or other ports or places in the State of California under instructions furnished by the Surgeon-General of the United States Marine-Hospital Service begs leave to submit the following report:

In accordance with instructions received, the members of the commission proceeded as early as possible to San Francisco, one of them (Dr. Barker), arriving on Friday, January 25, 1901, the other two (Dr.

Flexner and Dr. Novy) on Sunday, January 27.

The first formal meeting of the commission was held at the Occidental Hotel shortly after the arrival of all the members. At this meeting it was decided, in accordance with your instructions, to call and pay our respects to the honorable, the governor of the State, to place ourselves in communication with the local authorities in order to obtain facilities for the examination of the sick and dead in Chinatown, or elsewhere should suspected cases arise, and to arrange for a laboratory in which pathological and bacteriological examinations could be undertaken.

Owing to the miscarriage of a letter sent to the commission by the honorable the governor of the State, the call of your commissioners upon him was delayed until Saturday, February 16. On this date, however, they had the privilege of paying their respects to the governor and of informing him of their orders. The governor received your commissioners most courteously and stated that the authorities in California desired to facilitate by every means in their power the investigation concerned.

A call was also made upon the mayor of the city of San Francisco and upon the president of the city board of health, both of whom offered to aid, in any way possible to them, the work of your commissioners. The city board of health supplied the commission with a map of Chinatown, on which were charted the location of cases which the board had

examined and regarded as plague.

During the first fifteen days of our visit a bureau was opened in the Occidental Hotel; the commission met at 11 o'clock daily, and it was announced in the press that its members would be glad to confer with anyone who had information to give with regard to the existence or nonexistence of plague in the city. In addition, letters were sent to a number of physicians in town requesting an interview. The majority of those written to responded; opinions were divided, some of the phy-

sicians being confident that plague existed, others being sure that the disease was not here. The establishment of this bureau proved to be of great service, not so much in affording us information about plague as in putting us into relation with the medical and business interests of the city. Through it a plan of work became easy to formulate; through it we learned how to gain access to the sick and dead Chinese and how to proceed without exciting the opposition or suspicion of those among whom we were to work.

The representatives of the principal commercial interests of the city of San Francisco, including the Merchants' Association, the Manufacturers and Producers' Association, the Board of Trade, the Pacific Coast Jobbers and Manufacturers' Association, the Chamber of Commerce, the Pacific Mail Steamship Company, and the Southern Pacific Railway, called upon the commission, welcomed them to California, and offered their aid. Through the courtesy of Colonel Mendel, room 161 of the city hall, previously used as a license office, was put at the disposal of the commission. It was fitted out as a laboratory, the outfit being purchased new in San Francisco.

### INSPECTIONS OF THE CHINESE SICK AND DEAD.

The attorney of the Chinese Consolidated Benevolent Associations (ordinarily known as the Chinese Six Companies) advised the Chinese to cooperate with the commission. As a result, proclamations were issued ordering the Chinese to report all cases of sickness and death, no matter what the cause, to the offices of the Chinese Six Companies in order that daily inspections might be made. Mr. Wong Chung, the secretary of the Six Companies, accompanied a member of the commission (Barker) daily to each house whence a report had been made, aided in finding the cases, acted as interpreter, and assisted in obtaining the necessary histories. It is believed by the members of the commission that the Chinese Six Companies acted in good faith and that they made every attempt to give access to the sick. Certain cases of sick. .ness, it is true, were not reported and were not known of until the dead bodies were found, but this, it is believed, was due to negligence on the part of the Chinese concerned rather than to any attempt at concealment.

The daily inspections of the sick and dead permitted of observations relative to the mode of life of the people in the 14 blocks of San Francisco which make up "Chinatown." These observations were extended by special trips of inspection under the guidance of officers of the city detective force and by numerous independent trips of inspection made by your commissioners.

The dwellings of the poorer classes of Chinese were found to be here, as they seem to be everywhere, shockingly unsanitary. In places there is marked overcrowding; the rooms are small; they are often entirely devoid of light or means of ventilation, and nearly always insufficiently lighted and ventilated; many of them are filthy; some of them, especially those situated in basements, are damp and emit a foul stench. These faults in sanitation are not confined to the tenement houses of the Chinese; on the contrary, in the rear of, or over or under, some of the more pretentious business buildings are to be found sleeping and living apartments which are most objectionable from a sanitary point of view.

The Chinese in San Francisco, are however, in many respects much better off than are their countrymen in great native centers like Canton or even than those in a city like Hongkong. There is almost an entire 803 April 19,190J

absence of the utter destitution met with among many of the Chinese in Asia; the Chinese in San Francisco are, on the whole, very well fed, for wages are high and food is abundant and cheap. They are also well clothed as a rule and particular emphasis is to be laid upon the fact that the Chinese here wear shoes, stockings, and trousers, since it is believed by many that the bare legs and feet of the Chinese in Hongkong and Canton had much to do with the frequency of infection with plague in those places.

A large percentage of the Chinese in San Francisco, it is said, smoke opium. There are a number of Chinese prostitutes, but inspection of the quarters occupied by the latter would indicate that the rooms in which they live are on the whole more wholesome as regards air space, light, ventilation, and cleanliness, than those of the other inhabitants

of the district.

On Wednesday, February 6, 1901, systematic daily rounds of visits were made by one of the commissioners in company of Mr. Wong Chung to the rooms of the sick as reported each day to the offices of the Chinese Six Companies. Rapid clinical examinations were made and notes kept of the results. A number of the cases met with were obviously instances of advanced tuberculosis; others were affected with various chronic diseases. Such cases, being of no interest for the investigation, were visited only once. When patients were found who presented symptoms which were suggestive of plague, a careful examination was made. In doubtful cases the first visit was followed by others and the progress of the illness carefully watched. These regular visits of daily inspection were maintained until February 16, 1901, during which period a sufficient number of instances had been observed to permit your commissioners to conclude beyond possible doubt that cases of bubonic plague were occurring among the Chinese.

Inspections of the dead in Chinatown were made also daily by the same member of the commission, beginning February 5, 1901. Access to the dead was gained in two ways. In the first place the assistant city physician, Dr. F. P. Wilson, makes the rounds of the undertaking establishments in Chinatown each forenoon. He inspects the bodies of the dead, and where necessary advises a pathological and bacteriological examination by Dr. Kellogg, the bacteriologist of the city board of health. Permission was obtained from these gentlemen for the making of simultaneous and independent inspections and of pathological and

bacteriological examinations by the commission.

A second mode of access to the dead was that afforded by the reports made by the Chinese directly to the offices of the Six Companies. By this mode, it was in some instances possible to learn of the death of individuals and to make inspections of bodies before the city officials were informed of them.

From February 5 to February 16, 13 dead Chinese were inspected as follows:

Death 1 (inspected February 5).—Chun Ah Chou, age 44, actor, died this morning in Washington Street Theater. Body well nourished; two or three dark bluish spots on legs (possible hemorrhages). On palpation of the neck, axillæ, and groins, some enlargement of the lymphatic glands of the left groin was made out, though nothing corresponding to an outspoken bubo was visible. Inspecting commissioner advised a pathological and bacteriological examination in order to remove all doubt as to the nature of the case. The results proved the case to be one of infection with plague (vide infra—laboratory case 1).

Death 2 (inspected February 5).—Wong Koong Chin, elderly Chinese

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male, died at 6a Waverly Place; history of dyspnæa and cyanosis for a long time before death. There is marked ædema of legs; no enlargement of lymphatic glands ascertainable on palpation. Death certificate signed by city physician as due to valvular disease of the heart. Case was not regarded as suspicious and no pathological or bacteriological examination was insisted upon.

Death 3 (inspected February 5).—Lee Kee, middle-age Chinaman, found dead at 917½ Stockton street. This man had been visited by members of the commission 2 nights before, the case having been reported to them as one suspected of being plague. Neither when seen during life nor on inspection after death was anything seen which pointed to infection with plague. No enlargement of lymphatic glands could be made out. A pathological and bacteriological examination was, however, deemed advisable for purposes of exclusion. The results as regards plague were negative (vide infra—laboratory case 2). The assistant city physician attributed the death to intestinal obstruction.

Death 4 (inspected February 6).—Fong Sha Song, coolie, age 56, found dead in "hall of tranquility" at rear of 1111 Stockton street. No available history of condition intra vitam; body filthy; cedema of legs; no enlarged lymphatic glands; no visible hemorrhages; pathological and bacteriological examination advised for purposes of exclusion. Results negative as regards plague (vide infra—laboratory case 4).

Death attributed by city physician to interstitial nephritis.

Death 5 (inspected February 6).—Lum Hong Yuen, died in room 15, third floor, at 28 Ross alley. Body found at Main Fook's undertaking establishment at 740 Pacific street. Through Mr. Wong Chung, the secretary of the Six Companies, a school teacher who knew deceased stated that the man had been ill about three weeks; that he had been a cook and waiter in the Chinese Theater up to three weeks ago, when he quit work on account of chancre and bubo; that since then he has been in his own room in Ross alley; that four or five days before his death he was given medicine by a Chinese doctor for a chill; that said medicine was too strong for the patient, and that "his breathing stopped and he died."

On inspection of the body no evidence of chancre could be found; in the inguino-femoral region a large mass of swollen conglomerated lymphatic glands could be felt. The swelling was so like similar swellings previously observed in cases of plague in Hongkong and in India that the case was regarded as almost certainly one of plague. Pathological and bacteriological examinations were made at once; the results proved the correctness of the impression gained from inspection (vide infra—

laboratory case 3).

Death 6 (inspected February 7).—Wong Chi Lui; age 45; cigar maker, who had worked at 418 Battery street; found dead at  $18\frac{1}{2}(21\frac{1}{2})$  Waverly place. Through Mr. Wong Chung it was ascertained that the man had been ill for about two weeks, complaining of fever, loss of appetite, and general uneasiness. He had had pains in groins and lower abdomen, to which region a Chinese doctor had applied honey and salve. No history of venereal disease. For three or four days prior to death the man was unconscious. When chided by Mr. Wong Chung for not having reported the case earlier to the Six Companies, the brother of the deceased said he had not made a report because he had believed that the patient would soon be well.

On inspection and palpation a large mass of swollen glands was discovered in the left inguino-femoral region. It seemed likely that the case was one of plague and the friends of the deceased were notified

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that an examination of the body would be made immediately. The pathological and bacteriological examination established the death as one due to infection with bacillus pestis (vide infra—laboratory case 5.)

Death 7 (inspected February 11).—Tom Shom; male; age 51; actor in Chinese Theater; room above theater at 814 Washington street, near room of late Chum Ah Chou (see death 1). This man was reported as ill to the Six Companies, and was examined clinically on Friday February 8 by Dr. Barker, who obtained the following history: The man had been acting in the theater about two weeks before, although it had been stated that he had not been very well for from six to seven months previously. On February 4 he became seriously ill with fever and There has been some vomiting. The urine, as observed by the attendant, was described as brandy colored. He had a Chinese doctor in attendance, and his friends had not considered him ill enough to make a report to the Six Companies worth while. The man smoked about 50 cents worth of opium daily. On clinical examination the patient was found lying upon his back in bed with legs drawn up; he was in a state of semistupor. His pulse was 108, quick, rather full, but The skin was hot and dry; respiration 20 to the minute. of low tension. The face had an anxious expression; the tongue was coated in the There was no palpable enlargement of the glands of the neck or axillæ, but in the right groin several slightly enlarged glands could be distinctly felt, and the patient, though his mind was partially clouded, winced decidedly when either groin was palpated. It was evident that the glands were quite tender. It the absence of urethral discharge. chancre or evidence of local irritation in the lower extremities, the case was, on account of the local and general phenomena, regarded as one The skin was cleansed and a sterilized hypodermic needle introduced into the groin. A few drops of bloody fluid were withdrawn, presumably from one of the enlarged glands. It was difficult to be sure of this however, as the patient could not be kept quiet while the needle was being inserted. No colonies of plague bacilli developed in the inoculated tube. The necropsy subsequently made indicated that the needle had failed to enter an enlarged gland.

The patient was seen on the following day, when his condition showed no change for the better. The pulse was 136 and feebler, the patient seemed in general weaker, and an unfavorable prognosis was made. The patient's friends were told that an injection of Yersin's serum offered the best chances for recovery, though they were also told that not much could be hoped from any treatment in the stage of the disease in which patient then was. The offer was refused. The man died on

February 10, the next day.

The dead body was inspected on the morning of February 11. 'The body was in a state of firm rigor mortis, the limbs being strongly flexed. On breaking down the rigor mortis and palpating the glands in the groin, it was difficult to say positively that there was any enlargement of the lymphatic glands. In view of the enlargement distinctly made out during life and the clinical picture which had been observed, the death was believed to be one due to plague and a pathological and bacteriological examination undertaken. The results indicated clearly the existence of infection with B. pestis (vide infra—laboratory case 6).

Death 8 (inspected February 11).—Chung Moon Woo She, wife of Chung Toy Ding, living in a cellar at 27½ Waverley place. She had been seen clinically by inspecting commissioner on February 6, and also on February 9. When first seen clinically it was learned that she had been ill for three or four days, complaining of aching pains in ribs and

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other bones, headache, and loss of appetite. She had no cough. days before she had felt very chilly. On examination she was found to have slight fever; pulse 100; tongue slightly coated; examination of thorax and abdomen negative; careful palpation of cervical, axillary, cubital, inguino-femoral, and popliteal lymph glands revealed no enlargement or tenderness. When seen on February 9 the patient was found to have grown much worse; the pulse was 132, and quick; the temperature was higher, the tongue was dry, sordes were appearing upon the lips, and the woman was semistupid and moaning in bed. The next day, February 10, the patient died, and the body was inspected on the following morning. The house in which the body lay was filled with men, women, and children, friends of the deceased, all of whom objected strenuously to any examination of the body whatever. It was insisted upon, however, and finally, by promising that only one small cut would be made, permission for examination was granted. Amid an appalling outbreak of grief on the part of the friends, an incision was made in one groin, and as the glands embedded in the fat there showed no hemorrhage or enlargement, no further examination was made. It is to be regretted in this case, where only one slight incision was allowable, that the spleen was not bacteriologically examined, as the case may have been one of general infection with B. pestis. At the time, however, in face of the strong protest made by the friends, it seemed wise, in order not to antagonize the Chinese too much and so perhaps interfere with the progress of the whole investigation, not to go further. The body was surrounded by quicklime and sublimate sheet, and burial was permitted by the board of health.

Death 9 (inspected February 12).—Foong Ah Fong, female; age, 12; found dead at 747 Sacramento street (room No. 12), fourth floor. little girl had been observed clinically on February 6, the first day of systematic clinical inspection. She gave a history of having caught a cold, followed by a headache and lack of appetite. She had complained of no chill or vomiting. Her pulse was 84, and her temperature only slightly above normal. She did not look very ill; the tongue was slightly coated; there was no palpable enlargement of lymphatic glands. As the splenic dullness was only slightly increased, and the mother of the child stated that the patient had been ill for fully two weeks, plague was not suspected. The case was looked upon as possibly a mild case of typhoid, and instructions were given to report to the Six Companies in case she got worse. She was not visited again during life. It was a surprise to hear of her death, and on inspecting the body, though no external signs of plague were visible, it was deemed advisable to make at least a bacteriological examination of the spleen. This was done, but under marked protest from the child's relatives. The result showed that the child was actually infected with B. pestis (vide infra—laboratory case 7).

Death 10 (inspected Tuesday, February 12, 1901).—Ung Ah Buck; age, 45; found dead at Wing Hai's undertaking establishment on Sacramento street. This man had been seen alive and examined by Dr. Barker on the previous day, who diagnosed the case, intra vitam, as one of cervical bubonic plague. When seen alive he was in a room upstairs in the rear of 921½ Dupont street, opposite St. Louis alley. The man was sitting up, but looked extremely ill. His face was pale, cyanotic, and anxious looking. His voice was very feeble, but his intelligence seemed almost unclouded, and he was able to carry on a conversation, though with difficulty, with the interpreter. The friends stated that he had at times wandered in his talk. He was under the care of Dr.

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Mather. The patient stated that he had been ill for two weeks. neck had been swollen for one week and he regarded the condition as With the aid of a tongue depressor the throat was examined. The fauces were swollen and reddened, the swelling being very marked in the left side. The left palatine tonsil was much enlarged and showed on its surface a grayish white patch the size of a dime. The reddening in the throat was general, and there was less local injection than one ordinarily sees in diphtheria. The left side of the neck was brownish yellow, having been painted over with a solution of iodine. On inspection and palpation marked bulging was found. This seemed to be due to enlargement of the cervical lymphatic glands. The case was diagnosed as one of plague, with cervical bubo. The man died next day, and a complete autopsy was made by Dr. Flexner. The pathological examination showed typical lesions of plague, and the bacteriological examination made by Dr. Novy demonstrated the presence of B. pestis (vide infra—laboratory case 8).

Death 11 (inspected February 14).—Baby, 7 days old, found in undertaker's establishment on Clay street, having died at 717 Sacramento street. Advised making of cover-slip and cultures from umbilical stump

and from spleen; reported negative as regards B. pestis.

Death 12 (inspected February 15).—Ow Ah Lane; male, age, 55; coolie, who had worked at San Jose Junction, died at Kwang Chow "hospital," February 14, at 6 a.m. He had been ill for from six to seven months. No enlargement of lymph glands. Advised bacteriological examination of spleen. Reported negative as regards B. pestis.

Death 13 (inspected February 16).—Male; body found at Quong Fook's undertaking establishment. Slight swelling in right groin. Pathological examination negative as regards plague. No bacteriologi-

cal examination made.

It will be noticed that of the 13 deaths, which came to our attention, occurring from February 5 to February 16 inclusive, 6 were undoubtedly due to infection with plague. A seventh (death No. 8) may have been a case of plague which went unrecognized. The 6 undoubted deaths from plague occurred during the eight days from February 5 to February 12, inclusive. During the days, February 13 to February 16, inclusive, no new cases of plague or deaths therefrom were encountered.

Two of the deaths from plague occurred in the Chinese Theater on Washington street. The other four cases occurred singly in different parts of Chinatown. 'The accompanying map shows the location of 6 cases observed by your commissioners and also of those which have previ-

ously been regarded as plague by the city board of health.

The study of cases during life and the inspection of bodies after death proves that it is often difficult and under certain circumstances impossible to make a diagnosis of plague, even post-mortem, without bacteriological examination. In outspoken bubonic cases there will be but little, if any, difficulty in diagnosis, either intra vitam or post-mortem, provided the observer has had sufficient experience with the disease, but in the absence of primary buboes, the unskilled observer will miss practically every case and even the practitioner who has had much experience with plague may be deceived. Your commissioners feel sure, from experience with plague in Hongkong, India, and San Francisco, that once it is established that plague exists among the Asiatics of a town, every Asiatic who has fever should be suspected as a case of infection with plague until the disease is proven to be other than plague and every dead body should be treated as a plague cadaver until bacteriological

examination of glands, lungs, and spleen (including animal inoculation) has proven the absence from the body of the B. pestis. Only by such caution will it be possible to avoid missing actual plague cases.

In the following table are given the deaths per month occurring from all cases among the Chinese during the past four years as recorded by the city board of health. As data regarding the exact population of Chinatown at different times are not obtainable, it is difficult to institute comparisons of the mortality among the Chinese with that among the whites. It is obvious, however, that at no time during the past four years has the mortality rate among the Chinese increased to such an extent as to, in itself, cause alarm.

Mortality among Chinese of San Francisco, 1897-1901.

Months.	1897.	1898.	1899.	1900.	1901.	Months.	1897.	1898.	1899.	1900.	1901.
January February March April May	46 38 35 27	35 36 46 41 34 21	46 39 37 33 36 46	64 48 47 30 42 25	45	August	35 45 36 39 23	47 27 53 66 46	43 85 44 87 48	19 27 32 34 32	
June July		25	31	38		Total	430	477	478	438	4

The pathological anatomy of the cases of bubonic plague met with in San Francisco.

1. Human cases.

2. Experimental inoculations.

In the study of the pathology of the cases of plague met with among the Chinese in San Francisco, a number of disadvantageous circumstances were contended with. In the first place, owing to the peculiar prejudices of this people, prejudices born especially of their religious beliefs and practices, permission for post mortem examination is given with great reluctance. The opposition to all mutilation of the bodies of the dead is so great that consent for necropsies was obtained only after assurances that the examinations would be limited strictly to the actual necessities for the establishment of the diagnosis of the disease.

In the next place, there is no public mortuary in San Francisco to which the dead bodies were or could be carried. Such examinations as were made were conducted in the narrow limits of a dimly lighted alcove in an undertaker's shop or in the even worse habitations where the dead were found.

Under these circumstances, the post-mortem examinations left something to be desired on the score of completeness, although in every instance the important question whether death was caused by plague was answered definitely.

The majority of the dead did not exhibit well-marked buboes. Careful palpation usually was required in order to discover swellings and cedema of the groin. In all cases in which inguinal buboes were suspected or discovered incision was performed and the diseased glands and periglandular tissue, if present, removed.

With one exception (case  $\bar{8}$ ) complete necropsies were not made. In all cases, however, the spleen was exposed and examined and parts removed. The tissues removed at necropsy were examined in three different ways.

1. Cultures upon agar-agar and cover-slips were made at once after removal.

2. The tissues were taken to the laboratory, where additional cultures and cover slips were prepared and examined.

3. Guinea pigs were inoculated with portions of the tissues.

Finally portions of the tissue were placed in alcohol for future study.

### HUMAN CASES.

Case 1.—Chom Ah Chou; necropsy February 5, 8 p. m. Examination was made in the presence of one of us (Flexner) by Dr. Kellogg. examination consisted in exposing and removing the inguinal and femoral glands on both sides. Incisions were made deep into the subcutaneous tissue, extending from Poupart's ligament about one-third the length of the thigh. The tissues on the left side were swollen and cedematous; the cedema was sero-hemorrhagic in character, and the lymphatic glands were hemorrhagic and greatly swollen. On the right side the cedema was less marked, and the glands, while distinctly enlarged and reddened, were less altered than those of the left side. Sections of these glands showed them to be uniformly hemorrhagic and swollen and to contain frequently necroses visible to the naked eye.

The spleen was fully twice the normal size. It was softer than normal,

the capsule was wrinkled and the color deepened.

The further examination of these tissues was made after removal to the laboratory and participated in by Drs. Barker and Novy. The examination consisted in-

(a) Study of cover-slips stained in anilin dyes and treated by Gram's

method.

(b) Preparation of cultures upon agar-agar separately by each member of the commission.

(c) Inoculation of guinea pigs with portion of tissue from the glands and spleen.

d. Preservation of tissues in alcohol for future study.

The examination of the cover-slips from the glands, periglandular tissue, and spleen showed large numbers of bacilli decolorizing by Gram's method and presenting the morphology of the B. pestis.

Case 2.—Lee Kee; necropsy February 5, 9 p. m., in the presence of Dr. Flexner, performed by Dr. Kellogg. No evidence of plague.

Case 3.—February 6, Lum Hong Yuen; autopsy made in Main Fook's undertaker shop; Drs. Kellogg, Novy, and Flexner present. Upon incision, the right groin from Poupart's ligament to the beginning of the middle third of the thigh, sero-hemorrhagic periglandular ædema and uniformly enlarged and reddened glands were found. The amount of fluid was considerable; although there was enlargement of all the glands, some of them reached to the size of a horse-chestnut. On section, these were of deep red color and soft consistence. Necroses were present.

The spleen was enlarged to fully double the normal size; it was

softened and of a deep bluish red color.

Cultures and cover slips were made at once by Dr. Novy and the excised tissues taken at once to the laboratory, where additional cultures were made, cover slips examined, and animals inoculated.

The cover-slips showed large numbers of bacilli, having the morphol-

ogy and staining properties of B. pestis.

Case 4.—February 6, Fong Sha Shong: necropsy by Dr. Kellogg, in the presence of Drs. Novy and Flexner. No evidence of plague.

Case 5.—Wong Chi Lui, February 7; necropsy by Dr. Barker, 6 p. m.

Drs. Novy and Kellogg present.

On inspection, there was a swelling in the inguino-femoral region, which, on incision, revealed enlarged glands about the saphenous opening and in the groin. The largest gland had the size of an English walnut and was of a dark reddish brown color; it was soft and juicy in consistence and mottled with hemorrhages and grayish white patches of necrosis. The less swellen glands were markedly injected and contained hemorrhages. Periglandular tissue was very cedematous, the fluid running freely from the incision. The spleen was about twice the normal size, soft, and friable.

Cultures were made at once by Dr. Novy and cover-slips about one hour later at the laboratory, where at the same time animals were inoculated with portions of the tissue. The cover-slips from the spleen and the glands showed bacilli, presenting all the properties of B. pestis.

Case 6.—February 10, Tom Shom; necropsy by Dr. Kellogg, Drs. Bar-

ker and Novy being present.

There was a slight swelling in the right inguino-femoral region which, on incision, revealed slightly cedematous subcutaneous tissue, with slight enlargement of the glands. The largest gland had the size of a filbert, and its surface was dark and hemorrhagic; on section, it presented distinct hemorrhages; other glands were swellen, soft, juicy, and hemorrhagic. The spleen was enlarged, soft, and friable. The examination of the groin showed that the hypodermic puncture made for the withdrawal of fluid for diagnostic purposes during life had failed to enter a lymph gland.

Cover slips from the spleen and glands showed large numbers of

bacilli having the characteristic properties of the B. pestis.

Case 7.—Foong Ah Fong, February 12; necropsy by Dr. Flexner, Dr. Barker present. The spleen only was examined; the organ was enlarged to about twice the normal size and was diminished in consistence. Coverslips showed a very small number of bacilli of the size of B. pestis, although the characteristic polar staining was not observed. Cultures were made, and a portion of the spleen was introduced subcutaneously into a guinea pig.

Case 8.—Ung Ah Buck; autopsy February 12 at noon, at the undertaking shop of Wing Hai by Dr. Flexner, Drs. Novy, Barker, Kellogg, and Wilson being present. The left side of the face and neck presented a marked diffuse swelling, extending from the angle of the jaw backwards to the sterno-cleido-mastoid muscle and below, almost reaching

the clavicle.

On incising this region the parotid gland was first reached; this organ presented a normal appearance. After dissecting away the parotid gland a group of greatly enlarged deep glands surrounding the carotid artery and jugular vein came into view. The periglandular tissue was infiltrated with bloody fluid and presented a sodden appearance. The enlarged glands and portions of the surrounding tissue were excised; the former were found to be swollen (several reaching the size of an English walnut) and to be wholly altered in appearance and consistence. In color they were deep purplish and on incision a hemorrhagic fluid exuded. Opaque points of necrosis were also present.

The general subcutaneous fat was well developed; there was no general cedema. Peritoneum appeared smooth and glistening; there was no excess of fluid in abdominal cavity and the abdominal glands were not noticeably swollen. The spleen was enlarged to fully twice its normal size; it presented a purplish color and its consistence was diminished. The pleural cavities were dry. The lungs retracted moderately upon removal of the sternum. The lower lobes of the lungs were congested,

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but no consolidation was made out. No other abnormality was observed in the body.

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The organs and tissues removed at this necropsy, consisting of the enlarged cervical glands and spleen, were taken to the laboratory, where

cover slips, cultures, and animal inoculations were made.

The cover-slips from the spleen showed large numbers of a bacillus, having the morphology and staining properties of the B. pestis. The cover slips from the glands differed in their appearance. In some instances there were present large numbers of bacilli similar to those in the spleen, together with a few diplococci or short chains of cocci. Other cover slips showed besides the organisms mentioned a bacillus having the morphology of the B. diphtheriæ.

### EXPERIMENTAL INOCULATIONS.

The animals used for experimental inoculations were half grown and grown guinea pigs. In order to guard against accidental infection of the locality, the animals were placed in glass jars, which in turn were placed in large crocks, the latter having been covered with wire netting covers, upon which the earthenware covers were placed. When an animal succumbed to the inoculation it was carefully removed from the jar and immersed for some time in 1–1000 sublimate solution. The jar itself was filled with a similar sublimate solution and the two left in contact for several days.

After subjecting the animals to necropsy, they were placed in the steamer and thoroughly steamed, after which the body was incinerated. Such portions of the tissue as were preserved for microscopical study

were placed at once in 95 per cent alcohol.

Inoculations were made subcutaneously with bits of tissue from the tissue from the human cases and pure cultures of bacilli obtained from these sources. The usual procedure was to inoculate at least 2 animals from each human case; one with portions of the spleen and another with portions of the lymph glands. The cultures used were derived indifferently from the spleen and from the glands.

The inoculated animals can be separated into groups, depending upon the results of the inoculation. These results in turn depended upon the virulence of the material—tissue or culture—inoculated, upon

which also depended the duration of life following inoculation.

It is important to state that characteristic lesions were obtained from inoculated material derived from every case in which bacilli were found in cover-slips including case 7 in which very small numbers of bacilli

were detected in the spleen.

Types of infection.—The animals inoculated early in the course of the investigations died at periods varying from forty hours to eight days. Those inoculated later, and one or two inoculated with cultures early in the studies, but which have not succumbed, were etherized at the close of the work and subjected to post-mortem examination. According to the period of survival and virulence of the inoculated material, the appearances observed denoted (a) bacteræmia without microscopical localization in the organs and (b) focal, nodular localizations in the internal organs. In all cases marked local lesions at the site of inoculation and in the adjoining tissues occurred.

Local lesion.—At the point of inoculation the tissues—skin, subcutaneous tissue and sometimes muscles—were infilt ated with pus cells and presented a yellowish focus of necrosis. From this area as a center, the

subcutaneous tissue, sometimes of one side, but frequently of both sides, was occupied by gelatinous hemorrhagic infiltration.

The lymphatic glands of the inguinal and axillary regions were distinctly enlarged even in the acute cases. In those animals which died after a longer period or were killed from six to seven days after inoculation, the regional lymphatic glands were much enlarged, hemorrhagic, and even necrotic. The inguinal glands were, as a rule, more swollen than the axillary.

Cover-slip preparations from the local lesion—necrotic area, subcutaneous ædema, swollen lymph glands—showed large numbers of bacilli, having the characteristic morphology, staining, and reaction to Gram's method of the B. pestis. Cultures from these sources gave positive results.

In one animal in which the inoculation was made with a culture, the animal being etherized on the third day, there was slight local reaction only, no involvement of the regional lymph glands and no visible lesions in the internal organs having been observed. A small number of characteristic bacilli were found in cover-slips made from the site of inoculation.

The spleen and liver.—In the instances of rapid death (bacteræmia) the spleen was moderately large, its color was deepened, its consistence decreased, but no focal lesions were visible to the naked eye. Coverslips and cultures showed numerous bacilli agreeing in characteristics with those of B. pestis.

In this class of cases, the other organs failed to show focal lesions. The lungs appeared mottled only, and a few small necroses existed in the liver; numbers of bacilli were contained in all the viscera and in the heart's blood.

The focal lesions in the spleen consist of grayish-white nodules, larger than a millet seed in size, covering the surface (within the capsule) and occupying the substance of the organ; when the nodules are numerous, as, e. g., in animals succumbing from the sixth to the eighth day, or after etherization at that period, when there has been a marked local reaction, the spleen is greatly enlarged, perhaps five to six times its normal size and its color is pale. Cover-slips and cultures show a very large number of characteristic bacilli if the animal has died spontaneously, while if killed the number of bacilli upon cover-slips and cultures is far less.

The liver invariably showed lesions when death had been delayed a few days. The common ones were focal necroses of varying size. These were yellow in color, and in size ranged from that of a pin's point to linear and wedge shaped areas 3 to 4 millimeters in length. Only rarely did whitish nodules similar to but smaller than those occurring in the spleen occur. The best example of nodular lesions in the liver was observed in an animal inoculated with a culture derived from case No. 1, the guinea pig having been etherized on the eighth day after inoculation.

The lungs.—The lungs presented a variety of appearances only one of which was characteristic. Some times they showed no microscopical lesion; not uncommonly, they were mottled and presented small ecchymoses beneath the pleura; rarely they contained scattered whitish nodules resembling those of the spleen, except that they were smaller and surrounded with a zone of recent hemorrhage. No effusion into the pleuræ were noted.

Subserous hemorrhages.—These were common especially in the peritoneum, where they accurred beneath and within the serosa of the large

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intestine, and in the pleura covering the lungs. They were usually small in size, although at times through confluence, they reached larger dimensions. They did not give rise to an exudate or effusion into the serous cavities.

The other organs, except the adrenal glands, showed no especial changes to the naked eye. The adrenals were uniformly congested and often very dark in color and hemorrhagic.

The central nervous system was not examined.

### BACTERIOLOGICAL EXAMINATIONS.

Case 1.—Chun Ah Chou, 814 Washington street; necropsy February 5. The spleen and left femoral glands were examined. These organs were found to contain enormous numbers of bacilli, having the morphological and tinctorial properties of bacillus pestis; thus, the short thick oval rods gave a bipolar stain with Loeffler's methylene blue or with carbolic thionin and were decolorized by Gram's method. Their pathogenicity was determined by inoculation of portions of the spleen and of a pure

culture, subcutaneously, into guinea pigs.

Agar streaks made from the perfectly fresh organs showed many small white moist isolated colonies, having all the appearance of those of bacillus pestis. This was further confirmed by microscopic examination of living and stained preparations of such cultures. A few rapid growing colonies due to other forms of bacteria were present. Subcultures were made in glucose gelatin, bouillon, agar, salt agar, and milk. On agar in Petri dishes in twenty four to forty-eight hours in the incubator, small white or grayish, moist colonies developed. These had finely granular center, with a smooth, sharply defined border.

The stab culture in glucose gelatin developed a slight growth along line of inoculation. On the surface the growth spread slightly, was grayish, moist in appearance, and had a slightly wavy, raised border.

No gas was formed.

In bouillon, in twenty-four hours, a diffuse cloudiness was produced. The sediment was very slight, scarcely appreciable. Subsequently, a faint stringy deposit formed. The surface remained perfectly clear with a trace of a ring or collarette.

The streak cultures on nutrient agar presented a moderate grayish white moist growth which when touched with a platinum wire could be

drawn out into strings.

On 5 per cent salt agar, the growth is very slight, scarcely visible, and shows the peculiar roundish or pyriform involution forms of the pest bacillus.

In milk the organism grows without producing any visible change in

the medium.

The absence of gas production and of coagulation of milk, together with the macroscopic and microscopic characteristics, agreed fully with the characters of bacillus pestis. The effects on animals have been

described in a preceding part of the report.

Guinea pig No. 1.—Was inoculated under the skin with a portion of the spleen from the above case. It died in thirty-six to forty hours. Cultures on agar made from the spleen and heart blood gave almost pure growths of the pest bacillus. Direct examination of the organs showed enormous numbers of typical plague bacilli.

Guinea pig No. 2.—Was inoculated subcutaneously with a pure culture obtained from the gland of above case. The animal died in three days. Plague bacilli were very numerous in the spleen and inguinal

glands, and were also present in the heart's blood.

Case 5.—Lum Hong Huen, 28 Ross alley; necropsy February 6. Smear preparations from the spleen showed large numbers of short, thick rods, chiefly single; some oval or roundish forms were also present. The organisms stained readily with Loeffler's methylene blue or with carbolic thionin. In the latter case the bipolar staining was excellent. The organisms were completely decolorized by Gram. Cover-glass preparations from the gland likewise showed very numerous bacilli, occurring singly, taking the bipolar stain, but not that of Gram. Agar cultures were made at the time of the necropsy in the undertaker's shop of Main Fook. The cultural and morphological characteristics were the same as those observed in case 1.

Guinea pig No. 3.—Received subcutaneously a portion of the spleen from above case; died in five and one-half days. On autopsy, the spleen was found markedly enlarged, full of white nodules which were also present in the liver and in the lungs. Cover-glass preparations from the spleen showed enormous numbers of bacilli, having all the characteristics of bacillus pestis. Agar slants were inoculated with the heart's blood and spleen of this animal. The former yielded a slightly con-

taminated growth, but the culture from the latter was pure.

Case 5.—Wong Chi Lui, 21½ Waverly place; autopsy February 7. Streak preparations from the spleen showed very numerous pest bacilli apparently in pure culture; the predominating form was the short, thick rod, although some oval or roundish forms were present. Loeffler's methylene blue and carbolic thionin stained the bacilli readily, demonstrating the characteristic bipolar form. The organisms were completely decolorized by Gram. Similar preparations made from one of the left femoral glands show fewer organisms, but these in form, size, and staining reactions are identical with those found in the spleen. Cultures made on agar developed very slowly; on subsequent transplantation, however, the growth was more rapid, more abundant, and typical of that of bacillus pestis.

Guinea pig No. 4.—Was inoculated subcutaneously with a portion of the gland from the above case. Death resulted in three and one half days. Bacilli were numerous in the spleen and corresponded in char-

acteristics to those of the plague bacilli.

Guinea pig No. 5.—Was inoculated subcutaneously with a portion of the spleen; it was found dead three and one half days later. Numer ous plague bacilli were found in the spleen, heart's blood, and glands. Agar streaks from the heart's blood gave numerous small colonies of pest bacilli with a few larger colonies due to foreign organisms. The spleen gave numerous isolated small moist colonies, apparently a perfectly pure culture of the plague bacillus. Agar streak plates were made at the same time, and gave in twenty-four hours numerous minute colonies.

Guinea pig No. 6.—A portion of the spleen from this case was introduced into the peritoneal cavity. Death resulted in four and one-half days. Pest bacilli were abundant in the internal organs and in the glands. Agar streaks from the heart's blood gave a very limited growth, while that from the spleen was scarcely visible. In this and several other instances, difficulty was experienced in starting the growth of the organism directly from the tissues. Once started, however, with subsequent transplantations, better results were obtained.

Guinea pig No. 7.—Was inoculated subcutaneously with a loopful of a pure culture obtained from guinea pig No. 5. It died in two and one-half days. Necropsy revealed a hemorrhagic cedema, and cover-glass preparations of this showed pest bacilli mixed with numerous minute

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diplo and streto cocci. The spleen was large and soft, contained nodules, and on staining cover-slips therefrom, enormous numbers of typical plague bacilli, apparently perfectly pure, were found. No diplococci

were present.

Case 6.—Tom Shom, 814 Washington street; necropsy, February 11. During life some fluid was aspirated by means of a sterile syringe from the swelling in the right femoral region and transferred to nutrient agar. Blood was also drawn from the lobe of the ear and planted on agar. Stained preparations made from these specimens failed to demonstrate the presence of any organism. Cultures developed pyrogenic cocci, but failed to give any indication of pest bacilli. On necropsy, the femoral glands, though characteristic of plague, were found not markedly enlarged. It was evident that the aspirating needle, when introduced, had missed the gland proper, and the failure to isolate the pest bacillus during life in this can thus be explained. It should be noted that the periglandular tissue was but very slightly involved. Streak preparations made from the hemorrhagic gland showed relatively few typical plague bacilli. A long, thick bacillus was present in small numbers. Gram's stain was negative. Streak preparations from the spleen showed the pest bacillus to be present in large numbers and apparently pure. The organisms occurred singly, gave the bipolar stain, and were decolorized by Gram.

Guinea pig No. 8.—Was inoculated subcutaneously with a portion of the spleen from this case. Six and a half days later, though healthy in appearance, it was killed. A circumscribed caseus local lesion was found. There was a slight glandular enlargement on the same side. The spleen was slightly enlarged and showed white nodules. Pest bacilli having the short-rod and oval form were present in small numbers.

Case 7.—Fong Ah Fong, 747 Sacramento street; necropsy February 12. Streak preparations from the spleen revealed the presence of pest bacilli, although these were not very abundant; indeed, they were difficult to find in cover-slips. Typical bipolar staining rods and oval roundish forms were, however, found. Gram's stain was negative.

Streak cultures were made with the fresh spleen on agar slants, and at the same time agar plates were made. The agar streaks failed to give an appreciable growth, but on the plate a colony was found which corresponded to that of the plague bacillus. On microscopic examination it was observed to consist of small, short, oval, nonmotile rods, which decolorized by Gram. The colony transplanted to agar gave a typical growth of pest bacilli, and this culture was used to inoculate guinea pig No. 10.

Guinea pig No. 9.—Received a portion of the spleen of Fong Ah Fong subcutaneously. It died in four and one-half days. The spleen contained enormous numbers of pest bacilli, which stained in the usual bipolar manner and were decolorized by Gram. The heart's blood likewise contained the organism. Cultures were made on agar from the spleen and heart's blood of this animal; both gave numerous small,

moist colonies of bacillus pestis.

Guinea pig No. 10.—Was inoculated subcutaneously with the agar culture mentioned above. It was killed two and one half days later. The spleen showed only a few but characteristic pest bacilli. Under the skin there was but slight local change and a few typical bacilli were found.

Case 8.—Ung Ah Buck, St. Louis alley; necropsy February 12. Coverslip preparations from the cervical lymph glands showed the presence of several distinct organisms. The short, thick, oval forms of the pest

bacillus were present in small numbers. With them was associated a large thick bacillus; there were also bacilli present resembling the bacillus diphtheriæ and a diplococcus closely resembling that of The pest bacilli gave the usual bipolar stain with methylene blue and with carbolic thionin. Specimens stained by Gram's method showed deeply stained diplococci, the other forms being decol-Smear preparations from the spleen showed many organisms resembling the bacillus pestis morphologically.

Agar streaks from the fresh spleen gave a number of discrete moist colonies which consisted of large oval nonmotile bacilli, occurring singly and only occasionally in pairs; the streak cultures from the cervical gland also gave numerous isolated colonies. In both cases the cultures obtained were apparently perfectly pure and agreed in every respect with those of plague bacilli. The other bacteria seen in cover-

slips did not grow. Agar plates yielded the same results.

Guinea pig No. 11.—Was inoculated subcutaneously with a small portion of the spleen from above case. In about three days the animal was very sick and was finally killed five and one-half days after inoculation. Bacillus pestis was found in the spleen and to a less extent in the blood.

The bacteriological examination of the foregoing 6 cases has, therefore, demonstrated the presence of the bacillus pestis in each.

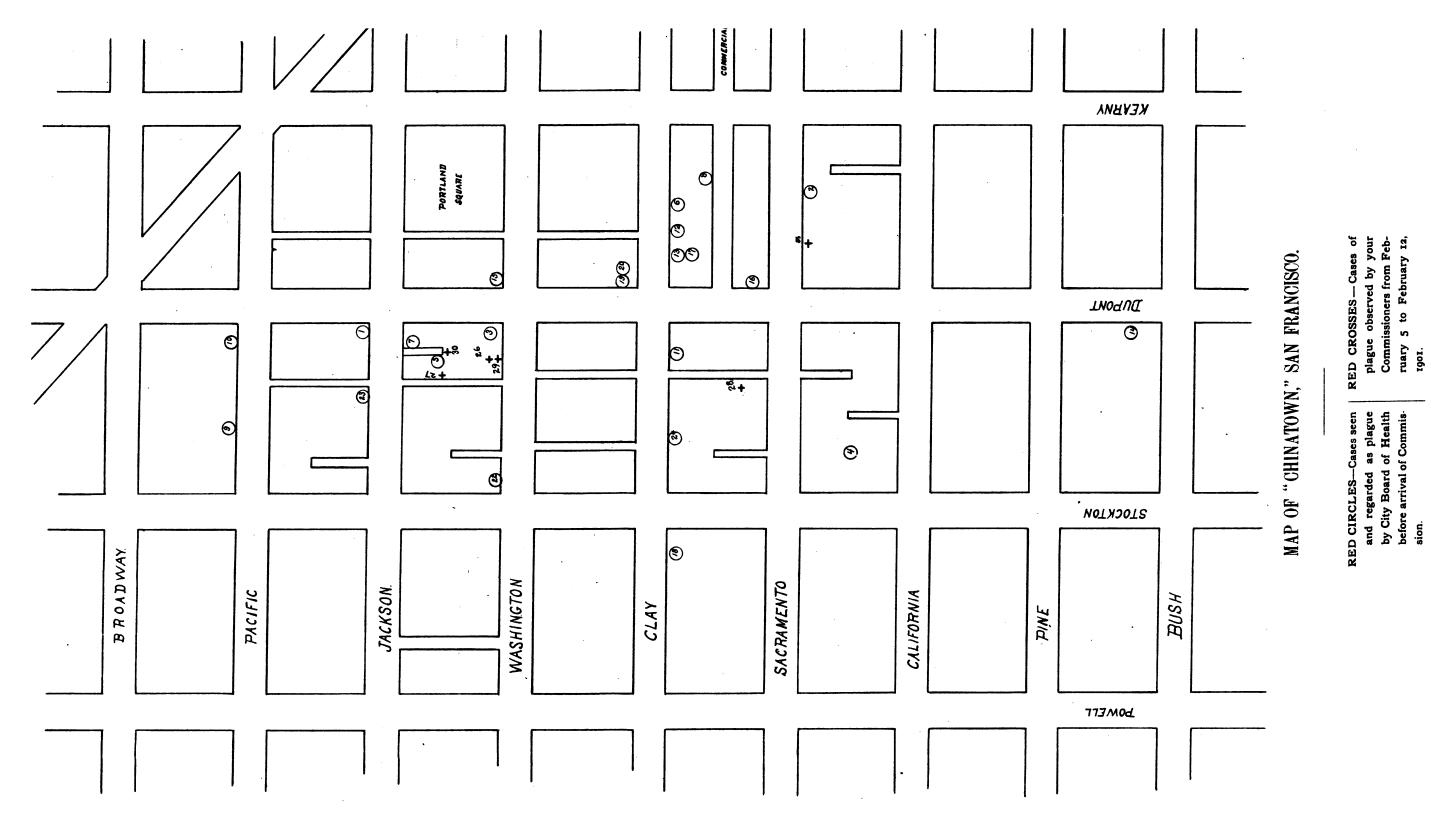
> SIMON FLEXNER, F. G. NOVY.

LEWELLYS F. PARKER.

No.	Name.	Age.	Sex.	Color.	Place of death.	Date of death, 1900.
1	Wing Chut King		Male	Mongolian	1001 Dupont	March 6.
2	Chu Gan	22		do	723 Sacramento	March 15.
3	Ng Ach Ging	37		do	905 Dupont	March 17.
4	Lee Sun King	47		do	Oneida place	March 18.
5	Law An	38		do	St. Louis alley	April 24.
6	Lim Fa Muey	16		do	739 Clay street	May 11.
7	Chu Sam	38		tot	717 Jackson	Do.
8	Chin Moon	16		do	730½ Commercial	May 13.
9	Her Woon Jock	53		do	740 Pacific	May 14.
10	Dang Hong	40		do	706 Pacific	May 29.
11	Chen Kney Kim	49		do	819 Clay	June 2.
12	Jay Man Tong	60		do	759 Clay	June 9.
13	Lee Wing Tong	40		do	767 Clay	July 6.
14	William Murphy	34	do	White	427 Dupont	August 11.
15	Ham Tan	29	do	Mongolian	9:0 Dupont	August 15.
16	Lea Do Hen	50		do	710½ Dupont	October 5.
17	Chun Yen	37	do	do	767 Clay	October 10.
18	Taik Dong Leong	39	do	do	705 Clay	October 14.
19	Young Moon Li Chee	30	Female	do	802 Dupont	October 31.
20	Young Wah Noui	9		do	802 Dupont	November 1.
21	Anne Roede	28		White	Pacific Hospital	November 3.
22	Lee Ho	30		Mongolian	844 Washington,.	December 7.
23	Chun Wey Lung	60	do	do	780 Jackson	January 6, 1901.
24	Leam Wing Low	59	do	do	6331/4 Clay	January 15.
25	Angela Colombo		do	White	5 Lafayette place	Do.
26	Chun Ah Chou a	44	do	Mongolian	814 Washington	February 5.
27	Lum Hong Yuen a	37		do	28 Ross alley	February 6.
28	Wong Chi Lina			do	15% Waverley	February 7.
29	Tom Shom a			do	814 Washington	February 10.
30	Ng Ah Back a	45		do	St. Louis alley	February 11.
31	Foong Ah Fong a	12		do	747 Sacramento St	February 12.

a Observed by commission.

Note.—Particular places of death of following numbers were as indicated below: No. 8, Pacific Hospital, Stockton and Chestnut streets; No. 13, City and County Hospital; No. 14, City and County Hospital; No. 21, Children's Hospital, 3700 California street; No. 25, City and County Hospital.



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[Reports to the Surgeon-General United States Marine-Hospital Service.]

Abstract of replies received in reply to request for reports on influenza (la grippe).

[Continued from Public Health Reports, Nos, 6, 7, 8, 9, 10, 11, 12, 13, 14, and 15.]

FRANCE—Marseilles.—Replying to your communication of January 18, I have the honor to report that influenza or la grippe has been more or less prevalent in Marseilles since 1890. The number of cases was notably large from 1890 to 1895, since which time there has been a gradual decrease, and at the present time the malady does not occur often enough or in a form sufficiently severe to warrant any special consideration. During the past two weeks the weather has been very cold for this region, and as the houses are ill-adapted to low temperatures, there has been a sudden and notable increase in the number of cases, most of which, however, are of the benign type. Statistics as to the number of cases are not taken. No deaths from influenza were reported during the month of January. There are, however, many deaths the cause of which is not shown in the official reports, and one of my professional informants estimates deaths from this cause to be actually about 10 a month.

At this time the number of cases is decreasing, and the cases are so mild that the treatment generally prescribed is in the main, care against exposure, especially after sundown, exercise, and diet. The types of the disease as noted here are: (1) pectoral or pulmonary; (2) gastrointestinal, slightly resembling typhoid fever, and (3), and very rarely, nervous, having some analogy to meningitis.

Paris.—No epidemic of la grippe prevails, but the disease has been present all winter, and it is necessary to go back well into last summer to find a week in which there was not at least 1 death reported from la grippe. An increase in the number of cases began to be marked early in December, 1900. The disease attacked the poor before the rich, and it was not until about February 1, 1901, that it appeared in private practice.

Catarrhal and pneumonic symptoms are the most common. Mortality is small and the cases are light. In general it can be said that the disease clinically had decreased steadily until 1889, when it raged as an epidemic disease in a nonimmune community. Since that period the violent contagion and the severe bulbar form with sudden prostration and vomiting are rarely seen. Treatment is symptomatic, but the coaltar derivatives are not given as much as formerly.

GERMANY—Barmen.—Influenza or la grippe usually prevails in this country more or less every year in the beginning of autumn, lasting until about March, when it is generally most severe. The duration of the disease is usually several months. The number of cases is not

reported. The mortality is 85 in a population of 141,000. The number of deaths from la grippe in 1900 was 73.

Berlin.-Influenza first made its appearance in Berlin during the first week in November, and has prevailed with increasing severity till the present time, though there is at present evidence of its abating. Owing to the fact that influenza is not classed among the infectious diseases that require reporting, it is impossible to estimate the number of cases. The number of deaths due to influenza have occurred as follows: November, 10; December, 23; January, 39, and February, 67. The highest mortality occurred during the last week of February, when 20 deaths were reported as due to influenza. The type of the disease has been rather of the respiratory form, broncho-pneumonia being a fairly frequent complication. Much more seldom has the intestinal form of the disease occurred than in the epidemics of the previous year. It would seem from the present epidemic that no relation can be found between the prevalence of the epidemic and the meteorological conditions. In the epidemic of one year ago some effort was made to show that the severity of influenza was due largely to the number of cloudy and rainy days. This year, which has been just as remarkable for the number of cold, clear days, shows little improvement in the influenza epidemic. The health authorities of Berlin regard it as a true infectious disease, and not materially influenced by the weather conditions. It is carried from one city to another in the course of travel.

No specific has been found for the treatment of influenza, though the remedy most generally used in Berlin is salipyrine. It is given in 0.5 gram (7½ grains) doses about every four hours. With this is frequently combined 0.2 gram (3 grains) of sulphate of quinine.

Hamburg.—Since 1889-90 la grippe has never become extinct. The number of cases is not reported. The type is catarrhal with tolerably severe general infection. Deaths are rare and generally occur in old and very weak persons.

Mainz.—There have been relatively few cases of influenza here this winter. The disease made its appearance between December 1 and 15, 1900. There have been only 5 deaths due to la grippe.

Stuttgart.—The are no evidences of an epidemic of la grippe in this city or kingdom.

GREAT BRITAIN—England—Bristol.—Influenza is not prevalent in this consular district.

London.—Influenza is not known to prevail to an unusual extent at present in England. Influenza not being a notifiable disease, the number of cases is not known. In London, for the week ended March 2, there were 35 deaths attributed directly to this disease as against 12, 16, and 32 in the three preceding weeks. The increase in the number of deaths may be partly attributed to the weather conditions, which were very wet and cold.

Liverpool.—During the last six months the city has been practically

free from influenza; but it made its appearance a few weeks ago, and since the date of its reappearance (about January 5) there have been 27 deaths caused by it. The cases are treated by medical men upon the usual principles.

IRELAND—Dublin.—The following table shows the number of deaths from influenza for the twenty-four weeks ended March 16, 1901, and the average for the corresponding weeks for the past ten years:

Week ended.	Deaths.	Aver- age(a).	Week ended.	Deaths.	Aver- age(b).
1900.  October 6	5 1 1 2	1.1 0.8 0.9 1.0 0.7 1.2	January 5 January 12 January 19 January 26 February 2 February 16 February 16 February 18 March 2 March 9 March 16	2 3 3 5 6 4 16	5.: 8.: 7.: 9.: 7.: 6.: 4.: 6.:

a Number of deaths from influenza in the corresponding week of ten years, 1890-1899. b Number of deaths from influenza in the corresponding week of ten years, 1891-1900.

SCOTLAND—Glasgow.—Cases of influenza are rarely dealt with in this country by any sanitary administration. In the earlier years of this decade, when influenza was more prevalent, certain cases were isolated in hospital, but that was rather with the view of treatment where the home conditions were unfavorable.

Year—	Death rate   per 100,000.	Year—	Death rate per 100,000.
1896	6	1899	22
1897		1900	27
1898	15		

HAWAII—Honolulu.—The actual number of cases can not be ascertained. The disease made its appearance on or about January 30, 1901. The number of cases was not very large and the form of the disease not severe. In a population of about 40,000, only 3 deaths are reported as due to la grippe, 2 of persons over 70 years of age, and 1, 43 years of age.

Kauai—Kealia.—La grippe is not known in the northern part of this island. It has been diagnosed in a few instances in the southern part of the island.

Kauai—Waimea.—No cases of influenza or la grippe known to be present.

Molokai—Kalawao.—Influenza or la grippe does not prevail in this locality.

Naalchu—Kau.—Influenza or la grippe does not prevail in this locality. During the summer and early fall of the year 1900, there were 300 cases in a community numbering 4,000.

North Kona Island—Kailua.—Twenty seven cases of la grippe are reported. The majority were of the respiratory type and all recovered.

Wailuku—Maui.—No influenza or la grippe reported in this district.

HOLLAND—Amsterdam.—Influenza does not prevail here, nor has it prevailed during the entire winter. In 1900 influenza was epidemic here as in London. .

ITALY—Naples.—Influenza does not prevail in this locality. There have been a few mild cases which could nearly all be traced to New York and usually occurred among the cabin passengers on the incoming steamships. There has been no mortality and no spread of the disease.

Trapani.—Influenza has not appeared here this year.

Malta.—Thirty cases of influenza were reported in these islands during the month of February last. Undoubtedly there were other cases, but hardly enough to constitute an epidemic such as we had during last March. The disease seems to have appeared here early in the month above named—earlier than last year. The few cases reported were so mild that no sanitary measures were taken. The treatment adopted was simply by diaphoretics and especially salicylate of soda.

### A case of smallpox at Louisville, Ky.

LOUISVILLE, KY., April 7, 1901.

SIR: I have the honor to report the admission to relief of Seaman William Martin on April 5, suffering with smallpox. Said seaman applied for relief from some other complaint, but, on examination after entrance, was found to be convalescent from smallpox, evidently from a very mild attack. He was isolated on the premises, and those who had been exposed to him were vaccinated and reported to the municipal authorities. He was taken to the eruptive hospital the next day.

A telegram has been sent to Cincinnati, where the boat now is from

which he came.

Respectfully,

H. R. CARTER, Surgeon, U. S. M. H. S.

### A case of smallpox in Charleston, S. C.

CHARLESTON, S. C., April 8, 1901.

SIR: A case of smallpox (the steward of the revenue cutter Forward) was detected at this office to-day, and turned over to the city health authorities after formal admission as patient of the service under the contract. The patient, a negro man, had been sick at his home ashore for several weeks (three, he states), unattended by a physician. He had not made application for treatment from this service before to day. The eruption was pretty well dried then. He had gone aboard the cutter to return to duty, when the officer there sent him to the Marine Hospital office, with a certificate of service, for treatment. He was aboard the vessel for about twenty minutes (to-day) he states. All precautions to avoid spread of the infection, both at the office and aboard the vessel, were taken.

Respectfully,

JNO. VANSANT, Surgeon, U. S. M. H. S.

### Arrival at Baltimore of vessels from West Indian ports.

BALTIMORE, MD., April 13, 1901.

SIR: I have to report the arrival during the week ended this day the following named vessels from the ports named: April 8, American schooner *John A. Matheson*, from San Andres, with fruit. April 11, Norwegian steamship *Caprivi*, from Santiago de Cuba, with ore.

Respectfully,

WM. F. STONE, Collector.

Arrival at Reedy Island Quarantine of vessels from West Indian ports.

REEDY ISLAND QUARANTINE, via Port Penn, Del., April 7, 1901.

SIR: Through the medical officer in command national quarantine service on Delaware River and Bay, I have the honor to report the arrival at this station of the following vessels: April 4, 1901, American steamship Maverick, from Havana, with molasses; no passengers; bill of health signed by Surgeon Glennan. April 4, 1901, American schooner Andrew Adams, from Matanzas, via Cardenas and Havana, with general cargo; no passengers; Matanzas bill of health signed by Passed Assistant Surgeon Guitéras; Cardenas bill of health signed by Acting Asst. Surg. Enrique Saez; Havana bill of health signed by Surgeon Glennan.

Respectfully, T. F. RICHARDSON,

Assistant Surgeon, U.S. M. H. S., In Command.

### Reports from the Mexican border.

El Paso, Tex., April 6, 1901—Inspection service.—I have the honor to transmit herewith summary of work at this station for week ended April 6, 1901: Inspection Mexican Central Railroad passengers, 212; inspection Rio Grande and Pacific Railroad passengers, 21; inspection of immigrants, 46; disinfection of baggage, blankets, etc., 25 pieces; disinfection soiled linen imported for laundry work, 376 pieces; disinfection Pullman soiled linen, 1,807 pieces; disinfection of cattle hides, 405; disinfection of sheepskins and calfskins, each, 4 bundles; vaccination of immigrants' children, 9.

E. ALEXANDER, Acting Assistant Surgeon, U. S. M. H. S.

Laredo, Tex., April 7—Inspection service.—I have the honor to submit the following report for week ended April 6, 1901: Number of passenger trains entering from Mexico inspected, 14; persons on train inspected and entered, 458. April 3, refused entry to 1 person two days out from Tampico; no baggage. April 5, refused entry to 1 person three days out from Tampico; no baggage. Immigrants inspected and passed, 47; immigrants vaccinated, 4; Pullman Company linen from Mexico disininfected, 5,008 pieces.

H. J. HAMILTON, Acting Assistant Surgeon, U. S. M. H. S. Statistical reports of States and cities of the United States—Yearly and monthly.

CALIFORNIA—Los Angeles.—Month of March, 1901. Census population, 102,479. Total number of deaths, 168, including diphtheria, 1; enteric fever, 5, and 46 from tuberculosis.

Oakland.—Month of March, 1901. Estimated population, 75,000. Total number of deaths, 105, including enteric fever, 1; scarlet fever, 1, and 23 from tuberculosis.

Sacramento.—Month of March, 1901. Estimated population, 30,000. Total number of deaths, 32, including 7 from phthisis pulmonalis.

INDIANA—Muncie.—Month of March, 1901. Census population, 20,942. Total number of deaths, 26, including diphtheria, 1, and 1 from tuberculosis.

KANSAS—Leavenworth.—Month of March, 1901. Census population, 21,556. Total number of deaths, 26, including enteric fever, 1, and 3 from tuberculosis.

MARYLAND—Baltimore.—Month of March, 1901. Estimated population, 541,000—white, 463,000; colored, 78,000. Total number of deaths, 966—white, 701; colored, 265—including diphtheria, 16; enteric fever, 2; whooping cough, 6; influenza, 28, and 140 from tuberculosis.

MASSACHUSETTS—Fitchburg.—Month of March, 1901. Census population, 31,531. Total number of deaths, 51, including diphtheria, 2; enteric fever, 1, and 3 from tuberculosis.

MICHIGAN.—Reports to the State board of health, Lansing, for the week ended April 6, 1901, from 76 observers indicate that pleuritis was more prevalent than in the preceding week. Cerebro-spinal meningitis was reported present at 2, whooping cough at 13, diphtheria at 21, measles at 29, enteric fever at 40, phthisis pulmonalis at 190, and small-pox at 100 places.

NEW HAMPSHIRE — Concord.—Month of March, 1901. Estimated population, 19,500. Total number of deaths, 36, including diphtheria, 1, and 3 from tuberculosis.

Franklin.—Month of February, 1901. Census population, 5,843. Total number of deaths, 7. No deaths from contagious diseases.

Month of March, 1901. Total number of deaths, 9, including 1 from tuberculosis.

NEW JERSEY—Hudson County.—Month of February, 1901. Census population, 386,048. Total number of deaths, 622, including diphtheria, 20; enteric fever, 2; measles, 1; scarlet fever, 8; whooping cough, 3, and 75 from phthisis pulmonalis.

NEW YORK—Saratoga Springs.—Month of March, 1901. Estimated population, 12,400. Total number of deaths, 18, including 1 from measles.

NORTH CAROLINA—Charlotte.—Month of March, 1901. Estimated population, 27,752. Total number of deaths, 34, including enteric fever, 1; measles, 1; smallpox, 1, and 1 from phthisis pulmonalis.

Wilmington.—Month of March, 1901. Census population, 21,000. Total number of deaths, 43, including 5 from phthisis pulmonalis.

OHIO—East Liverpool.—Month of March, 1901. Census population, 16,486. Total number of deaths, 20, including enteric fever, 2, and 1 from phthisis pulmonalis.

Pennsylvania—New Castle.—Month of March, 1901. Estimated population, 28,350. Total number of deaths, 36, including 17 from tuberculosis.

TENNESSEE—Knoxville.—Month of March, 1901. Estimated population, 35,000—white, 26,000; colored, 9,000. Total number of deaths, 48, including 14 from tuberculosis.

TEXAS—San Antonio.—Month of March, 1901. Census population, 53,321. Total number of deaths, 97, including enteric fever, 1; measles, 1; scarlet fever, 5, and 24 from tuberculosis, of which 16 were in the persons of nonresidents.

UTAH—Salt Lake City.—Month of March, 1901. Estimated population, 70,000. Total number of deaths, 57, including diphtheria, 3; enteric fever, 1; whooping cough, 1; smallpox, 2, and 5 from phthisis pulmonalis.

VIRGINIA—Roanoke.—Month of March, 1901. Census population, 21,495. Total number of deaths, 47; including diphtheria, 1; small-pox, 4, and 6 from tuberculosis.

# Reports from national quarantine

Number.	Name of station.	Week ended.	Name of vessel.	Date of arrival.	Port of departure.
1 2 8 4 5	UNITED STATES: Alexandria, Va. Beaufort, N. C. Brunswick, Ga Cape Charles, Va. Cape Fear, N. C.	Apr. 13 do do Apr. 6		•••••••	
6 7 8 9 10 11	Columbia River, Oreg Delaware Breakwater Quarantine, Lewes, Del. Dutch Harbor, Alaska Bureka Cal Grays Harbor, Wash Gulf Quarantine, Ship Island, Miss.		Ger. bk. C. Rawlson	Mar. 31	Para
12 18 14 15 16 17	Los Angeles, Cal	Apr. 6 do Apr. 6 Mar. 30 Apr. 6	Nor. ss. Hydra	***************************************	
18 19 20 21 22	Reedy Island Quarantine, Del. San Diego, Cal	Apr. 6 do do	***************************************		
23 24 25 26 27 28	Ga. Tortugas Quarantine, Key West, Fla. Washington, N.C	Apr. 18	Nor. bk. Sterling		
29 30 81 82 83 84 85	Cardenas	do Mar. 23 Mar. 30 Mar. 23			•••••••
86 87 88 89 40 41 42	Matanzas  Nuevitas  Puerto Padre  Santa Cruz	Apr. 6do Mar. 30	Am. steam yacht May		

# and inspection stations.

Number.	Destination,	Treatment of vessel, passengers, and cargo.	Date of depar- ture.	Remarks.	Vessels inspected and passed.
1				No transactions	
2				No report	
8				do	
5				do	2
6 7				No transactions	. 2
8		·		No report	
i o	***************************************			No transactions	
10 11	Ship Island	Disinfected	Apr. 4	Para, 2 en route soon after leaving; prob- ably vellow fever.	1
	Mobile	do	. Apr. 2	An account of possible case of smallpox advanced beyond the stage for diagnosis.	
12			· <b>  · · · · · · · ·</b> · · · · · ·	. No transactions	
18 14	•••••••••••••••••••••••••••••••••••••••			No report	
15	***************************************				1
16 17				No transactions	6
18				examined. No report	
19 20		[			3 17
21 22	Savannah	Disinfected and held for observation.		No transactions	
•••••			•••••	Crew and passengers vaccinated unless pre- viously vaccinated; 20 rowboats, 5 tugs, and 1 flat inspected and passed.	84
23	Sapelo	Preliminary disinfection; detained for discharge of ballast and disinfection.		***************************************	2
24	••••••		<b></b>	No report	•••••
25	•••••••	•••••••		do	•••••
26	•••••••		<b> </b>	do	
27 28	••••••	••••••••••••		2 vessels passed without inspection.	2
29	••••••			12 vessels passed without inspection.	5
30 31	•••••	•••••	••••••	No report	18
82 82	***************************************				2 13
33	•••••	•••••			13
34 35	W-11-	Disinfected	Apr. 5		8 33
	Mobile Uncertain	<i></i>		Awaiting sailing orders before complete disin- fection. No report	
87				No report	12
36 37 38 39					12 6 3 7 8 15
89 40	······································				8
40					ś
42	Port au Prince	Boarded and passed	Mar. 21		15

# Reports from national quarantine

Number.	Name of station.	Week ended.	Name of vessel.	Date of arrival.	Port of departure.
48 44 45 46 47 48 49 50 51	Kihei	Mar. 30 do Mar. 23 Feb. 23 do Mar. 2	Sp. ss. Pio IX		
52 53 54 55 56 56 57	AreciboFajardo	do do do		••••••	

# Reports from State and

Number.	Name of station.	Week ended.	Name of vessel.	Date of arrival.	Port of departure.
1 2 8 4 5 6 7 8 9 10 11 12 13 14	Anclote, Fla Baltimore, Md Baltimore, Md Bangor, Me Boston, Mass Carrabelle, Fla Codar Keys, Fla Charleston, S. C Charlotte Harbor, Fla Elisabeth River, Va Galveston, Tex Gardiner, Oreg Key West, Fla Marcus Hook, Pa Mayport, Fla	do			
16 17 18 19 20 21 22 23 24 25 26 27 28	Mobile Bay, Ala	Apr. 13dododododododododododo	Rus. bk. Betty	Apr. 1 Apr. 2 Apr. 3	Bahia

## and inspection stations—Continued.

Number.	Destination.	Treatment of vessel, passengers, and cargo.	Date of departure.	Remarks.	Vessels inspected and passed.
43 44 45 46	***************************************				7
47 48 49				do	
50 51 52		Held in quarantine		2 nonimmune passengers detained. No transactions	2 6
53 54 55 56	***************************************		••••••	do	1
57	••••••	•••••••••••••••••••••••••••••••••••••••	•••••	•••••••	2

# municipal quarantine stations.

Number.	Destination.	Treatment of vessel, passengers, and cargo.	Date of depar- ture.	Remarks.	Vessels inspected and passed.
1 2 8 4 5 6 7 8 9 10 11 12 18 14 15				do	
16 17 18 19 20 21 22 28 24 25 26 27 28	Sabine Pass	Disinfected	Apr. 7 Apr. 8	No report	

## Report of immigration at Boston for the week ended April 6, 1901.

### OFFICE OF U. S. COMMISSIONER OF IMMIGRATION, Port of Boston, April 7, 1901.

Number of alien immigrants who arrived at this port during the week ended April 6, 1901; also names of vessels and ports from which they came.

Date.	Vessel.	Where from.	No. of immigrants.
Mar. 81 Do Apr. 1 Do Apr. 3 Apr. 4 Do Do	Steamship Turcoman	Yarmouth, Nova Scotia	108 4 4 154 117

GEORGE B. BILLINGS, Commissioner.

Report of immigration at New York for the week ended April 6, 1901.

OFFICE OF U. S. COMMISSIONER OF IMMIGRATION, Port of New York, April 9, 1901.

Number of alien immigrants who arrived at this port during the week ended April 6, 1901; also names of vessels and ports from which they came.

Date.	Vessel.	Where from.	No. of immi- grants
Mar. 31 Do Apr. 1 Do	Steamship St. Louis	Havre	84 81 39
Do Apr. 2 Do Do Do	Steamship Bulgaria	Genos and Naples	190 92: 71: 48:
Apr. 3 Apr. 4 Do Apr. 5	Steamship Sicilia	Naples Copenhagen, etc	179 58
Do Do Do Apr. 6	Steamship Karamania Steamship Rhein Steamship Coleridge	Bremen	83 2, 40 4
Do	•	Hamburg	1,84

THOMAS FITCHIE, Commissioner.

Report of immigration at Philadelphia for the week ended April 18, 1901.

OFFICE OF U. S. COMMISSIONER OF IMMIGRATION, Port of Philadelphia, April 13, 1901.

April 8, steamship Rhynland, from Liverpool and Queenstown, with 92 immigrants.

JNO. J. S. RODGERS, Commissioner. Report of immigrants inspected at the port of Portland, Me., during the month of March, 1901.

Total number of immigrants inspected, 689; number passed, 686; number certified for deportation on account of dangerous contagious or loathsome diseases, or for other physical causes, 3.

Disposition of immigrants certified for deportation.—Number cases pending at beginning of month, none; number cases certified for deportation during month, 3; total to be accounted for, 3; number cases deported, none; number cases admitted, 2; number cases pending at close of month, 1.

S. D. BROOKS, Surgeon, U. S. M. H. S.

Report of immigrants inspected at the port of Baltimore, Md., during the month of March, 1901.

Total number of immigrants inspected, 3,878; number passed, 3,876; number certified for deportation on account of dangerous contagious or loathsome diseases, or for other physical causes, 2.

Disposition of immigrants certified for deportation.—Number cases pending at beginning of month, none; number cases certified for deportation during month, 2; total to be accounted for, 2; number cases deported, 1; number cases admitted, none; number cases pending at close of month, 1.

B. W. Brown, Passed Assistant Surgeon, U. S. M. H. S.

Report of immigrants inspected at the port of Philadelphia, Pa., during the month of March, 1901.

Total number of immigrants inspected, 692; number passed, 671; number certified for deportation on account of dangerous contagious or loathsome diseases, or for other physical causes, 21.

Disposition of immigrants certified for deportation.—Number cases pending at beginning of month, none; number cases certified for deportation during month, 21; total to be accounted for, 21; number cases deported, 5; number cases admitted, 16; number cases pending at close of month, none.

H. W. AUSTIN, Surgeon, U. S. M. H. S.

Report of immigrants inspected at the Port of Laredo, Tex., during the month of March, 1901.

Total number of immigrants inspected, 227; number passed, 227.

H. J. HAMILTON, Acting Assistant Surgeon, U. S. M. H. S. Smallpox in the United States as reported to the Surgeon-General United States Marine-Hospital Service, December 28, 1900, to April 19, 1901.

For reports received from June 30, 1900, to December 28, 1900, see Public Health Reports for December 28, 1900.

Place.	Date.	Cases.	Deaths	. Remarks.
Alabama:				
Lee County (Phœnix)	Dec. 26	. 16		.
Mobile	.! Feb. 12–Mar. 9	.  4	8	
Russell County (Girard)	do	. 25		•
Total for State		. 45	3	1.
Total for State, same period,		158	1	
1900. California :				
	Feb. 3-Mar. 30	. 18		.
Oakland	Dec. 30-Mar. 23	. 8		
Los Angeles	Feb. 26-Mar. 2	. 1		
San Francisco	Feb. 3-Apr. 6	. 30	••••••	:
Stockton	Mar. 1-Mar. 31	. 1	•••••	
Total for State		58		
Total for State, same period,		8		
1900.				
Colorado:	N 10 N 00	050	Ĭ	
Arapahoe CountyArchuleta County	110V. 15-MAT. 80	259 8		1
Post County	do	17		1
Boulder County	do	47		1
Boulder County	do	35		1
Charanna County	do	2	***************************************	
Clear Creek County	do	47		
Custer County	do	1 4		[
Delta County	do	88		
Douglas County	do	10		
Eagle County	Feb. 1-Mar. 30	4		
Douglas County  Douglas County  Eagle County  Eil Paso County  Fremont County  Garfield County  Gilpin County  Grand County	Nov. 13-Mar. 30	19		
El Paso Counly	do	161		İ
Fremont County	do	122		
Garfield County	do	147		
Gilpin County	do	3		
Grand County	do	6	•••••	
Gunnison County	do			
Gunnison County  Huerfano County  Jefferson County  Lake County	do	51		
Jenerson County	OD	66 25	•••••	
La Plata County	do	25 15	•••••	
Larimer County	do	16		
Las Animas County	do	41		
Mesa County	Feb. 1-Mar. 30	28		
Montrose County	do	7		
Morgan County	do	2		
Otero County		52		
Ouray County,	do	24		
Park County	Feb. 28-Mar. 30	22		
Pioneers County	Feb. 1-Mar. 30	12		
Pitkin County	Nov. 13-Mar. 30 Feb. 28-Mar. 30	9		
Prowers County	Feb. 28-Mar. 30	14	•••••	
Pueblo County	Nov. 18-Mar. 30	119	•••••	
Rio Grande County	do	. 8	•••••	
Saguache County	do	10		
San Juan County San Miguel County	reb. 28-Mar. 80	1		
Taller County	Feb. 28-Mar. 80 Nov. 13-Mar. 30	228	***************************************	
Teller County Weld County	do	43	••••••	
Total for State	••••••••••••	1,768		
Total for State, same period, 1900.	•••••••	63	2	
onnecticut:	į			
Bridgeport	Jan. 1-Jan. 81	6		
elaware:			1	
Seaford	Mar. 25	53		
<b></b>				
Total for State, same period,	······		1	
1900. District of Columbia:				
Washington Total for District, same pe-		50		
	1	14		

	1	ł	i	
Place.	Date.	Cases.	Deaths.	Remarks.
Florida :			-	
Columbia County	Jan. 1-Feb. 10	9	•••••	·
Duval County	Jan. 1-Apr. 6	39		
Escambia County	Jan. 1-Feb. 10 Dec. 16-Mar. 30 Jan. 1-Feb. 10	1 36		1
Jacksonville	Ion 1-Wab 10	5	***************************************	1
Lake County Marion County	do	i	•••••	1
West Tampa City	Dec. 30-Jan. 5	2		
Total for State	••••••	98		
Total for State same period, 1900.	••••••••••••	23		.  =
Georgia: Columbus	Dec. 26	10		
Macon	Feb. 1-Mar. 31 Feb. 3	10		.
Twiggs County	Feb. 3	1		•
Wilkinson County	do	1		<u>:</u>
Total for State		22		<u>.</u>
Total for State, same period,	••••••	168	2	
1900. daho:				
Dempsey	Nov. 23	10		.]
llinois:			·	<b>=</b>
Anna	DecMar. 18	50	0	
Beachwood (Mounds)	Feb. 2-Feb. 28	10		
Cairo	Dec. 22-Apr. 6 Dec. 23-Apr. 18 Dec. 1-Feb. 28	75		•
Chicago	Dec. 25-Apr. 18	164 15	2	
Quincy Springfield	Jan. 1-Jan. 31	5		
springueid	Jan. I-Jan. Ol			<u> </u>
Total for State		819	2	
Total for State, same period, 1900.		121	4	]
ndiana:				1 .
Daviess County	Feb. 1-Mar. 31	10		
Dearborn County	Mar 1-Mar 21	4		
De Kalb County	Feb. 1-Mar. 31	23		
Delaware County (Muncie)	Feb. 1-Mar. 31 Mar. 1-Mar. 31 Feb. 1-Mar. 31	23		.]
Dubois County	Feb. 1-Mar. 31	2		
Elkhart County	do	2		.]
Fulton County	Mar. 1-Mar. 31	12		1
Fulton County Howard County	do	8		.[
Lake County	Feb. 1-Mar. 31	14		
Lawrence County	Mar. 1-Mar. 31	101		1
Marion County (Indianapolis)	Feb. 1-Mar. 3	30		
Monroe County	Mar. 1-Mar. 31 Feb. 1-Mar. 3 Feb. 1-Mar. 31	5		
Newton County	OD	3		
Noble County	Mar. 1-Mar. 31 Feb. 1-Mar. 31	2		i
Ohio County	reb. 1-Mar. 81	46	•••••	
Perry County	do	8		ĺ
Pike County	do	8	•••••	
Posey County	Mar. 1-Mar. 31 Feb. 1-Mar. 81	6		
Randolph County	Feb. 1-Mar. 81	1		
St. Joseph County	do	1	•••••	
Steuben County	Mar. 1-Mar. 31	1		
Switzerland County	do	220 6	•••••	
Tipton County	do	2	•••••	
Vigo County	Feb. 1-Mar. 31 Feb. 24-Mar. 80 Mar. 1-Mar. 31	8	• • • • • • • • • • • • • • • • • • • •	
Vanderburgh County	Mon 1-Mon 91	16	•••••	
Vermillion County	do	4	*****	
Wabash County Wayne County	do	ī		
Total for State		557		
·				
Total for State, same period, 1900.		124		
ndian Territory:				
Ardmore	Feb. 7 Feb. 19	16		
Ryon	Feb. 19			Several cases.
ı				
	t t	75		
Total for Territory, same	************************************			
period, 1900.				
period, 1900.	Mar. 24-Apr. 6	1		

Place.		Date.	Cases.	Deaths	. Remarks.
Iowa—Continued. Des Moines					
Des Moines	Dec.	1-Dec. 31.	8		•• ·
Ottumwa	Jan.	6-Feb. 23.	. 4		<u>:</u>
Total for State		•••••	25		
Total for State, same period,	ļ		19		
1900. Kansas :					=
Barber County	Mar.	1-Mar. 31.			
Barton CountyBourbon County	de	1-Mar. 31	. 10 . 55		··
Butler County		1-MIME. 31.			"
Clay County	Feb.	1-Mar. 31			
Chase County	Mar.	1-Mar. 31	.  3		
Chautauqua County	do	0,	. 21		
Crawford County	Dec.	1-Mar. 31 1-Mar. 31 1-Mar. 31	. 824	2	
Cherokee County Coffey County	Pah.	1-Mar. 31	. 674 . 94	1 . 1	1
Cowley County	do	)	. 3		•1 .
Douglas County (Lawrence)	Feb.	3-Mar. 3	. š		1
Dickinson County	dc	)	. 16		
Douglas County	Dec.	1-Mar. 3 1-Mar. 31	.  30		.]
Edwards County	Mar.	1-Mar. 31	. 1		-{
Ellis County	do	)	1	••••••	·
Franklin CountyGraham County	Feb.	1-Mar. 31	28		•]
Greenwood County	Jan.	1-Mar. 8.	29		1
Hamilton County	Feb.	1-Mar. 3	30		
Jewell County	Mar.	1-Mar. 31 1-Mar. 3 1-Mar. 3 1-Mar. 3 1-Mar. 31	50		
Johnson County	au		. 8		.
Kingman County				***************************************	•
Kiowa CountyLabette County	ao	1 Wan 0	4		•{
Leavenworth County	Jec.	1-Mar. 3 7-Mar. 31	186 26	1	
Linn County	Mar.	1-Mar. 31	3		1
Lincoln County	do		ğ		
Lyon County	do		56		.}
			2		
Marion County	Dec.	1-Mar. 3	24	***************************************	·I
Miami County Montgomery County	ob	·	16 66		i
Morton County	Mar.	1-Mar. 31	9		l
Nemaha County	do		l i		
Ness County	Feb.	1-Mar. 3	6		
Neosho County	do	1 35	30	1	ŀ
Norton County	Jan.	1-Mar. 3	174 82	1	l
Osage County	do		187	2	l
Philips County	d۸		318	2	
Pawnee County	Feb.	l-Mar. 3	25		
Pratt County	Mar.	1-Mar. 31	16	•••••	•
Rawlins County	Dec.	l-Mar. 3 1-Mar. 31 1-Mar. 3 1-Mar. 31 1-Mar. 3	10	1	
Reno County	Mar. Feb 1	I-Mar. 31	4 42	······································	
ROOKS County			22		
Rush County	Dec.	l-Mar. 3	ī		
Saline County	Mar.	l-Mar. 3 l-Mar. 31 -Mar. 3	54		
Smith County	Jan. 1	-Mar. 3	8	•••••	
Sedgwick County, (Wichita)	Dec. 1	-Apr. 6	189	1	
Seward County Shawnee County, (Topeka)	Mar.	l-Apr. 6 l-Mar. 31 l-Mar. 3 l-Mar. 3	12 229		•
Stafford County	Feb 1	-Mar 3	40	2	
Sucriman County	ao		18		
Smith County	do		10		
Stevens County	Mar.	l-Mar. 31 -Mar. 3 l-Mar. 31	1		
Sumner County	Dec. I	-Mar. 3	105	2	
Thomas County	шаг. :	I-MAP. 31	11	•••••	
Woodson County	Feb 1	-Mar. 3	11		
	Dec. 1		34		
Čity.) Wallace County	Jan. 1		10		
_	oou. l	-ман. О			
Total for State	••••••	•••••••	8, 785	20	
Total for State, same period, 1900.	•••••		795	17	

Place.	Date.	Cases.	Deaths.	Remarks.
Kentucky ·				
Lexington	Dec. 16-Apr. 6			
Louisville	Dec. 20-Mar. 23	. 11	11	
Total for State		. 42	1	
Total for State, same period,		. 104	1	
1900. Louisiana :				
New Orleans	Dec. 2-Apr. 6	. 161 . 35	42	
Shreveport				
Total for State	······	. 196	43	
Total for State, same period, 1900.		. 2,518	325	
Maine:				
Portland	Mar. 24-Mar. 30	. 1		
Total for State, same period,		. 2		
1900. Maryland:				
Baltimore	Dec. 16-Apr. 13	10		
Cumberland	Feb. 1-Mar. 31	16		
Total for State		26		
Total for State, same period,		1		
1900. Massachusetts:				
Boston	Mar. 24-Apr. 18	1	1	
Lawrence Lowell		4		1
Oxford	Oct. 22	2		
Somerville] Springfield	Mar. 3-Mar. 9	. 2		l
Springfield	Jan. 6-Mar. 28	. 2		
Total for State		. 12	1	
Total for State, same period,			2	
1900.  Michigan Bay County	Dec. 30-Mar. 30			Reported at 88 places,
Bay County	Mar. 17-Mar. 30	5		
Grand Rapids	Dec. 30-Mar. 9	4		ĺ
Wast Raw City	Feb 10-Apr 6	110	•••••	
Alger County	Feb. 17-Feb. 23			Present.
Charlevoix County	do			Do.
Clair County	do		•••••	
Isabella County	Feb. 17-Mar. 2	•••••		Do. Do.
Mason County				Do.
Newaygo County	do,			Do.
Newaygo County Schoolcraft County Wayne County	Feb. 24-Mar. 2		•••••	Do.
Total for State		49	3	Three deaths reported in State, places not named.
Total for State, same period,		22	1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
1900. Minnesota:		1		
Aitkin County	Jan. 1-Apr. 8	29		
Aitkin County	Jan. 15-Apr. 8			
Beltrami County		69 20		
Benton County	Ten 1-Apr. 8	10		•
nig sione Connty		83		
Blue Earth	Jan. 28-Apr. 8			
Big Stone County Blue Earth Brown County	Dec. 14-Apr. 8	32		
Brown County Carleton County	Dec. 14-Apr. 8	32 33		
Carleton County Carver County	Dec. 14-Apr. 8 do Jan. 1-Apr. 8	32 33 21		
Brown County	Dec. 14-Apr. 8 Jan. 1-Apr. 8 Dec. 14-Apr. 8	32 33 21 31		
Brown County	Jan. 1-Apr. 8 Jan. 1-Apr. 8 Jan. 15-Apr. 8 Jan. 15-Apr. 8 Jan. 15-Apr. 8	32 33 21 31 17 2		
Brown County Carleton County Carver County Case County Chippewa County Chicago County Clay County	Dec. 14-Apr. 8 Jan. 1-Apr. 8 Dec. 14-Apr. 8 Jan. 15-Apr. 8 Jan. —Apr. 8 Jan. 28-Apr. 8	32 33 21 31 17 2 11		
Brown County	Dec. 14-Apr. 8 Jan. 1-Apr. 8 Dec. 14-Apr. 8 Jan. 15-Apr. 8 JanApr. 8 Jan. 28-Apr. 8 Dec. 14-Apr. 8	32 33 21 31 17 2 11 8		
Brown County	Dec. 14-Apr. 8  Jan. 1-Apr. 8  Dec. 14-Apr. 8  Jan. 15-Apr. 8  JanApr. 8  Jan. 28-Apr. 8  Dec. 14-Apr. 8  Dec. 14-Apr. 8	32 33 21 31 17 2 11 8 80		
Brown County Carleton County Carver County Cass County Chippewa County Chicago County Clay County Cottonwood County Crow Wing County Dakota County	Dec. 14-Apr. 8do	32 33 21 31 17 2 11 8 30 48		
Brown County Carleton County Carver County Cass County Chippewa County Chicago County Clay County Cottonwood County Crow Wing County Dakota County	Dec. 14-Apr. 8do	32 33 21 31 17 2 11 8 80 48 53		•
Brown County	Dec. 14-Apr. 8do	32 33 21 17 2 11 8 8 80 48 53 79		

Place.	Date.	Cases.	Deaths	Remarks.
Innesota—Continued.			-	
Hennepin County	Dec. 14-Apr. 8.	. 66	3	!
Hennepin County (Minne-	do	. 90		
apolis).		1	1	···]
Houston County	Jan. 15-Apr. 8.	. 1		
Hubbard County	Dec. 14-Apr. 8.			iil
Isanti County	Jan. 28-Apr. 8	.] 13		ī <b>l</b>
Jackson County	. Jan. 15-Apr. 8	. 41		::.
Kanabec County	Jan Mar. 25	. i		I
Kandiyohi County	Dec. 14-Apr. 8	. 164		
Lake County	Jan. 1-Apr. 8	66		
Le Sueur County	Jan. 1-Apr. 8 Dec. 14-Apr. 8	149		
Lyon County		61		î l
Marshall County	Jan. 1-Apr. 8	. 2		
Martin County	Jan. 1-Apr. 8 Jan. 15-Apr. 8	24		
McLeod County	ldodo	1		
Meeker County	Dec. 14-Apr. 8	59		
Mille Lacs County	Feb. 13-Apr. 8	2		
Murray County		8		
Morrison County	Jan. 28-Apr. 8	30		
Nicollet County	Jan. 15-Apr. 8	4		l
Nobles County	Dec. 14-Apr. 8	38		
Olmstead County	do	7		.1
Otter Tail County	Jan. I-Adr. S	9		-1
Otter Tail County	Jan. 15-Apr. 8	30		.
Pipestone County	Dec. 14-Apr. 8	63		.]
Polk County	Jan. 15-Apr. 8 Dec. 14-Apr. 8	15		.1
Ramsey County (St. Paul)	Dec. 14-Apr. 8	52		.
Redwood County	Jan. 1-Apr. 8	25		.
Renville County	do	2		
Rice County	Jan. 5-Apr. 8 Jan. 28-Apr. 8	18		.
Scott County	Jan. 28-Apr. 8	8		.
Stearns County		38		.
Steele County	Jan. 1-Apr. 8	39		
Stevens County	Jan. 15-Apr. 8	1		
St. Louis County (Duluth)	Dec. 14-Apr. 8	350		
Swift County	Jan. 1-Apr. 8	4		.]
Toda County	Dec. 14-Apr. 8	4		.
Traverse County	Jan. 15-Apr. 8	7		.]
Wabasha County	ao	36		
Wadena County	Jan. 1-Apr. 8	2		1
Waseca County	do	10		·I
Washington County	Jan. 15-Apr. 8 Jan. 28-Apr. 8	50		.}
Watonwan County	Jan. 28-Apr. 8	29		4
Wilkin County	do	19		ĺ
Winona County	Dec. 14-Apr. 8	.88	•••••	ł
Winona County (Winona) Wright County	do	157	•••••	i
wright County	Jan. 1-Apr. 8	84	·····	· ·
Yellow Medicine County	Jan. 1-Mar. 11	1		ĺ
Other places	••••••	44	•••••	
M-4-1 6 94-4-	j.	0.740		
Total for State	•••••••	2, 746	3	
Matal for Otata	į <del>.</del>			
Total for State, same period,	•••••	387	5	
1900.	F			
seissippi :	Det op-t o	ا ۾	اہ	
Vicksburg	Геб. 3-Геb. 9∣	4	2	
Motel for State	=			
Total for State, same period,	••••••	303	9	
1900	=		<del></del>	
souri:	Tam 1 Tam 00	ایم	.	•
St. Joseph	Jan. 1-Jan. 31	34	1	
St. Louis	Dec. 17-Apr. 7	139	0	
Total for State	<b>!</b> -	100		
Total for State	••••••	173	1	
Total for State same new - 3	=	105		
Total for State, same period,	••••••	105	4	
ntana:	ļ=			
	Dog 20 Ton 20	010		
Duws	Dec. 20-Jan. 20	218	2	
Total for State come mont - 3	ļ=	100		
Total for State, same period, 1900.	••••••	100  .	•••••	
	<del>-</del>			
oraska:	Wan 1	ŀ	- 1	Dunama
Columbus 1	Mar. 1	·····	••••••	Present.
Decatur and vicinity	Apr. 1-Dec. 14	451	4	D.
Lincoln I Nebraska City	Mar. 1	•••••••••••••••••••••••••••••••••••••••	••••••	Do.
	an. 1-Mar. 23	15 .	•••••	

Place.	Date.	Cases.	Deaths.	Remarks.
Nebraska—Continued.				
South Omaha	Dec. 28-Apr. 6.	. 78	0	
Total for State		. 622	4	
Total for State, same period, 1900.		. 41	2	
Nevada: Virginia City	Jan. 9	. 1		
New Jersey:				
Hudson County	. Mar. 21-Mar. 31	. 12		
Hudson County  Jersey City  Newark	Feb. 10-Apr. 6	. 15		
Total for State	•	. 34	1	
Total for State, same period,		. 17		
1900. New Hampshire :		204		
Manchester New Mexico:	Dec. 17-Apr. 6	324		
Fort Stanton	Jan. 14-Feb. 28	. 4		
Total for Territory, same		. 4		
period, 1900. New York :				
Elmira, N. Y New York	Feb. 24-Mar. 9 Dec. 16-Apr. 13 Jan. 13-Jan. 26 Feb. 23-Mar. 1	538		
Utica	Jan. 13-Jan. 26	2		
Yonkers	Feb. 23-Mar. 1	1		
Total for State		543	96	
Total for State, same period, 1900.		21		
North Carolina:				
Alexander County		3 3		
Buncombe County	Dec. 1-Feb. 28	i		
Caswell County	Nov. 1-Feb. 28	114	2	
Cleveland County Cumberland County	To Feb. 28	8		
Currituck County	do	6		
Davidson County	To Feb. 28	8 7		
Durham County Forsyth County	do Dec. 1-Feb. 28	7	•••••	
Franklin County	do	1		
Gaston County	To Feb. 28			
Greene County Greenville County	Jan. 1-Feb. 28 Dec. 1-Feb. 28	177 21		
Halifax County	To Feb. 28	13		
Harnett County	Jan. 1-Feb. 28 Nov. 1-Feb. 28			A few cases.
Henderson County Lincoln County	Nov. 1-Feb. 28 Jan. 1-Feb. 28			A few deaths.
Mecklenburg County	Jan. 1-Mar. 31	37	1	
Nash County	Jan. 1-Feb. 28	53		
Orange County	To Feb. 28 Dec. 1-Feb. 28	4 3		
Pamlico County Pasquotonk County	Jan. 1-Feb. 28	12		
Person County	Jan. 1-Feb. 28 Nov. 1-Feb. 28	14		
	To Feb. 28	7		
Polk County Richmond County	do Nov. 1-Feb. 28	1		
Robeson County	To Feb. 28	35		
Rockingham County	Dec. 1-Feb. 28	23		
Transylvania County	Nov. 1-Feb. 28	5		
Vance County Wake County	Dec. 1-Feb. 28 Nov. 1-Feb. 28	1 14		
Wantanga County	Jan. 1-Feb. 28	10		
Wayne County	To Feb. 28	2		
Wilkes County Wilson County	Nov. 1-Feb. 28	.3		
Wilson County	Jan. 1-Feb. 28	18		
Yancey County		9		
Total for State		650	8	
		510	2	
1900. orth Dakota.				
Bismarck	Jan. 20	1		
DISMAICE				
Burleigh County Jamestown	Mar. 12	15		

# Smallpox in the United States—Continued.

Place.	Date.	Cases.	Deaths	. Remarks.
	-	<del> </del>	-	
orth Dakota—Continued.	T 15			
Mandan Morton County	Jan. 15 Jan 25_Mar 12	. 35		•••
Richmond County	Mar. 12	:  ~~~		
Walsh County	do	. 4		Ϊ
Total for State		. 60	1	Ī
hio : Ashtabula	Dec. 16-Mar. 30	. 39		=
Cincinnati	. Dec. 30-Apr. 5	. 23		::
Cleveland	Dec. 16-Apr. 6	689		
Dayton	Mar. 3–Mar. 9	. 1		••
Portsmouth Toledo	Fob 2 Mon 22	4 7		••
Youngstown				•••
				<u>-</u>
Total for State		766	9	녈
Total for State, same period.		345	5	7
1900. Total for State	Jan. 1-Dec. 81	2, 699	24	=
				=
klahoma: Reports from fifteen Counties.	Dec. 1-Dec. 21	401		
Cananadian County	Jan. 1	5		
Cleveland County	do	19		
Day CountyGarfield County	do	1		•
Greer County	do	50		1
Kingfisher County		2		]
Lincoln County	do	13		•
Logan County	do	10		•
Noble County Oklahoma County	do	12 43		•
Pawnee County	do	5		
Payne County	do	12		.
Pottamatomie County	do	25		
Washita County	do	50 40		1
Payne County	do	ī		,
Total for Territory	l l	690		•
Total for Territory, same	•••••	55		
period, 1900.				
egon : Portland	Jan. 4-Mar. 28	10		
Total for State, same period,		7		
1900.				
nnsylvania:	Ion 12 Mon O			
Erie Philadelphia	Jan. 13-Mar. 9	8 2	2	
Steelton	Feb. 17-Apr. 13	10	<del>-</del>	
Erie. Philadelphia Steelton Allegheny County Lebanon County Clearfield County Cumberland County	Dec. 1-Apr. 6	62	3	
Clearfield County	Apr. 13	1 1	••••••	
Cumberland County	do	2		
Dauphin County	do	14		
Erie County	do	1	••••••	
Fayette County	do	2 2	••••••	*
Lycoming County	do	18	••••••	
Lycoming County Washington County	do	7		
Total for State		130	5	
Total for State, same period,		51	4	
1900. ode Island:	=			
Central Falls	Dec. 28-Mar. 15	5	1	
River Point	mar. 10-Apr. 8	5		
Total for State		10	• 1	
th Carolina ·	<u> </u>			
Blacksburg, Charleston	Apr. 2	8		A few cases.
Greenville	Dec. 23-Mar. 16	7	1	10 17
Total for State	i-	10	1	
	1=			
Total for State, same period, 1900.		18 .		
nnessee: Chattanooga		51	2	

# Smallpox in the United States—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
		·	-	
Fennessee—Continued.				
Knoxville	Mar. 1-Mar. 31	. 14		·
Madison County Memphis	Feb. 1-Feb. 28 Dec. 16-Apr. 13	. 189		
Nashville	Dec. 23-Apr. 13	134		
Total for State	_	411	-	
				=
Total for State, same period, 1900.		576	5	<b>:</b>
lexas:				
Clay CountyGalveston		116		
Houston		122 184	4	1
San Antonio	Dec. 1-Mar. 31			.]
			-	-
Total for State		466	7	}
Total for State, same period,		399	11	1
1900.	***************************************			
Jtah:				l .
Ogden	Dec. 1-Mar. 31			
Salt Lake City	Dec. 16-Apr. 6	546	3	
Total for State	<u></u>	707	3	1
_ ~~~ ~~ ~~ <del>~~~</del>				
Total for State, same period,		64	1	l
1900.				
rirginia:	Fob 4			Dunnama
Albemarle County Bedford County	Feb. 4do			Present. Do.
Bland County	do			Do.
Botetourt County	do			Do.
Buckingham County	do			Do.
Campbell County	do	•••••		Do.
Carroll County Chesterfield County	do	••••••		Do. Do.
Craig County	do			Do.
Floyd County	do			Do.
Fluvanna County	do,,			Do.
Chesterfield County Craig County Floyd County Fluvanna County Goochland County Greeneville County Halifax County King George County Lee County Louisa County Middlesex County Middlesex County Orange County Orange County Page County	do	•••••		Do.
Greeneville County	do	••••••		Do.
King George County	do	•••••		Do. Do.
Lee County	do			Do.
Louisa County	do	•••••		Do.
Middlesex County	do			Do.
Orange County	do	••••••		Do. Do.
Page County	do	••••••		Do
Rosnoke County	Jan. 1-Mar. 31	119	4	20.
Rockbridge County	do			Do.
Rockingham County	do			Do.
Alexandria Pittsylvania County	Dec. 29-Feb. 9 Dec. 31	5	•••••	
Richmond	Jan. 7	200		
		328	4	
Total for State, same period, 1900.		219	21	
ashington:	ľ			
Seattle	Dec. 1-Mar. 81	30		
Tacoma	Dec. 9-Feb. 25	8		
Total for State		38		
	:			
Total for State, same period, 1900.	······	360	8	
est Virginia:	ľ			
Huntington	Feb. 17-Mar. 16	25		
Wheeling	Dec. 16-Apr. 6	13		
Total for State	-	88		•
	ļ <del>-</del>	00		-
1	17	95	1	
Total for State, same period, .	••••••			
Total for State, same period, . 1900.				
Total for State, same period, . 1900. isconsin :	-	99	1	-
Total for State, same period, 1900. isconsin: All over the State	Dec. 12-Dec. 31 Jan. 1-Feb. 28	15 .	1	•
Total for State, same period, . 1900. 1900. isconsin: All over the State Ashland County	Dec. 12-Dec. 31 Jan. 1-Feb. 28	15 . 5 .	1	
Total for State, same period, . 1900. isconsin : All over the State	Dec. 12-Dec. 31 Jan. 1-Feb. 28	15 .	1	

# Smallpox in the United States-Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Visconsin—Continued.				
Chippewa County		16	1	Ī
Clark County				
Columbia County		i		
Crawford County		i		
Dana County	Ion 1-Feb. 26			
Dane County Douglas County	Jan. 1-Feb. 20	101		
Done Compter		101		
Dunn County	ao	12		
Eau Claire County		36		
Forest County	op	7		
Grant County		7		
Iowa County	. Feb. 1-Feb. 28	28		
Iron County	. Jan. 1-Feb. 28	2		
Jefferson County	do	4		
La Crosse County	.  <u>.</u> do	23		
Lafayette County	. Feb. 1-Feb. 28	4	l	
Lincoln County	. do	1		
Langlade County		71		
Marathon County	do	iî		
Marinette County	Feb. 1-Feb. 28	5		
Manitowoc County		ĭ		
Marquette County	Jan. 1-Feb. 28	4		
Milwaukee County, (Mil-	Jan. 20-Mar. 30	10		
waukee).	Jan. 20-Mar. 30	10		
	Mak 1 Mak 00	2	1 -1	
Monroe County	reb. 1-reb. 28		1 1	
Oneida County	do	8		
Outagamie County	ao	8		
Portage County	Jan. 1-Feb. 28	9		
Price County	do	3	1	
Racine County	do	3	l	
Rock County	do	7	l	
St. Croix County	do	3	l	
Shawano County	do	1		
Sheboygan County	do	ī		
Taylor County	do	4		
Trempealeau County	do	8		
Vilas County	Feb 1-Feb 28	14		
Vilas County Vernon County	Ion 1-Feb 28	3		
Waupaca County	Jan. 1-1-eu. 20	8		
Winneham County	Esh 1 Esh 00	î		
Winnebago County	Ten. 1-Feb. 28			
Wood County	Jan. 1-Feb. 28	1		
m	i i			
Total for State		564	4	
M-4-14 04-4 1 1				
Total for State, same period.		16	1	
1900.	-			
yoming:	!	- 1		
Evanson	Dec. 31	2		
Green River	do	1		
Rock Springs	do	ī		
	` .			
Total for State		4		
	_			
Total for State, same period,	ľ	5		
1900.		a	•••••	
	t=	16 50:	205	
Grand total		16,734	225	
Cound total same weeks	<b>]=</b>	0.015		
Grand total, same period, 1900.	••••••	8,013	439	

# Plague in the United States as reported to the Surgeon-General, United States Marine-Hospital Service, from January 1, 1901, to April 19, 1901.

## PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
California:				
San Francisco.	Jan. 6	1	1 1	
Do	Jan. 15	2	2	
Do	Feb. 5	1	1	
Do	Feb. 6	1	1 1	
Do	Feb. 7	1	1	
Do	Feb. 10	1	1	
Do	Feb. 11	1	1 1	
Do	Feb. 12	1	1	
	Mar. 2	1	1	
	Apr. 1	1	1	
Do	Apr. 4	1	1	

# Weekly mortality table, cities of the United States.

		ø.	B					Dea	ths	fron	a—				_
Cities.	Week ended.	Population, U. census of 1900	Total deathsfrom	Tuberculosis.	Yellow fever.	Smallbox.	Varioloid.	Cholera.	Typhus fever.	Enterio ferrer	Goodlet Cores	Scarled level.	Dipnuneria.	1 8	cough.
Ashtabula, Ohio	Apr. 13	12,94		4							- -				
Baltimore, Md Baton Rouge, La		508, 95° 11, 26°		1 31										-	••••
Bay City, Mich	Apr. 6	27, 62	8	9 1	l					:	i				
Binghamton, N. Y Boston, Mass	Apr. 13	39, 64° 560, 89°		9 4 23		i	·····				1 1	<b>a</b> .	7	3	¨i
Burlington, Vt	Apr. 6	18,64	0   1	7					.						••••
Carbondale, Pa	. Apr. 7	13,530	6   3	3					.					:: :	••••
Chelsea, Mass Chicago, Ill		34,072 1,698,573	2   13								;- ;		9		٠
Cincinnati, Ohio	. Apr. 5	325, 90	2	12					.	2	2   1	l		<u>.  </u>	
Cleveland, Ohio Do		381,768 381,768				. 2		• • • • •					i		••••
Clinton, Mass	do	. 13,667	7   6	5   1						. 1	١				
Dayton, Ohio Detroit, Mich	do	. 85, 333 285, 704	23	3   5						. i			l		••••
Dunkirk, N. Y	Apr. 6	11,616	3 4	1 1		.	.!								
Elmira, N. Y Evansville, Ind	do	. 35, 672 59, 007				1								::  <u></u> .	
Do Everett, Mass	. Apr. 13	59,007	7   14					l	.i						1
Fitchburg, Mass	do	24, 336 31, 531	.   8	3			: :::::			<u> </u>	:: ::::		l		••••
Freeport, Ill	do Apr. 13	. 13, 258 26, 121				· ·····		·····		1	ļ	•-			•••
Grand Rapids, Mich	Apr. 6	87, 565	20												•••
Green Bay, Wis	Apr. 13 Apr. 7	87, 565 18, 684			•	·				.				·· ···	•••
Green Bay, Wis Greenville, S. C	Apr. 6	11,860	4	2										: :::	•••
Haverhill, Mass Holyoke, Mass	Apr. 13	37, 175 45, 712	12 16		ļ	·	•••••		·····	·	·	·-			•••
Jacksonville, Fla	Apr. 6	28, 429	10	3											•••
Johnstown, Pa Lawrence, Mass		35, 936 62, 559	14 15												
Lexington, Ky	do	26, 369	8												
Los Angeles, Cal Do	Apr. 6	102, 479 102, 479	43 36	12				•••••	•••••		i	· ···;	•••••		•••
Lowell, Mass	Apr. 12	94, 969	40	3						1	ļ	.			
Lynchburg, Va McKeesport, Pa	Apr. 13 Apr. 6	18, 891 34, 227	12	3					•••••	1	1	1			
Maiden. Mass	Anr 12	33, 664	10						•••••		Ī				••
Manchester, N. H Marlboro, Mass	Apr. 6 Apr. 13	56, 987 13, 609	30	5 2							<u>                                     </u>	1		1	•••
Massillon, Ohio Medford, Mass	Apr. 6 Apr. 13	11, 944 18, 244	3 6												••
Memphis, Tenn	Apr. 6	102, 320	38	6		1				1		11		1	••
Do Michigan City, Ind	Anr Ri	102, 320 14, 850	37							•••••	ļ	ļ	·	· ····	••
Milwaukee, Wis	Apr. 6	285, 315	73	8						1		2		.	ï
Minneapolis, Minn Mobile, Ala	do	202, 718 38, 469	40 23	5	•••••	•••••			•••••	4	ļ	4		· ····	••
Nashua, N. H	Apr. 13	23, 898	8	1								1	-1		••
Nashville, Tenn Nebraska City, Nebr	do Mar. 9	80, 865 7, 200	25 5	5						1					••
Do	Mar. 16	7, 200 7, 200	1				-						.		
Do	Mar. 30	7, 200	5	l							1				••
Newark, N. J New Bedford, Mass	Apr. 6	246, 070 62, 442	82 18	14 2	•••••			-			1	. 1	ļ		1
Newburyport, Mass New Orleans, La	Apr. 6	14, 478	3	}							1				•
New Orleans, La Newport, R. I	do	287, 104 22, 034	115	21		2	····· ·	-		1	2		·		1
Do	Apr. 13	22,034	8												:
Newton, Mass New York, N. Y	a.do	33, 587 3, 437, 202	6 1,386	1 148		8				11	44	48	6	ļ;	3
Do	Apr. 13	8, 437, 202	1,413	173		11			٠	14	50	47	10	10	
Norristown, Pa North Adams, Mass	do	22, 265 24, 200	9 6								<u>.</u>		••••		•
Dakland, Cal	Mar. 23	66, 960	24	6										ļ	
Do Omaha, Nebr	Apr. 6	66, 960 102, 555	19 24									1			
Oneonta, N. Y	Apr. 13	7, 147	8					.:	·····j.			•••••			
Palmer, Mass Philadelphia, Pa	do	7, 801 1, 293, 697	5 469	44					·		6	6		٠٠٠٠٠	3
Pittsburg, Pa	Apr. 6	321,616	113							4			<b></b>		

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

		ъ	8			Deaths from—								
Cities. Aspended Week	Week ended.	Population, U.: census of 1900	Total deaths from	Tuberculosis.	Yellow fever.	Smallpox.	Varioloid.	Cholers.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping
Pittston, Pa	Apr 13	12, 556	3	•										
Plainfield, N. J	Apr. 10	15, 369	3	•••••	•••••									
Portland, Me		50, 145	24	8	•••••	1								
Providence, R. I		175, 597	62	2							1	1		
Quincy, Mass		23, 899	ī	ļ <u>-</u>								1 -		
Reading, Pa		78, 961	27	5						1				1
Rutland, Vt		11, 499	6	1										
Sacramento, Cal		29, 282	9	1										
Salem, Mass		35, 956	15											
Salt Lake City, Utah	do	53, 531	14							ļ		1		
San Diego, Cal		17,700	1		ļ					ļ				
San Francisco, Cal		342, 782	151	30	ļ				ļ. <b></b> .	2		2	2	
Shreveport, La	do	16,013	3	ļ					<b></b> .				. <b></b> .	
Do		16,013											l	
Somerville, Mass		61, 643	21	4										
South Bend, Ind		35, 999	11	2							1			
Do		35, 999	13	3								1		1
Springfield, Mass	Mar. 30	62,059	27	3										
Do		62,059	14	2							ļ			
Steelton, Pa	do	12,086	6											
Do		12,086	4											
Terre Haute, Ind		36, 673	9	4						1				ļ
Do	Apr. 1	36, 673	10	1						1				
Toledo, Ohio		131, 822	39	7						1		1		
Do	Apr. 13	131, 822	32	4								1		
Waltham, Mass	Apr. 6	23, 481	4											
Warren, Ohio	Apr. 13	8,529	2											
Washington, D. C	Apr. 6	218, 718	110	16						1		1		1
West Bay City, Mich	do	13, 119	4							•••••				
Weymouth, Mass		11, 324	2											
Wheeling, W. Va	do	38, 878	8	2						•••••				
Wichita, Kans		24,671	5											•••••
Williamsport, Pa		28,757	7	2										·····
Winona, Minn		19,714	11							•••••		••••		•••••
Yonkers, N. Y	Apr. 12	47, 931	21	3					- 1			1	- 1	

# Table of temperature and rainfall, week ended April 15, 1901. [Received from Department of Agriculture, Weather Bureau.]

Locality.	Temp	erature ii Fahrenh	n degrees eit.	Rainfa	Rainfall in inches and hun dredths.				
	Normal.	a Excess	aDefic'ncy	Normal	Excess.	Deficiency			
Atlantic Coast:									
Eastport. Me	37	3	ļ	.72		. 32			
Portland, Me Northfield, Vt	42			.70		. 40			
Northfield, Vt	37	2		.49					
Roston Mass	44	Ō		.77		. 47			
New Haven, Conn	45	1		.84		. 1 84			
Albany, N. Y	45	1		.56					
New York, N. Y	47	1		.77					
New York, N. Y	49		. 1	.77					
Philadelphia, Pa	49		. 1	.70		. 60			
New Brunswick, N. J	48	0		.84		54			
Atlantic City, N. J	45	1		.79	.01				
Baltimore, Md	52		. 4	.82	.18				
Washington, D. C Lynchburg, Va Cape Henry, Va Norfolk, Va	52	•••••	. 3	.78	1.08				
Lynchburg, Va	55		. 3	.77	.73				
Cape Henry, Va	54			1.05					
Norfolk, Va	55		. 3	.98	.22				
Charlotte, N. C Raleigh, N. C	1 5×			.81	.29				
Kaleigh, N. U	58		' 6	.69	.41				
Kittyhawk, N.C	55			1.05					
Hatteras, N. C	55	·····	. 3	1.12		.12			
wilmington, N.C	60		. 4	. 63	.17				
Columbia, S. C	63		. 5	.60		.20			
Charleston, S. C	63		. 3	. 82	.62				
Augusta, Ga	63	•••••	7 2	.78	.12				
Augusta, Ga	64			.84		.54			
	68		4	. 65		.54			
Jupiter, FlaKey West, Fla	72		2	.49		.49			
Key West, Fla	76		4	.28		.28			
Gulf States:		ĺ				1			
Auanta, Ga	60	••••	4	.86	1.94				
Atlanta, Ga	71		3	.44		.04			
Pensacola, Fla	66	·	2	.84	2.66				
Mobile, Ala	66	•••••	2 2 7 4	1.12	1.68	•••••			
Montgomery, Ala	64	•••••	2	1.12		. 62			
Meridian, Miss	65	• • • • • • • • • • • • • • • • • • • •	7	1.06	.24	••••••			
Montgomery, Ala Meridian, Miss Vicksburg, Miss	64	•••••	4	1.40	·····	.80			
New Orleans, La	68	•••••	4	1.19	.71				
Shreveport, La	66	•••••	8	1.28		.28			
Fort Smith, Ark	62	•••••	6	1.18	.84	•••••			
Fort Smith, ArkLittle Rock, ArkPalestine, Tex	62	••••••	4 7 3 2 1	1.10	1.40	••••••			
Calmarkan Man	67	••••••	7	1.05	.15	••••••			
Galveston, Tex	69	•••••	8	.66	2.14	••••••••			
San Antonio, Tex	70 71	•••••	2	. 67		. 17			
Corpus Christi, Tex	71	••••••	1	. 35	.05	•••••			
Unio valley and Tennessee:				1 00		1 00			
Memphis, Tenn	61	••••••	1	1.30		1.00			
Chatter and Tana	58	•••••	4	1.12	.18	••••••			
Chattanooga, Tenn	60	•••••	6	1.06	.14				
Knoxviile, Tenn	57	•••••	5 7	1.19	••••••	. 19			
Lexington, Ky	55	•••••	7 1	. 84	•••••	.54			
Louisville, Ky	55 52		5	1.09	•••••	. 69			
Cincinneti Ohio	53	•••••	4	.84	•••••	.74			
Columbus Obio	50		3 4	. 75		.35			
Donkonshung W W.	53	•••••	5	.70 .77	•••••	.50 .27			
Dittahuma Da	50	••••••	4		.27	.21			
ake Region:	90	•••••••	4	.63	.21	••••••			
Osmoro N V	41		1		i	. 24			
Poshester N V	42	2	-	.44 .56		.24			
Oswego, N. Y		5	••••••••	.56		. 46			
Erie Pe	41 43	9	8	.56	•••••	.36			
Erie, PaCleveland, Ohio	45	•••••••		.00	••••••	, .39			
Sandueky Ohio	45		8	.56		. 46			
Toledo Ohio	46	•••••••••••••••••••••••••••••••••••••••	2	.49	••••••	. 49 . 49			
Sandusky, Ohio	45	1	2	.49	•••••••••••••••••••••••••••••••••••••••	.49			
Lansing, Mich	45 44	2	•••••••••••••••••••••••••••••••••••••••	.56		.56			
Port Huron, Mich	41	z	1	.42		.42			
Alpena, Mich	35  -	6	*	.43		. 42 . 43			
Soult Ste Marie Mich	36 36 36 35	6		.35	•••••	.35			
Sault Ste. Marie, Mich	26	6		.48		.48			
Marquette, Mich Escanaba, Mich	26	•		.49	***************************************	. 20			
	35  . 41	3		.49	•••••••	. 49			
Green Bay, Wis	43	1		.56		.56			
Wilwankee Wie	41	5		.64	•••••	.64			
Grand Haven, Mich	45 .	υ  .	3	.70	••••••	.70			
Duluth Minn	37 ·	5	3	.56	••••••	.56			
-uiuu, miiii	3/	<b>9</b> 1.		.00	•••••	.00			

a The figures in this column represent the average daily departure.

Table of temperature and rainfall, week ended April 15, 1901-Cont'd.

Locality.	Temp	erature ir Fahrenhe	degrees	Rainfall in inches and hundredths.				
Locality.	Normal.	aExcess.	aDefic'ncy.	Normal.	Excess.	Deficiency		
Upper Mississippi Valley:					ļ			
St. Paul, Minn	48	7		.55		55		
La Crosse, Wis	46	4		.49				
Dubuque. Iowa	47	1		.63		. 68		
Davenport, Iowa	48	0	••••••	.63	ļ			
Des Moines, Iowa	49		. 1	.60				
Keokuk, Iowa	50 52	0		.73				
Springfield, Ill Cairo, Ill	52 58		2 2	.84 .91				
St. Louis, Mo	55		í	.84				
Missouri Valley:	. س	***************************************	1 -	.01		.01		
Columbia, Mo	56	l	4	1.03	1	.03		
Springfield, Mo	55		ŝ	.85		.15		
Kansas City, Mo	53			.66	.74			
Topeka, Kans	56		6	.49	71			
Wichita, Kans	56		6	.49	2.41			
Concordia Kans	. 55		7	.42	2.38			
Lincoln, Nebr Omaha, Nebr	50		2	. 56	.04			
Omaha, Nebr	49		1	.70		.50		
Sioux City, Iowa	46	2		.75		.45		
Yankton, S. Dak	45	8		.70		.30		
Valentine, Nebr	46		4	. 66	.54			
Huron, S. Dak	44	2		.70		.60		
Pierre, S. Dak	47	·····	1	. 46	.54			
Moorhead, Minn	39	7		.54		.44		
Bismarck, N. Dak	40	4		.50		.40		
Williston, N. Dak	41	3		.30		.20		
Rocky Mountain Region:	43		1	01				
Havre, Mont.	43 43	1	1	.21 .28		.01		
Helens, Mont	46	0	- 1	.23 .21	.12 .19			
Panid City, Mont	45	U	5	.50	1.10			
Rapid City, S. Dak Spokane, Wash	47	1		.31	1.10	.31		
Walla Walla Wash	วี <b>เ</b>	i	***************************************	.35	•••••	.35		
Walla Walla, Wash Baker City, Oreg	42	2	***************************************	.28		.28		
Winnemucca, Nev	46		2	.21		iñ.		
Pocatello, Idaho	46		2	.35		.35		
Boise, Idaho	48	0		. 25		.25		
Salt Lake City, Utah	48	Ō		. 56		.56		
Lander, Wyo	41		5	. 51	.69			
Cheyenne, Wyo	39		7	.28	2.02	******************		
North Platte, Nebr	46		2	.51	1.39			
Denver, Colo	46		10	.43	1.27			
Pueblo, Colo	50		8	. 31	1.49			
Dodge City, Kans Oklahoma, Okla	52			. 35		• • • • • • • • • • • • • • • • • • • •		
UKIANOMA, UKIA	61		7	.53	.87	••••••		
Amarillo, Tex	54	•••••	6	.17	1.03			
Abilene, Tex	66		6	.61		.41		
Santa Fe, N. MexEl Paso, Tex	45 63	` 1		.14	.26	••••••		
Phœnix, Ariz	66	************	5	.07	.00			
Yuma, Ariz	69	•••••	3	:00	.00	.07		
acific Coast:	05	•	•	.00	.00	***************************************		
Seattle, Wash	49		1	.66		.66		
Tacoma, Wash	48	0	- 1	.84		.84		
Portland, Oreg	50	·ŏ		.81		.81		
Roseburg, Oreg	49	ĭ		.63		.68		
Eureka, Cal	50		2	.98		.98		
Redbluff, Cal	57	7		.53		.58		
Carson City, Nev	47	1		.21		.01		
Sacramento, Cal	57	3		.56		.56		
San Francisco, Cal	54	0		.50		. 50		
Fresno, Cal	60	2		. 34		.34		
San Luis Obispo, Cal	56	0		.50		.50		
Los Angeles, Cal San Diego, Cal	59		$\frac{1}{2}$	.33	•••••••	. 33		
	58 .			01		. 21		

a The figures in this column represent the average daily departure.

### FOREIGN AND INSULAR.

#### AFRICA.

### Plague in Cape Town.

CAPE TOWN, March 12, 1901.

SIR: I regret having to report the outbreak of plague in this city, as contained in my telegram of 8th ultimo, which I now confirm, the number of cases reported officially up to March 9 being 100, with 27 deaths, and from later reports appears to be spreading, fresh cases occurring daily.

The government is isolating all cases, as well as suspects and contacts, at a quarantine station about 5 miles outside the city, and are

doing all it possibly can to stamp out the disease.

On the 26th instant, at the request and expense of several shipmasters who were leaving and about to leave for the United States, I sent you the telegram, as per inclosure No. 2, and have to thank you for your reply thereto, which I duly communicated to them.

I inclose, for the Department's information, copies of correspondence received from the colonial secretary's department, relative to the outbreak; also, copies of government notice with reference to the outbreak in the district of King Williams Town (see dispatch No. 304, dated November 28, 1900), where, I am pleased to report, the disease has been stamped out.

Respectfully,

C. H. KNIGHT.

Vice and Deputy Consul-General.

Hon. Assistant Secretary of State.

#### BRAZIL.

### Vital statistics of Bahia for November, 1900.

BAHIA, BRAZIL, March 1, 1901.

SIR: I beg leave to inclose herewith a compilation from the official sanitary report and statistics for the month of November, 1900.

Respectfully,

H. W. FURNISS, United States Consul.

# Hon. SECRETARY OF THE TREASURY.

#### [Inclosure.]

Cases of infectious diseases—Cont'd.	
Lepers in hospital end of last month	16
Male	12
Female	4
Left hospital during month	0
Entered during month	0
Died during month	0
Births, alive—	
Male	33
Female	32
	Male

#### Vital statistics of Bahia for November, 1900-Continued.

Births, alive—Continued.		Causes of deaths—Continued.	
Legitimate		Yellow fever	0
Illegitimate	34	Asthma	3
Births, stillborn	27	Bright's disease	4
Marriages	40	Bronchitis	13
Deaths—		Carcinoma	5
Male	160	Cerebral hemorrhage and congestion	14
Female	153	Croup	1
Nationality—		Diabetes	1
African	14	Diarrhea and dysentery	32
Brazilian	295	Diseases of circulatory system	26
French	1	Elephantiasis	0
Portuguese	2	Influenza	1
Paraguayan	1	Malarial fevers	18
Causes of death—		Meningitis	4
Beriberi	6	Nephritis	6
Diphtheria	2	Pneumonia	8
Enteric fever	5	Syphilis	2
Hydrophobia	0	Tetanus	1
Leprosy	1	Tetanus neonatorum	9
Scorbutus	0	Tuberculosis, pulmonary	49
Measles	4	Tuberculosis, other	3
Smallpox	0	Other causes	97
Typhus fever	0		

#### CHINA.

Reports from Hongkong—Cholera on the steamship Cheung Chew from Singapore.

Hongkong, China, March 5, 1901.

SIR: I have the honor to transmit herewith the report of inspection work at this station for the week ended March 2, 1901:

The number of steerage passengers has greatly fallen off during the past two weeks because of the Chinese holiday season.

The work at the disinfecting stations during the week consisted in

bathing 293 individuals and disinfecting 280 pieces of baggage.

Steamers of the San Francisco lines occasionally call at Macao to take on cargo for the United States. As there is no consul or medical officer at that port, it was thought necessary to accompany one of these steamers for the purpose of observing the character of cargo and the communication with the city. Dr. Hough's arrival made it possible for me to accompany the steamship *Hongkong Maru* which left this port at daylight March 4. After a two-hour run the steamer came to an anchorage 8 miles off shore, where a junk, containing a cargo of opium, was awaiting the steamer. Opium is the only kind of cargo taken from Macao and is loaded at that port because of certain restrictions in this colony.

The cargo is small, is handled by the ship's crew, and, in my opinion, there is no danger of introducing contagion aboard the steamer in this way. No passengers are allowed to board the steamer at this port, two passengers aboard having told me that they were refused that privilege at the company's office in Hongkong.

Macao is well located and quite clean for a city with so large a Chinese population. The streets are narrow, but well paved and clean. The water supply is largely derived from town wells and would appear to be a source of typhoid and gastro-intestinal diseases.

The sanitary reports of Hongkong for the past week show 7 cases of plague and 6 deaths, 9 cases of smallpox and 7 deaths, and 3 cases of

April 19,1901

cholera and 6 deaths. The cholera cases occurred in the harbor aboard the steamship *Cheung Chew*, which recently arrived from Singapore in a very unhygienic condition. The cases reported last week were on the same steamer. There has been no epidemic of influenza here during the winter, and but few, if any, cases.

845

Respectfully,

JOHN W. KERR, Assistant Surgeon, U. S. M. H. S.

The Surgeon-General, U. S. Marine-Hospital Service.

Plague, smallpox, and malarial fever—Mortality statistics for January, 1901.

HONGKONG, CHINA, March 11, 1901.

SIR: I have the honor to transmit herewith the report of inspection work at this station for the week ended March 9, 1901:

Eight steamers were inspected during the week, 586 baths were given, and 653 pieces of baggage were disinfected at the disinfection stations.

As stated in last week's report, a visit was made to Macao on the steamship *Hongkong Maru* to observe the character of cargo taken on at that port, and the amount of communication with shore. Inquiry regarding the health of the port and the accuracy of statistics was made. Death statistics are no doubt fairly accurate, but in the case of plague the number of cases reported no doubt falls very far short of the actual number occurring. This results from the fact that sick Chinese go across the bay to the Chinese town of Wanchai where there are hospital facilities, and that they may die in native territory.

Nothing like statistics are kept in any part of China, and one can get very little information of the true conditions prevailing. I was informed, however, that smallpox is epidemic in Canton, and large numbers of cases are probably occurring. No information could be obtained

regarding the plague situation in that city.

The number of cases of plague is gradually increasing at this port, so much so that two districts were declared infected by the local government, that house-to-house inspection and other sanitary measures might be enforced. Thus far practically all the cases have been reported after death, and I was informed that such would be the case until house to-house inspections were made.

The number of cases of smallpox has increased, and, judging from

the reports, the mortality is high.

Malarial fever always prevails, but is more severe during the autumn. The etiology and prophylaxis of this disease occupied two sessions of the Hongkong branch of the British medical society during the winter. Specimens of the parasites were shown; also the varieties of mosquitoes prevalent in the colony, together with their larvæ. Two varieties of anopheles are abundant and two other varieties of the same species are probably new, a preliminary report having been made to that effect. Dr. Stedman outlined four means of prophylaxis adaptable in this island, viz, the destruction of breeding places which has been carried on during the past year and consisting in repairing drains and filling holes, the use of kerosene, the use of nets to prevent the bites of mosquitoes, and the use of quinine. The latter method was used among the local police stationed in the new territory. Their stations were known to be in malarial districts, yet these men enjoyed marked immunity. The quinine was given in the manner recommended by Koch.

The sanitary reports for the week ended March 9, 1901, show 14 cases of plague and 15 deaths, and 2 cases of smallpox and 1 death.

I also transmit under same cover an abstract of the mortality statistics of the colony during the month of January, 1901.

Respectfully,

JOHN W. KERR, Assistant Surgeon, U. S. M. H. S.

The SURGEON-GENERAL,

U. S. Marine-Hospital Service.

[Inclosure.]

Abstract of mortality statistics at Hongkong during January, 1901.

	Population.				F	opulatio	n.
	British and for- eign.	Chinese land.	Chinese harbor.		British and for- eign.	Chinese lap J.	Chinese harbor.
Specific febrile dis-				Nervous diseases—			
_eases—			_	Continued.		i	l
Typhoid fever	1	0	Ō	Infantile convul-		1	i
Diarrhea	0	29	8	sions	0	20	1 0
Plague (bubonic)	0	6	0	Trismus	0	46	0
Malarial—				Insanity	1	0	1
Fever, intermittent	0	- 4	0	Eclampsia	1	0	1 0
Fever, remittent	0	19	9	Circulat'y system—			ł
Fever, undefined	3	2	0	Heart disease	1	6	1
Beriberi	0 1	21	5	Pericarditis	1	0	i o
Septic—	1			Respirat'y system—			i
Septicæma	0	1	0	Bronchitis	1	20	5
Puerperal fever	0	0	1	Pneumonia	3	19	5 2 7 0
Venereal, syphilis	1	7	0	Phthisis	4	48	7
Effects of injuries	0	9	0 1	Empyemia	Ō	2	Ò
Developmental dis-	-	- 1	- 1	Laryngeal obstruc-		_	
eases—	i	ı		tion	1	0	0
Debility and old age	0	17	5	Digestive system-	-	•	
Marasmus and atro-	٠,١		- 1	Digestive system— Tonsillitis	1	0	0
phy	0	14 !	0	Enteritis	î!	ň	ŏ
Inanition	ŏ	- i l	ŏ	Strangulated her-	- 1	٠,	·
Miscellaneous-	- 1	- 1	•	nia	0	2	0
Cancer of uterus	0	1 1	0	Urinary system—	٠,	-	·
Cancer of breast	ŏ	ī l	ŏ	Nephritis (acute)	1	0	0
Cancer of lower iaw.	ŏ	٥l	ĭ	Bright's disease	2	. 2	ž
Cancer of stomach	ŏ	ĭl	õ	Miscellaneous-	- 1		-
Sarcoma of neck	ŏ	î l	ŏ	Childbirth	0	2	1
General tuberculosis	ĭ	õl	ŏ	Ulcer of leg	ŏ	ĩ	ō
Anæmia	ī	ŏl	ŏ	Hip joint disease	ĭ	ō	ŏ
Nervous diseases—	- 1	٠,	١, ٠	Dropsy	ōl	ĭ	ň
Meningitis	0	7	0	Undiagnosed	ĭ	1	ı A
Apoplexy	ŏ	2	ŏ	C110108110801			
Paralysis	ŏ	2 2		Total	27	319	50
Tetanus	ŏ	<b>1</b> 1	- o			919	30

British and foreign population, 9, 100; death rate, 23.1 per 1,000. Chinese land population, 212, 860; death rate, 16.2 per 1,000. Chinese harbor population, 35,040; death rate, 16.1 per 1,000. Total population of colony, 257,000; death rate, 16.4 per 1,000, exclusive of Army and Navy.

#### COLOMBIA.

No yellow fever reported at Barranquilla since December, 1900.

WASHINGTON, D. C., April 11, 1901.

SIR: Referring to your letter dated March 5 last, and to the Department's reply thereto of the 12th of that month, relative to the case of yellow fever at Cienfuegos, Cuba, the patient being a sailor from the steamship Fri, which had arrived at that port from Barranquilla, and to the desire of the Surgeon General of the Marine-Hospital Service for a report in the premises from the consul of the United States at Barranquilla, I have now the honor to inclose, for your information on the subject, copy of dispatch, No. 65, dated the 25th ultimo, from the vice-consul reporting on the subject.

Respectfully, John Hay, Secretary of State.

Hon. SECRETARY OF THE TREASURY.

#### [Inclosure.]

BARRANQUILLA, March 25, 1901.

SIR: Reterring to your dispatch, No. 57, this day received, I have to say that the last case of yellow fever in this city was announced in sanitary report for the week ended December 31, 1900, from this office.

On the removal of troops from the interior, yellow fever ceased in this city.

Respectfully,

E. P. Peller,

United States Vice and Deputy Consul.

Hon. Assistant Secretary of State.

#### COSTA RICA.

## Report from Port Limon—Fruit port.

PORT LIMON, COSTA RICA, April 4, 1901.

SIR: I have the honor to report my arrival at this port to-day per steamship Anselm. I have received from the United States consular agent the property of the Marine-Hospital Service left in his charge by Acting Asst. Surg. J. G. Thomas, as per copy of receipt held by the consular agent. I find no code and respectfully ask that one be sent me at once; also that I be supplied with the Public Health Reports, as formerly. I have assumed the duties of my office and will at once proceed to inspect the hospitals.

Respectfully,

D. W. GOODMAN, Acting Assistant Surgeon, U. S. M. H. S.

The SURGEON-GENERAL,

U. S. Marine-Hospital Service.

The case of yellow fever at Port Limon.

PORT LIMON, COSTA RICA, April 5, 1901.

SIR: I have the honor to confirm by letter my cable of this date, to wit: "One yellow." Having no code book of the United States Marine-Hospital Service is my reason for not using cipher. The patient was first seen by me April 4 at 1 p. m. (the day of my arrival), at the hospital of the United Fruit Company. From the physician in charge, Dr. Steggall, the nurse of the patient, the charts of the case, information derived from responsible parties, and my own observations, I have the

following history and condition:

Patient, named Richardson, male, about 35 years of age, of Canadian parentage, has been in Port Limon and immediate vicinity one month, having come from the Pacific coast via Colon. Was taken sick suddenly either Sunday, March 31, or Monday, April 1; admitted to the hospital, Tuesday, April 2. April 2, 11 a. m., temperature 103° F., pulse rate 88; 4 p. m., temperature 103° F., pulse rate 86. April 3, 7a. m., temperature 102.4° F, pulse rate 83; 4 p. m., temperature 103° F., pulse rate 86. April 4, 6 a. m., temperature 99° F., pulse rate 98; 1 p. m., temperature 102° F., pulse rate 88; 4 p. m., temperature 99° F., pulse rate 80. April 5, 7 a. m., temperature 98.4° F., pulse rate 74. From the time of admission to the hospital there has been constant nausea, and tenderness over the epigastrium, with some vomiting. When first seen by me, April 4, 1 p. m., there was slight icterus, congested conjunctivæ, glistening eyes, and a look of anxiety. His gums were spongy, but there was no bleeding. Pains in head and back marked on first and second, but diminished on third day. There was a trace of albumen in the urine on second day, greatly increased in amount on third and fourth days. Some suppression of urine, patient going twelve

hours or more without voiding urine. On April 5 is passing more urine, containing less albumen. Diagnosis, yellow fever, concurred in by Dr. L. A. Wailes, medical inspector of the Louisiana State board of health, on his way to Bocas; by Dr. Allen Jumel, inspector of the same board, stationed here, and by Dr. Steggall, the hospital physician. The patient has been isolated and a promise given to have all bedding, clothing, excreta, etc., disinfected.

I will continue my inspection of the other hospitals and, as far as possible, of the town in general, keeping you advised of the situation.

Respectfully,

D. W. GOODMAN, Acting Assistant Surgeon, U. S. M. H. S.

The Surgeon-General,

U. S. Marine-Hospital Service.

CUBA.

Reports from Cienfuegos, Casilda, and Santa Cruz del Sur.

CIENFUEGOS, CUBA, April 8, 1901.

SIR: I have the honor to submit the following report for the district

under my command for the week ended April 6. 1901:

Twelve deaths occurred in this city, the following report showing the causes: Paludic fever, 3; tuberculosis, 2; myocarditis, 1; old age, 1; phthisis, Florida, 1; malarial fever, 1; enteritis, 1; wounds, 1; mitral insufficiency, 1. Four of these deaths occurred in civil hospital. Death rate. 16.94.

Thirteen vessels were inspected at this port during the week; 21 bills of health were issued to vessels leaving Cienfuegos; no alien steerage passengers landed; 33 health certificates issued outgoing passengers; 42 pieces baggage of outgoing passengers inspected and passed, and 16 pieces baggage from Havana destined for Manzanillo and Santiago were labeled to be disinfected at those ports.

Casilda.—Dr. Alejandro Cantero reports 7 deaths in the city of Trinidad during the week; no contagious diseases reported; 18 vessels

inspected; 15 bills of health issued to outgoing vessels.

Santa Cruz del Sur.—Dr. Juan R. Xiques reports no deaths in that port during the week; no contagious diseases; inspected 8 vessels at

that port during the week.

Following is a recapitulation of reports for the month of March, as submitted from this station for the district under my command: Deaths occurred in this city, 72; vessels inspected at this port. 35; members of crews inspected, 2,149; passengers inspected, 813; bills of health issued to outgoing vessels, 92; alien steerage passengers inspected and allowed to land, 22; health certificates issued outgoing passengers, 278; pieces of baggage of outgoing passengers inspected and passed, 309; pieces of baggage from Havana destined for Santiago and Manzanillo labeled to be disinfected at those ports. 108.

Casida.—Dr. Alejandro Cantero, reports 13 deaths in the city of Trinidad during the month; no contagious diseases reported; inspected

27 vessels during month.

Santa Cruz del Sur.—Dr. Juan R. Xiques reports 1 death during the month at that port; no contagious diseases reported; inspected 25 vessels at that port during month.

Respectfully,

T. D. BERRY, Assistant Surgeon, U. S. M. H. S.

The SURGEON-GENERAL.

U. S. Marine-Hospital Service.

Report of immigrants inspected at the port of Cienfuegos, Cuba, during the month of March, 1901.

Total number of immigrants inspected, 22; number passed, 22.

T. D. BERRY, Assistant Surgeon, U. S. M. H. S.

## Report from Havana.

HAVANA, CUBA, April 8, 1901.

SIR: I have the honor to submit the following report of the transactions at this station for the week ended April 6, 1901:

There have been no cases of yellow fever reported during the week. The last case reported was on March 14. There have been no cases, no deaths, and no cases remaining on hand since March 24. The yellow fever report for the month of March, 1901, shows 5 cases with 1 death. This is an improvement over the same month of the preceding year, 1900, in which there were 11 cases and 5 deaths; but is not so good as the report for March, 1899, during which there were 2 cases with 1 death.

A diagnosis of yellow fever was made on the 2d instant in the case of the seaman removed from the transport Rawlins March 29, just prior to the sailing of that vessel for New York. The ship's surgeon claims that this man was not ashore at any of the Cuban ports touched at from March 18 to March 29, while the vessel was in these waters. The source of infection can not be traced, but in all probability was obtained on the south coast.

On April 3 quarantine officer at Sagua reported the steamship *Jessica* held in quarantine pending investigation of a suspicious case of fever on board. On the 6th, however, she was reported as released, the case not being yellow fever.

I inclose the usual statistics for the week.

Respectfully,

A. H. GLENNAN,

Surgeon, U. S. M. H. S., Chief Quarantine Officer for the Island of Cuba.

The SURGEON-GENERAL,

U. S. Marine-Hospital Service.

#### [Inclosure.]

Summary of transactions at Havana for week ended April 6, 1901.

#### PASSENGER DEPARTMENT.

Number of passengers inspected	546 4
Total	550
HARBOR DEPARTMENT.	
Crews of incoming vessels inspected	1, 255 1, 085 633 1, 258
Total	4, 231
Vaccination certificates issued	3

#### SHORE-DISINFECTING PLANT.

Baggage disinfected	Pieces.						
Baggage inspected and passed	92						
Total number handled	1, 849						
Number of viveros inspected							
camp for coastwise points	5						
MORTUARY REPORT.							
Enteritis         10         Pernicious fever           Pneumonia         11         Diphtheria           Enteric fever         2         Total number of deaths from all cause           Tuberculosis         18	1						

### The Doris fined for breaking quarantine.

HAVANA, CUBA, April 11, 1901.

SIR: In reply to Bureau letter dated April 4, 1901 (R. M. W., W. P. W., E. B. S.), in regard to the fine imposed upon the American yacht *Doris*, I have to report as follows: On March 5 this office received a telegram from Acting Assistant Surgeon Gomez at Gibara stating that the *Doris* had arrived at his port from Banes without a bill of health. The passengers were allowed to land, but the vessel was held for instructions. Some time during the same night the *Doris* broke quarantine and left the harbor, destination unknown. Dispatches were sent from this office to north coast points to detain this vessel upon arrival. The *Doris* returned to Banes and a fine was imposed by the captain of the port for violation of harbor rules. It appeared to be a case of ignorance, and this small fine was imposed in a cautionary way, and turned over to the collector of customs.

Respectfully,

A. H. GLENNAN, Surgeon, U. S. M. H. S.,

Chief Quarantine Officer for the Island of Cuba.

The Surgeon-General,

U. S. Marine-Hospital Service.

April 19, 1901

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## Inspection of immigrants at Havana during the week ended April 6, 1901.

HAVANA, CUBA, April 6, 1901.

SIR: I herewith submit report of alien steerage passengers arriving at this port during the week ended April 6, 1901:

Date.	Vessel.	Where from.	No. of immi- grants.
Apr. 1 Do Apr. 2 Do Apr. 3 Do Apr. 4 Do Apr. 6	Steamship Isla de Panay Steamship Julia Steamship Monteerrat. Steamship Morro Castle. Steamship Morro Castle. Steamship La Navarra Steamship Conde Wifredo. Steamship Veritas.	Porto Rico	1 12 190 45
	Total		635

Respectfully,

A. H. GLENNAN,

Surgeon, U.S. M. H. S.,

Chief Quarantine Officer for the Island of Cuba.

The SURGEON-GENERAL,

U. S. Marine-Hospital Service.

Reports from Matanzas, Cardenas, and Isabela de Sagua.

MATANZAS, CUBA, April 10, 1901.

SIR: I have the honor to submit herewith the following sanitary report of the quarantine district under my command for the week ended April 6, 1901:

Matanzas.—Eleven deaths occurred in the city of Matanzas during the period covered by this report, showing a mortality of 12.67 per 1,000. The principal causes of deaths were as follows: Tuberculosis, 4; broncho pneumonia, 2; uræmia, 1; meningitis, 1; other causes, 3. One case of diphtheria was reported. Six vessels were inspected and passed on arrival. Six bills of health were issued to vessels leaving this port. Twenty-four health certificates were inspected and passed and 15 pieces were disinfected. The steamship Chalmette, bound for New Orleans, was disinfected on April 6, 1901. The apparatus aboard the disinfecting barge Guardian was used for this purpose, and worked fairly well. The process was completed in about six hours.

Cardenas.—Acting Asst. Surg. Enrique Saez reports that 9 deaths occurred in Cardenas during the week. The principal causes of deaths were as follows: Cancer, 1; broncho-pneumonia, 1; heart disease, 1; abscess of the liver, 1; softening of the brain, 1; strangulated hernia, 1; other causes, 3. No case of infectious or contagious character was reported during the week. Five vessels were inspected and passed on arrival and 12 vessels passed without inspection. Twenty-one bills of health were issued to coasting and foreign vessels during the week. The death rate during the week was 18.90 per 1,000.

Isabela de Sagua.—Acting Asst. Surg. Pedro Garcia Riera reports that 11 bills of health were issued to coasting and foreign vessels, leaving the port during the week. No report for vessels arriving, departing, and remaining being received for the week.

Caibarien.—Acting Asst. Surg. Leoncio Junco reports that the sanitary condition of the port and town is good. The death rate during the week was 2.01 per 1,000. Two vessels were inspected and passed on arrival and 2 vessels passed without inspection during the week. Two bills of health were issued to vessels leaving the port.

Respectfully,

G. M. GUITÉRAS, Passed Assistant Surgeon, U. S. M. H. S.

The Surgeon-General,

U. S. Marine-Hospital Service.

Reports from Nuevitas, Gibara, and Baracoa.

NUEVITAS, CUBA, April 9, 1901.

SIR: I have the honor to submit the following report for the week ended April 6, 1901:

Three vessels arrived at this port and 7 bills of health were issued. There were no deaths and the sanitary condition of the town is good.

Gibara.—Reports show the arrival of 9 vessels, the issuance of 10 bills of health. A deaths, and good sonitory condition

of health, 4 deaths, and good sanitary condition.

Baracoa.—Reports show the arrival of 7 vessels, the issuance of 7 bills of health, 2 deaths, and good sanitary condition. No quarantinable disease is reported at any point in the district.

Respectfully,

OWEN W. STONE,

The SURGEON-GENERAL.

U. S. Marine-Hospital Service.

Reports from Santiago, Manzanillo, Guantanamo, and Daiquiri.

SANTIAGO DE CUBA, March 29, 1901.

Acting Assistant Surgeon, U.S. M. H.S.

SIR: I have the honor to submit herewith the following report for the week ended March 23, 1901:

Santiago.—During this period there was a total of 17 deaths reported, making the annual death rate 20.5 per 1,000. The causes of death were the following: Fever, intermittent malarial, 4; tubercle of lungs, 2; acute articular rheumatism, 1; aneurism of the aorta, 1; pneumonia, 2; gastritis, chronic, 1; diarrhea and enteritis (under 2 years), 2; Bright's disease, 1; other causes, 3. Total, 17. The sanitary condition of the port and city remains good.

Manzanillo.—Acting Asst. Surg. R. de Socarras reports 4 deaths, the causes being the following: Fever, intermittent malarial, 2; enteritis, acute, 1; inanition, 1. Total, 4. Population, 14,464. Annual rate of mortality, 14.38.

Guantanamo.—Acting Asst. Surg. Edward F. Nunez reports 7 deaths, due to the following causes: Uterine carcinoma, 1; pneumonia, 3; acute enteritis, 1; fracture of the cranium, 1; other causes, 1. Total, 7. Population, 18,000. Annual rate of mortality, 20.22.

Daiquiri.—Acting Asst. Surg. Juan J. de Jongh reports nothing of

interest.

Respectfully,

R. H. VON EZDORF, Assistant Surgeon, U. S. M. H. S.

#### [Inclosure.]

Report of treatment of passengers' baggage for the week ended March 23, 1901.—Port of Santiago de Cuba.

Date.		Disinfected and passed.								Inspected and				
	Name of vessel.		Formaldehyd gas.				Steam.			passed.				
			Bundles.	Trunks.	Valises.	Вожев.	Trunks.	Valises.	Baskets.	Boxes.	Bundles.	Trunks.	Valises.	
<b>Mar.</b> 18	Steamship Antinogenes Menendez (baggage arrived from Havana)		4	5	12					8	3	5	5	

Inspection of immigrants at Santiago during the week ended March 23, 1901.

SANTIAGO DE CUBA, March 23, 1901.

SIR: I herewith submit report of alien steerage passengers at this port during the week ended March 23, 1901:

Date.	Vessel.	Where from.	No. of immigrants.
Mar. 19	Brooks. German steamship Senior	Port au Prince, Hayti, and Kingston, Jamaica. Ponce, P. R Lucea, Jamaica.	18 8 10 81

Respectfully,

R. H. VON EZDORF, Assistant Surgeon, U. S. M. H. S.

The SURGEON-GENERAL,

U. S. Marine-Hospital Service.

Inspection of immigrants at Manzanillo during the week ended March 23, 1901.

MANZANILLO, CUBA, March 23, 1901.

Acting Assistant Surgeon, U.S. M. H. S.

SIR: I herewith submit report of alien steerage passengers at this port during the week ended March 23, 1901: March 18, Spanish steamship *Miguel Gallart*, from Barcelona, Spain, with 1 immigrant.

Respectfully,

R. DE SOCARRAS,

The SURGEON-GENERAL,

U. S. Marine-Hospital Service.

#### ENGLAND.

Report from London-Further concerning the case of plague at Southampton.

LONDON, ENGLAND, March 30, 1901.

SIR: I have the honor to make the following report for the week

ended March 30, 1901:

There have been no further cases of plague in England. The case recently removed from the Simla at Southampton is now convalescent. As regards this case, the facts are as follows: The Simla left Durban

February 16 with invalids for Southampton, touching at Cape Town two days later, but not going to the dock. Two days after leaving Cape Town the Lascar steward was taken ill and had at first a temperature of 103.5° F. and complained of tenderness in the inguinal regions. Later the temperature was septicæmic and then normal. The case was not considered infectious and was not reported on the vessel's arrival at Plymouth, March 12, or at Southampton, March 13. He went to an infirmary for an operation on a fluctuating bubo, and, the case being considered suspicious, the health officer was notified and the case was sent to the isolation hospital for observation. Pus was collected from the bubo and found to contain the bacillus pestis. It is interesting to note that in this case the bacillus was found in pus that was swarming with the ordinary pus organisms.

All contacts of this case have been under observation and no further cases have been reported. The case of suspicious illness removed from the *Norman* at Southampton on the 23d has been proved not to be plague.

The plague continues to spread in Cape Colony. The official report for the week ended March 23 in Cape Town was as follows: Cases admitted, 46; deaths, 21; suspects, 3.

The number of cases among Europeans seems to be on the increase, and 3 cases have recently occurred among the troops stationed in or about Cape Town.

In Mauritius for the week March 14, 5 cases of plague occurred and 4 deaths. There were no cases reported during the week ended March 21.

In West Australia there were, on March 20, 9 cases of plague and 1 death. No case of plague has occurred at Singapore since March 7 and clean bills of health are now issued from that port.

Smallpox continues to decrease in Glasgow, and on the 28th there were only 2 cases admitted, and there were in hospital that day 319 cases. One death from smallpox is reported from Cardiff for the week ended March 23.

Respectfully,

A. R. THOMAS,

Passed Assistant Surgeon, U.S. M. H. S.

The SURGEON-GENERAL,

U. S. Marine-Hospital Service.

### GERMANY.

# Report from Berlin-Health conditions.

BERLIN, GERMANY, April 2, 1901.

SIR: I have the honor to report that the last weekly health report for Berlin shows a mortality of 13 from influenza against 19 of the previous week. It has been a cause of disappointment that the epidemic has continued so late in the season, a fact doubtless explained by the continued cold and damp weather. Now, as April has begun with warm spring-like weather, it is likely that the epidemic will soon terminate.

The mortality for all diseases during the past week was 16.9 per 1,000, quite a satisfactory death rate. It is worthy of note, however, the enormous proportion of deaths from diseases of the respiratory system, especially pulmonary tuberculosis. Of the 621 deaths in Berlin for all.causes, 104 (16.7 per cent) were from pulmonary tuberculosis, and 72 (11.5 per cent) from acute diseases of the respiratory organs. It is probable that some of the diseases reported as "acute diseases of the respiratory organs" were due to the tubercle bacillus. The number of deaths reported from pulmonary tuberculosis is made to appear less also,

from the fact that many cases suffering from this disease are transported to the various sanatoria outside of Berlin proper. It is not surprising that the health authorities should be very active in combating the spread of tuberculosis.

They are considering the idea of following the example of New York

City in requiring compulsory reporting of cases of tuberculosis.

Respectfully,

JOSEPH B. GREENE, Passed Assistant Surgeon, U. S. M. H. S.

The SURGEON-GENERAL,

U. S. Marine-Hospital Service.

Plague and cholera in various countries.

BERLIN, GERMANY, April 1, 1901.

SIR: I have the honor to submit herewith the following information obtained from the Imperial Health Office:

#### Plague.

BRITISH INDIA.—In Karachi, at the end of February, 1 to 4 cases of

plague occurred daily.

According to the Civil and Military Gazette, in the whole of India, during the period from the 9th to the 16th of February, the number of deaths from plague had increased in an alarming manner, having risen from 4,377 during the foregoing week to 5,910. Of these 5,910 deaths, 3,600 occurred in the Province of Bengal, 267 in Mysore, 124 at Madras, and 233 at Calcutta. The number of deaths from plague in India during the corresponding week of last year amounted to 2,597.

CHINA—Hongkong.—In the period from January 12 to February 9,

6 plague cases occurred, all ending fatally.

According to an official report regarding the plague during the year 1900, up to October 31, 1,082 plague cases in Hongkong came to the knowledge of the authorities, all of the cases being among Chinese excepting 28; and of the 1,034 deaths from plague all were Chinese except 15. In 412 instances the dead bodies were found either in the street or in the harbor, where they were thrown at night by the Chinese to avoid the disinfection of the houses. During the year 43,000 rats were collected and killed.

RÉUNION.—According to an official notice of March 11, plague has ceased on the island. Departing ships have been given certificates of

health since March 5.

SOUTH AFRICA—Natal.—In Durban a case of plague has occurred on a steamer arriving from Cape Town. The ship which had remained in strict quarantine left again on March 20 without having landed a single man.

#### Cholera.

British East India.—In Calcutta during the period from February 10 to February 23, 44 persons have died from cholera.

Respectfully, Joseph B. Greene,

Passed Assistant Surgeon, U. S. M. H. S.

The SURGEON-GENERAL,

U. S. Marine-Hospital Service.

## Review of Koch's report on malaria in German East Africa.

### BERLIN, GERMANY, March 23, 1901.

SIR: I have the honor to submit the following report on the result of Dr. Robert Koch's study of malaria, carried on in Italy, German East Africa, and the East Indian Islands: The investigation was begun in the summer of 1898, and continued till near the end of 1900. work was begun after Manson's and Ross' work had proved the mosquito an active participant in the propagation of malaria, so little remained along that line to be solved. Suffice it to say, that the conclusion of these well-known investigators was confirmed, though Dr. Koch thinks it very likely that the anopheles are not the only species of mosquito capable of transmitting the malaria, but that the culex is also concerned in its propagation. Every attempt to find the plasmodiamalaræ in any species of the lower animal was entirely unsuccessful, so it is not likely the parasite can complete its life history in another organism than the human body. Efforts were also made to inoculate other animals, as monkeys and bats, with malarial blood from the human subject, but failure resulted in every case.

Dr. Koch observed the fact that during the winter months in Italy the number of cases of malaria dropped to a minimum, and only manifested itself again on the appearance of warm weather in the following He is of the opinion that these first cases of the spring months are relapsing cases that were either untreated or imperfectly treated, and that the malarial parasite exists in a latent form in the human body during the apparent disappearance of the malaria. regards it of the utmost importance to administer quinine sufficiently long to entirely eradicate the organism from the human body, and thus avoid the recurrences in the spring. He considers the free use of quinine the best and most practical method of ridding a community of malaria. Mosquito nets are regarded as a useful means for combating the spread of the dreaded pest, but not as specific as some claim for it. The weak point in its use is the fact that one is subject to the bite of the mosquito at hours when not under the protection of a bednetting. To wear veils as a protection to the face he regards as impracticable on account of the heat of the tropics. The use of petroleum is in many cases impracticable on account of the large marshy areas devoted to the cultivation of Then, too, it would be difficult to apply petroleum to every small cavity containing water, as palm cones, tree trunks, etc., which are capable of receiving the larvæ of the anopheles.

That the free use of quinine alone is capable of ridding a community of malaria is shown by the following statistics from Spandau, a small town in the vicinity of Berlin: Population, 1874, 3,853; 1885, 4,800, and 1891, 5,883. Cases of malaria, 1874, 2,557; 1885, 111, and 1891, 1.

It is stated that the practical disappearance of malaria is not due to better drainage, for the anopheles are still found in considerable num-The cheapening of quinine has had a considerable influence on increasing its use, and thus contributing to the eradication of malaria. Thirty years ago it was so expensive that the poor of the community were deprived of its use, but now it is within the reach of all.

The German army is also quoted to show the influence of quinine in eradicating malaria: Cases of malaria, 1869, 13,563 (54.5 per cent);

1896, 230 (0.45 per cent).

This shows a decrease in the number of cases of more than 99 per Another point of considerable interest is the fact that malaria existing in a locality endemically is distinctly a disease of childhood. 857 April 19, 1901

Among infants under two years of age Dr. Koch found the malarial organism in the blood of 80 per cent of the cases. Between 2 and 5 years of age, the organism was much less frequently found, and later in life it was exceptional to find the organism at all. Dr. Koch holds that a certain immunity exists after a long attack of malaria. Dr. Koch recommends as a means of eradicating malaria from the German colonies the sending out of young physicians trained in the use of the microscope. He also advocates the distribution of quinine gratis to the natives. The success of the government of Dutch India in diminishing so successfully the number of cases of malaria, he attributes to the free use of quinine. In Dutch India there is distributed gratis more than 2,000 kilograms of quinine annually to the natives.

Respectfully,

JOSEPH B. GREENE,

Passed Assistant Surgeon, U.S. M. H.S.

The SURGEON-GENERAL,

U. S. Marine-Hospital Service.

#### HONDURAS.

## Report from Puerto Cortez-Fruit port.

PUERTO CORTEZ, HONDURAS, April 3, 1901.

SIR: I have the honor to report my arrival at Puerto Cortez, Honduras, yesterday afternoon (April 2). Reported to consular agent and received from him Department letter of March 22 (W. P. W.), inclosing appointment, and Department Circular No. 134. Mr. Algeralso turned over to me certificates, stationery, code book, book of revised regulations (U. S. M. H. S.), autoclave, lamp, formalin mixture (1 carboy), glycerin, and calcium chloride received by him from former appointee at this station. Dr. E. B. Preis, representing State board of Louisiana, also arrived yesterday.

Mr. Alger gives a favorable report of health conditions at this port. Will institute quarantine regulations beginning (to-morrow) April 4.

Respectfully,

SAMUEL HARRIS BACKUS, Acting Assistant Surgeon, U. S. M. H. S.

The Surgeon-General,

U. S. Marine-Hospital Service.

#### ITALY.

# Report from Naples.

NAPLES, ITALY, March 30, 1901.

SIR: I have the honor to report that for the week ended March 30,

1901, the following ships were inspected:

On March 26, the steamship *Tartar Prince*, of the Prince Line, bound with passengers and cargo for New York. There were inspected and passed 1,004 steerage passengers and 96 pieces of large and 1,500 pieces of small baggage. Two hundred and seventy four pieces of baggage were disinfected by steam.

On March 26, the steamship *Citta di Torino*, of the Veloce Line, bound with passengers and cargo for New York. There were inspected and passed 1,202 steerage passengers and 36 pieces of large and 1,547 pieces of small baggage. Two hundred and seventy-five pieces of

baggage were disinfected by steam.

On March 27, the steamship Auguste Victoria, of the Hamburg-American Line, bound with passengers and cargo for New York. There

were inspected and passed 637 steerage passengers and 83 pieces of large and 918 pieces of small baggage. One hundred and twenty-two pieces of baggage were disinfected by steam.

On March 27, the steamship *Marco Minghetti*, of the Italian General Navigation Company, bound with passengers and cargo for New York. There were inspected and passed 804 steerage passengers and 106 pieces of large and 1,300 pieces of small baggage. One hundred and ninety-two pieces of baggage were disinfected by steam.

On March 28, the steamship *Hohenzollern*, of the North German Lloyd Steamship Company, bound with passengers and cargo for New York. There were inspected and passed 740 steerage passengers and 112 pieces of large and 980 pieces of small baggage. One hundred and fifty-four pieces of baggage were disinfected by steam.

#### Smallpox.

The smallpox situation has not improved any since my last report. The newspapers report from 3 to 5 deaths daily; the board of health reports a lesser number. There are probably many more deaths from smallpox than the newspapers record.

At the inspection of the steamship *Marco Minghetti* a child was rejected which had a profuse eruption which closely simulated varioloid, but which probably was a case of varicella. The child and family were rejected in order to await further developments.

Respectfully,

VICTOR G. HEISER, Assistant Surgeon, U. S. M. H. S.

The Surgeon-General, U. S. Marine-Hospital Service.

#### JAMAICA.

# Yellow fever at Port Royal.

KINGSTON, JAMAICA, April 1, 1901.

SIR: I have the honor to report that a few days ago I learned incidentally from a friend that several cases of yellow fever existed at Port Royal, this island, and in consequence the white troops stationed there were ordered up the hills. Not wishing to act impulsively, I restrained my first intention to cable the Department until I received more official information. Accordingly, I called upon the colonial secretary, Hon. Sydney Olivier, who did not seem to know much about it, but said he would inquire immediately and let me know about it, and same afternoon I received a communication from him, a copy of which I hereto attach, together with a copy of my acknowledgment of the same.

I shall keep a lively lookout for a change in the situation, and so soon as I learn of any decided increase of the fever at Port Royal or elsewhere, I shall promptly cable the Department, and until then I do not consider there will be any cause for alarm.

Respectfully,

ETHELBERT WATTS,
United States Consul.

Hon. Assistant Secretary of State.

#### NOVA SCOTIA.

# Compulsory vaccination in Halifax.

HALIFAX, NOVA SCOTIA, April 10, 1901.

SIR: I beg to inform you that the Halifax board of health has ordered compulsory general vaccination on account of the existence of smallpox

at Kentville, Nova Scotia, some 70 miles away, where there have been 2 or 3 cases of the disease. The last general compulsory vaccination in this city was in 1873. The present order provides a penalty for school authorities who admit to the public schools unvaccinated pupils after the 30th of this month.

Respectfully,

JOHN G. FOSTER, Consul-General.

Hon. SECRETARY OF THE TREASURY.

#### PORTO RICO.

## Report from Ponce.

Ponce, P. R., April 1, 1901.

SIR: Through chief quarantine officer for Porto Rico, I have the honor to transmit herewith the quarantine and abstract of bills of health reports for the week ended March 30, 1901. Two vessels were inspected and passed and 8 bills of health were issued. The American steamship Californian sailed this week from subport Guanica for New Orleans with 895 emigrants for Hawaii, and the American steamship Puerto Rico sailed for Daiquiri, Cuba, with 390 emigrants. Since last report 4 new cases of smallpox have appeared and 24 cases recovered, and there are at present under treatment 34. No deaths. None has been reported in the port.

Respectfully,

F. ALEMAN,

Acting Assistant Surgeon, U. S. M. H. S., In Temporary Charge.

The SURGEON-GENERAL,
U. S. Marine-Hospital Service.

Inspection of immigrants at San Juan during the week ended March 30, 1901.

SAN JUAN, P. R., April 1, 1901.

SIR: I submit herewith report of alien steerage passengers arriving at this port during the week ended March 30, 1901.

Date.	Vessel.	Where from.	No. of immigrants.
	-	Havana, Cuba Barcelona, Malaga, Cadiz, Las Palmas, Teneriffe, and La Palma	1 5
До	Total	Cuban ports and Porto Plata, St. Domingo	9

Respectfully,

W. W. KING,

Assistant Surgeon, U. S. M. H. S., Acting Chief Quarantine Officer for Porto Rico.

The Surgeon-General,
U. S. Marine-Hospital Service.

Report of immigrants inspected at the port of San Juan, P. R., during the month of March, 1901.

Total number of immigrants inspected, 50; number passed, 50.

W. W. KING,

Assistant Surgeon, U. S. M. H. S., Acting Chief Quarantine Officer for Porto Rico.

Report of immigrants inspected at the subports of Porto Rico during the month of March, 1901.

Total number of immigrants inspected, 7 (at Mayaguez); number passed, 7 (at Mayaguez).

W. W. King.

Assistant Surgeon, U.S. M. H. S., Acting Chief Quarantine Officer for Porto Rico.

#### STRAITS SETTLEMENTS.

Plague in Singapore—The settlement declared infected area.

SINGAPORE, March 1, 1901.

SIR: I have the honor to inclose, for the Department's information, copy of letters from the honorable acting colonial secretary of the Straits Settlements, regarding the outbreak in this district of 3 cases of plague between the 22d and 24th, and 2 cases on the 25th instant.

By a proclamation published in the Straits Settlements Government Gazette, of the 27th instant, the settlement of Singapore was declared by

the officer administering the government to be an infected area.

Although the disease can not be said, according to published reports, to have reached the epidemic stage, yet I have reason to believe that many seizures occur, which never come within the ken of the authorities.

The masses of Chinese and Tamils (natives of southern India) who furnish the victims, look distrustfully upon every measure of either the Government or the municipality, sanitary or otherwise, as a means of "squeeze," and do their best to conceal from the authorities any and every occurrence that might tend to bring upon them a visit from the dreaded inspector.

This fact, coupled with the known insanitary habits of these people, brings the possibility of an epidemic so near that I deemed it advisable to cable the Department, which I did yesterday, as follows: "Secre-TARY OF STATE, Washington, D. C.: Plague.—Campbell," and trust the Department will not consider my action to have been overhasty, under the circumstances.

J. W. CAMPBELL,

Acting United States Vice and Deputy Consul-General. Hon. Assistant Secretary of State.

#### [Inclosures.]

SINGAPORE, February 25, 1901.

SIR: I am directed to forward for your information the inclosed copy of a memorandum regarding 3 cases of plague which were reported in Singapore between the 22d and 24th instant.

S. MCARTHUR,

For Acting Colonial Secretary, Straits Settlements.

The ACTING VICE AND DEPUTY CONSUL-GENERAL FOR THE UNITED STATES OF AMERICA, Singapore.

#### [Memorandum.]

SINGAPORE, February 25, 1901.

On the morning of the 22d instant one Ham Poh, a boiler maker by trade, residing at No. 2 Tanjong Pager Dock Lines, was found dead in his quarters. The deputy registrar of deaths, after seeing the body, sent for the assistant health officer, who, thinking the case suspicious, ordered the body to be taken to the quarantine camp mortuary for post-mortem examination. Bacilli characteristic of plague were found in 861

blood taken from the spleen, and still more plentifully in the glands. The diagnosis was verified by cultivation.

The inmates of the house in which the fatal case occurred were at once transferred to the quarantine station at St. Johns Island and the house was cleared of all its con-

tents and thoroughly disinfected.

On the 24th instant 2 more seizures were reported, viz, (1) A Chinese female, aged 16, residing next door to the case above mentioned. She was sent to the quarantine camp for treatment and is still alive. (2) A male Chinese believed to be a gharry syce found after death at 75-5 Pearl's Hill road; post-mortem examination verified the case as one of plague.

C. W. S. KYNNERSLEY, Acting Colonial Secretary, Straits Settlements.

SINGAPORE, February 28, 1901.

SIR: In continuation of my letter No. 2073 of the 25th instant, I am directed to forward the inclosed copy of a memorandum regarding 2 further fatal cases of plague which are reported as having occurred on the 25th instant.

Respectfully,

A. W. O'SULLIVAN, For Acting Colonial Secretary, Straits Settlements.

THE VICE AND DEPUTY CONSUL-GENERAL FOR THE UNITED STATES OF AMERICA, Singapore.

#### [Memorandum.]

SINGAPORE, February 28, 1901.

The following further cases of plague, both eventually fatal, are reported as having occurred 25th instant:

1. Peria Karpen, male Hindu, aged 18. The deceased used to live in Market street, but left there some days ago (probably when the first case of plague occurred) and went with his brother to a temple at the  $6\frac{1}{2}$  mile on Changi road. There he fell ill and his brother brought him to Tan Tock Seng's Hospital, where he died at 6 p. m. on the 25th instant.

2. A clerk to a chetty in Market street. He left town with two friends on the 25th and went to a hut near the 7½ mile on the Changi road, where he died at 9 a. m. on the

26th. The hut has been burned down.

In both the above cases post-mortem and bacteriological examination verified them as plague. The bodies were burned with due precautions; the houses in town occupied by the patients disinfected and all contacts removed to St. Johns Island Quarantine

Some delay occurred in the reporting of these cases owing to their having occurred at a distance from town.

C. W. S. KYNNERSLEY. Acting Colonial Secretary, Straits Settlements.

Foreign and insular statistical reports of countries and cities—Yearly and monthly.

Africa-Sierra Leone.—Three weeks ended March 16, 1901. Estimated population, 35,000. Number of deaths not reported. Sanitary conditions bad. Smallpox present, but controlled by quarantine. African malarial fever very prevalent.

ARGENTINA—Buenos Ayres.—Month of February, 1901. Estimated population, 824,158. Total number of deaths, 1,316, including diphtheria, 8, enteric fever, 13, scarlet fever, 15, smallpox, 21, and 73 from tuberculosis.

Brazil-Rio de Janeiro.-Two weeks ended February 28, 1901. Estimated population, 793,000. Total number of deaths, 475, including diphtheria, 2; enteric fever, 2; measles, 1; smallpox, 6; yellow fever, 19; beriberi, 9; plague, 1, and 104 from tuberculosis.

British Honduras—Belize.—Month of February, 1901. Estimated

population, 31,471. Total number of deaths, 61, including diphtheria, 1; scarlet fever, 1, and 3 from phthisis pulmonalis.

DENMARK. — Month of February, 1901. Estimated population, 2,447,441. Total number of deaths, 20,885, including diphtheria, 532; enteric fever, 67; measles, 2,486; scarlet fever, 1,012; whooping cough, 367, and 23 from smallpox.

Copenhagen.—Estimated population, 378,280. Total number of deaths, 4,308, including diphtheria, 85; enteric fever, 11; measles, 1,127; scarlet fever, 107, and 69 from whooping cough.

FRANCE—Marseilles.—Month of February, 1901. Estimated population, 447,344. Total number of deaths, 1,207, including diphtheria, 4; enteric fever, 3; measles, 3; scarlet fever, 1; whooping cough, 3, and 57 from la grippe.

GREAT BRITAIN—England and Wales.—The deaths registered in 33 great towns in England and Wales during the week ended March 23, 1901, correspond to an annual rate of 18.4 per 1,000 of the aggregate population, which is estimated at 11,789,099. The highest rate was recorded in Liverpool, viz, 23.6, and the lowest in Halifax, viz, 10.7.

Bradford.—Two weeks ended March 23, 1901. Estimated population, 291,535. Total number of deaths, 174, including diphtheria, 3; enteric fever, 1; scarlet fever, 2, and 14 from phthisis pulmonalis.

London.—One thousand five hundred and eighty-eight deaths were registered during the week, including measles, 42; scarlet fever, 6; diphtheria, 14; whooping cough, 63; enteric fever, 5, and diarrhea and dysentery, 13. The deaths from all causes correspond to an annual rate of 17.8 per 1,000. In Greater London 2,133 deaths were registered, corresponding to an annual rate of 16.4 per 1,000 of the population. In the "outer ring" the deaths included 7 from diphtheria, 9 from measles, and 21 from whooping cough.

Ireland.—The average annual death rate represented by the deaths registered during the week ended March 23, 1901, in the 22 principal town districts of Ireland was 30.4 per 1,000 of the population, which is estimated at 1,058,722. The lowest rate was recorded in Newtownards, viz, 0.0, and the highest in Kilkenny, viz, 75.5 per 1,000. In Dublin and suburbs 253 deaths were registered, including diphtheria, 1; enteric fever, 1, and 7 from whooping cough.

Scotland.—The deaths registered in 8 principal towns during the week ended March 23, 1901, correspond to an annual rate of 21.1 per 1,000 of the population, which is estimated at 1,630,155. The lowest mortality was recorded in Perth, viz, 13.4, and the highest in Glasgow, viz, 23.1 per 1,000. The aggregate number of deaths registered from all causes was 663, including diphtheria, 7; measles, 8; scarlet fever, 2; smallpox, 12, and 38 from whooping cough.

ITALY—Genoa.—Month of December, 1900. Estimated population, 230,969. Total number of deaths, 563, including diphtheria, 6; enteric fever, 1; measles, 1; whooping cough, 4, and 78 from tuberculosis.

Jamaica—Port Antonio.—Two weeks ended March 30, 1901. Estimated population not reported. Number of deaths not reported. No contagious disease reported. The health of the port is good.

JAPAN — Nagasaki.—Ten days ended March 10, 1901. Estimated population, 131,701. Number of deaths not reported. One death from typhus fever reported.

MEXICO—Tuxpam.—Two weeks ended April 1, 1901. Estimated population, 13,000. Total number of deaths, 20. No deaths from contagious diseases reported.

NORFOLK ISLAND.—Months of December, 1900, and January, 1901. Estimated population, 854. Total number of deaths, 2. No death from contagious disease. Year ended December 31, 1900. Total number of deaths, 17, including enteric fever, 3, and 4 from influenza pneumonia.

St. Helena.—Three weeks ended March 9, 1901. Estimated population, 4,000. One death. No contagious diseases.

SPAIN—Malaga.—Two weeks ended March 15, 1901. Estimated population, 130,000. Total number of deaths, 195, including enteric fever, 2, and 2 from smallpox.

Valencia.—Two weeks ended March 24, 1901. Estimated population, 203,895. Total number of deaths, 223, including 1 from enteric fever.

# Cholera, yellow fever, plague, and smallpox, December 28, 1900, to April 19,

[Reports received by the Surgeon-General United States Marine-Hospital Service from United States consuls through the Department of State and other sources.]

[For reports received from June 29, to December 28, 1900, see Public Health Reports for December 28, 1900.]

#### CHOLERA.

	OHODE	31415.		
Place.	Date.	Cases.	Deaths	Remarks.
Argentina:				
	Feb. 1-Feb. 28	2		İ
	Mar. 4	3	6	
India:	I	1		Į
	Nov. 21-Mar. 12			Į.
	Nov. 11-Mar. 1		115	
Straits Settlements :	1		1	1
Singapore	Nov. 8-Mar. 2		272	
Feb. 1-Feb. 28				
Buosil :				
Pernambuco				
Rio de Janeiro			62	
	Anr 3			Present.
Cartagena	Dec. 10-Jan. 14		6	
Honda	Jan. 7			
	do	•••••		Do.
	Apr. 6	1		
Cuba:	-		_	
Cienfuegos	Jan. 1-Mar. 4			
пачана	Jan. 1-Jan. 31			
	Feb. 1-Feb. 28	8	6	
Matamana	Mar. 1-Mar. 16			
Matanzas Jamaica :	Dec. 19-Jan. 8	- 1	- 1	
	Apr. 1			Present.
Mexico:				
Vera Cruz	Dec. 16-Feb. 15			
	PLAGU	E.		
Africa:				
Cape Town	Feb. 16-Mar. 23	242	98	
Argentina:		1	i	
	Dec. 1-Feb. 28	8	1	
	March 4	2		
	do		1	On transport Antillion.
Brazil:	ľ			
	Now la Feb 92	12		
	Nov. 12-Feb. 28	6		
hina:	i	- 1	- 1	
	Nov. 25-Mar. 10		80	
Alexandria	April 10			Plague reported.
ingland:		- 1		•
Hull	Jan. 8-Jan. 81		8	On ss. Friary.

Southampton.....

On as, Friary. On as, Simla,

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# Cholera, yellow fever, plague, and smallpox—Continued. PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India—Continued.				
Bombay Presidency and Sind-	-{	İ		
Continued.		1		
Central Division— Ahmednagar District Ahmednagar Town Nasik District Poona City Poona City Poona District Satara Town Satara Town Southern Division	Nov. 4-Feb 16			
Ahmednagar Town	dodo	2	1	
Nasik District	do	48	30	
Nasik Town	do	122	98	
Poons City	do	872	881	
Fatara District	do	179 76	148 46	
Satara Town	do	144	50	
Belgaum District	do	2,811 87	2, 161 51	
Belgaum Town Dharwar District	do	407	321	
Dharwar Town	do	200	140	
Hubli Town	do	6	5	
Kanara District Karachi City Kolaba District Ratnagiri District	do	29	21	
Karachi City	Nov. 4-Feb 16	109 56	75 38	
Ratnagiri District	do	3	3	
Aundh State	do	. 8	. 4	
Baroda State	do	220 456	112 245	,
Cutch State	do	67	61	
Janjira State	do	54	45	
Kathiawar State	do	14	7	
Kolhapur and Southern	. a.	369	258	
Mahratta country Mandvi Town	do	27	208	
Mirai Town		406	276	
Savanur State Outside Bombay Presidency and	do	52	41	
Outside Bombay Presidency and Sind:				
M. J D				
Malabar District	do	2		
Madras City	do	5	2	
North Arcot	do	20	13	
Salem District South Canara		613 1	423 1	
Tinnevelly	do	ī		
Tinnevelly Trichonopoly District	do	1		
Bengal	i	6	6	
Bhagalpur Bihar Town	do	133	125	
Calcutta	do	1,052	1,002	
Calcutta	do	108	93	•
Dinapur Town	do	450	434	
		1,490	1,451	
Hoogly	do	5	5	
Monbhum District	do	21	18	
Monghyr District	do	892	840	
Monghyr Town	do	1,671	1,541	
Patna City	do	3,866	8,560	
Patna District	do	6,578	6, 305	
Monghyr Town  Muzaffarpur District Patna City Patna District Saran District	do	6, 182	4,911	
		107	196	
Juliandur District	do	187   82	136 16	
Gurdaspur District Jullemdur District Sialpot District	do	45	26	
mysore State-	j			
Bangalore City		1,456	1,064	•
Bangalore Civil and Mili-	do	2,039	1,661	
Bangalore Civil and Military Station  Bangalore District  Kolor Gold Fields  Mysore City  Mysore District  Shimoga	do	989	707	
Kolor Gold Fields	do	343	850	
Mysore City	do	997	680	
Mysore District	op	1,664	1, 281 72	
Tumkar District	do	20	15	
Hyderabad State—	1			
Aurangabad District	do	88	72	
Formosa : Tainan	Dec 21-Ten 14	28	22	
4 9111911 ······	Dec. 01-38H. 10	28	22	

# Cholera, yellow fever, plague, and smallpox—Continued. PLAGUE—Continued.

Place.	1	Date.		Cases.	Deaths.	Remarks.
Japan :						
Fukuoka	Dec.	1-Feb	. 8	1 1	1 1	ł.
Hiroshima		do			l ī	1
Kobe and Hiogo					22	i
Nagasaki		10			1 7	1
Osaka		10		157	139	ŀ
Shidzuoka					20	
Wakayama					13	1
Madagascar:				10	i 10	
Tamatave	Nov	. 19-Nov	90	1		
Mauritius		15-Mar			40	
Philippine Islands:	- 00.	20 222				
Manila	Dec	30-Feb.	22	23	9	
Béunion		3-Feb.			5	
Znasia :	van.	O L CD.	10			
Samara	Dec	23-Jan.	10	61	44	
Tsarevsk District		17-Dec.			24	
Uralsk		21		136	134	
Vladimirovka		1-Jan.			16	
traits Settlements :	Jall.	I-Jan.	<b>≠</b> 2	20	10	
Singapore	Doo	25			1	From se Hans Won
omkahora		12-Feb.			8	From ss. Hong Wan.
urkey:	vall.	IS-I. CO.	۵٠		۰	,
Constantinople	Ton	10		, ,	1	
Smyrna		9			13	
Vales:	Jan.	<b></b>	••••••	************	10	
Cardiff	Fah	0			1	

#### SMALLPOX.

	1					_
Argentina:				1	1	I
Buenos Ayres Montevideo	Oct.	1-Feb.	28		. 197	1
Montevideo	Nov	. 24-Dec.	1	. 1		١.
Austria-Hungary:	į .			1 -		1
Prague	Dec.	2-Mar.	23	. 187	1	J
Trieste						1
Vienna	Feb	17-23		1	1	Ί
Bahama Islands:				1	1 -	İ
Inagua	Jan.	l-Jan.	28	.] 1	l	ı
Belgium:				1 -		1
Antwerp	Dec	20-Mar	16.	18	2	ı
Ghent	Jan	20-Mar	16	1 -0	2	l
GhentLiege	Dec	16-Dec	22	·····	ĺí	1
Brazil :	Dec.	10-1000.	<b></b>	ļ		ı
Bahia	Ton	20-Jan.	26	8		ı
Ceara						Ĺ
Demonshuse	Dau.	1-3811.				ı
Pernambuco	Dec.	i-reb.			176 286	l
Rio de Janeiro British Columbia :	OCL.	1-Feb.	28	•••••	236	l
British Columbia:	D	01		1 -	l	l
Nanaimo	Tiec.	ZI	•===	1 9		ı
vancouver	Dec.	I-Jan.	31	4		ı
Canada:				1 .		ı
Ontario—	_		_			ı
Algoma County	Jan.	l-Mar.	8	90		l
Carleton County	d	lo		1		l
Haldimand County	d	lo	•••••	1		l
Huron County	d	lo		1		
Lenox County	d	lo	•••••	1		
Middlesex County	d	lo	• • • • • • • • • • • • • • • • • • • •	5		
Monitonlin County	d	lo		1		
Muskoka County	d	lo		8		
Norfolk County	d	o		i		
Northumberland County	d	0		1		
Renfrew County						
Simcoe County	d	0		ī		
Thunder Bay County	d	0		11		
York County	ă	•		-4		
Ceylon:		······		*		
Colombo	Ton	6-Mar.	4	8	8	
China:	vau.	U-DIAI.	Z	۰	•	
Hongkong	Dag	9-Mon		25	16	
Cuba:	Dec.	2-MIRI.	9	20	10	
Banes	¥		1	2	i	
Renador:	Jan.	20	••••••	z		
	<b>NT</b>	10 35	_			
Guayaquil	MOA.	18-Mar.	2	•••••••••••••••••••••••••••••••••••••••	56	
Egypt:			1	_	_	
Alexandria	NOA.	zī-Dec.	81	8	7	
Cairo	Jan.	l-Mar.	11		7	
England:	_			[	- 1	
Bradford	Dec.	l6-Mar.	23	27		

# Cholera, yellow fever, plague, and smallpox—Continued. SMALLPOX—Continued.

Place.	Da	ate.	Cases.	Deaths.	Remarks.
England—Continued.				1	
Leeds	Dec. 30-	Jan. 12.	. 2		
Liverpool	Feb. 8-	-Mar. 23.	5		
London	Dec. 2-	Mar. 21	. 18		ĺ
Newcastle-on-Tyne Southampton	Jan. 0-	Mar. 9. Mar. 23.	. 23		
West Hartlepool	Dec. 9-	Dec. 15	í		
France:			7 -		
Marseilles	Dec. 1-	Jan. 31		. 3	l .
Nantes	Feb. 1-	Feb. 28	. 1	145	
Paris	Dec. 2- Mar. 4-	Mar. 23 Mar. 10	· ·····	. 145	
Roubaix	Jan. 1-	Jan. 31		:  î	
St. Etienne	Jan. 1-	Mar. 15	. 5		
Germany:	78-1- 10	TR-1- 00	Ì		
Leipzig	Peb. 17-	Feb. 23 Dec. 23	. i	. 1	
Greece:	Dec. 17-	Dec. 20	1 1		j
Athens	Dec. 2-	Mar. 10	. 5	1	
India:				l	
Bombay		Mar. 12		61	
Calcutta Karachi		Mar. 9 Mar. 10		1,236	
Madras	Nov 17-	Mar. 10 Mar. 8	129	47	
taly:	1.07. 1.	<b></b> 0		'l •	
Licata		Dec. 15		. 1	
Messina		F			On steamship Mariner.
Naples	Jan. 20-	Jan. 30	. 26	2	
Japan : Yokohama	Feb. 17-	Mar. 16	. 2		
Korea:	200		i -		
Seoul	Dec. 1-	Jan. 1			Reported present.
Malta:	D 10	T 18	١ .		
Valetta	Dec. 16-	Jan. 15	2		
Mexico: City of Mexico	Dec. 16-	Apr. 9		7	
Merida	Dec. 20-				Epidemic.
Progreso	Feb. 2-				-
Tuxpan	Dec. 11-1			7	
Vera Crus New Brunswick:	Dec. 16-J	Jan. 5		4	
Gloucester and Westmore-	Feb. 9		150	l	
land counties.	100. 0	••••••	100		
Netherlands:					
Rotterdam	Feb. 10-1	Mar. 30	3		Imported.
Nova Scotia : Kentville	Apr. 10		2	1 1	
Philippine Islands:	Apr. 10	•••••			
Manila	Jan. 6-1	Feb. 9	15	0	
Porto Rico:			_	_	
Aguas Buenas	Feb. 1-1	Mar. 5	2	0	
	do do		2 2		
	do		20		
	do		2		
Piedras	do		2		
Ponce	Mar. 16-1	Mar. 31	136	1	
Quebradillas Rio Piedras	Feb. 1-1	инг. Э	1		
San Juan	do		7		
tussia :					
Moscow	Nov. 24-1	Mar. 16	75	16	
Odessa	Dec. 2-1		367	81	
RigaSt. Petersburg	Oct. 1-1 Nov. 25-1	Dec. 31	81	27 14	
Warsaw	Dec. 2-1	Mar. 16		123	
cotland:					
Dundee	Jan. 27-1		16		
Edinburgh	Dec. 30-1		1,490	199	
Leith	Dec. 8-2 Dec. 80-J	lpr. 5	1,490	199	
pain:		V	•		
Rarcelona	Jan. 1-B	Mar. 8		253	
Corunna	Feb. 24-1 Mar. 8-1 Mar. 1-1	far. 2		1	
Malaga	Mar. 8-1	Mar. 23		4	
Valencia traits Settlements :	mar. 1-N	12. 14	••••••	1	
Singapore	Nov. 24-F	eb. 16.		6	
witzerland, Geneva	Mar. 3-M	far. 9	1		
yria:					
Jerusalem	Aug. 2-I		1,500	500	

# Weekly mortality table, foreign and insular cities.

	Î	ģ	ă					Dea	the f	rom	_			
Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping
Aix la Chapelle			44									. 1		
Amherstburg			201							1		1	1	-
AntwerpBahia	Mar. 23	299, 346 200, 000	90	6	ļ		·			. 1	2	2	1	
Do	Feb. 23	200,000									.	.		
Do		200,000 200,000		· ·····		·	·	·	·	· ····		· ····	· ·····	·
Do	Mar. 16	200,000												
Barranquilla		40,000 359,000	20 187		·····		·	ļ	ļ	8	•	· ·····	4	····
Belfast Belize	Mar. 23 Apr. 4	18,000	107											
Bergen	Mar. 21	71,000	18 232		ļ		·	ļ	ļ	5	4	2	5	
Birmingham Bombay	Mar. 30 Mar. 12	524, 307 770, 843	2, 490	214	1196	4		10					. 2	
Bremen	Mar. 16	160, 823	60		ļ	•••••	ļ				2		·	ļ
Breslau Bristol	do Mar. 23	300,000 329,066	198 134	33						2 2		4		10
Brussels	do	570,846	195		ļ			ļ	ļ	1		1	1	1
Budapest Cairo	Mar. 26 Mar. 11	729,000 570,062	814	19				ī	3	2 2	3	1 3	5	i
Calcutta	Mar. 9	681,560	1,187		557	26		85	ļ					
Callao Do		30,000	20 12	5 2			•••••							
Cartagena	Mar. 17	25,000	12	2	ļ									
Do Catania		25,000 124,000	19 59	7	ļ					1				1
Christiania	Mar. 23	225, 800	71	ļ									ļ	2
Cognac		20,400	7 9			•••••	ļ	•••••		ļ		ļ	ļ	ļ
Cologne	do	374, 465	134	14	•••••							3	4	ï
Colombo	Feb. 23	130,000	103		••••	•••••	•••••	•••••		2	•••••	ļ		
Colon Copenhagen		8,000 476,876	7 146	16				•••••			1		6	2
Do	Mar. 23	476, 876	143	28				•••••			2	1	6	1
Crefeld		40,500 106,887	38 40			•••••	•••••	•••••	•••••	4	•••••		9	
Dublin	do	349, 594	253	27						1		1	1	7
Dusseldorf Edinburgh	do	213, 230 309, 472	66 123	•••••	•••••	•••••	•••••	•••••	•••••	1 8	•••••	1 2	8	1 7
Flushing	Mar. 30	18, 991	5						•••••			ļ <del>.</del>		••••
Frankfort-on-the-Main Funchal	Mar. 23 Mar. 24	287, 813 36, 982	95 25	•••••	•••••	•••••	•••••	•••••	•••••		1		2	2
Geneva	Mar. 9	104,044	. 40								1			•••••
Ghent	Mar. 16 Mar. 23	104, 044 168, 030	41 69	12				•••••	•••••	•••••	 1	4	•••••	i
Gibraltar	Mar. 17	24,701	9											
Girgenti	Mar. 23 Mar. 29	24, 428 758, 766	10 835		•••••		ïï	[		3	2			 18
GlasgowGothenburg	Mar. 23	129,000	24	4										ĭ
Hamilton, Bermuda	Apr. 2	2,000	241						•••••	"i	ï	2	"i	3
Hamburg Havre	Mar. 23 Mar. 16	705, 738 119, 470	67	16									i	
_ Do	Mar. 23	119, 470	76	12 2					•••••	2	•••••		2	•••••
Hongkong Karachi	Mar. 2 Mar. 10	257, 000 98, 195	120 147		68	6		7				•••••	ï	•••••
Kingston, Canada	Apr. 8	18, 300	5											•••••
Königsberg Las Palmas	Mar. 23 Mar. 16	187, 897 50, 000	18								2			
Do	Mar. 23	50,000	14											•••••
Lausanne Do	Mar. 9 Mar. 16	46, 407 46, 407	17 12										•••••	•••••
Leeds	Mar. 30	46, 407 488, 814	157							1	2	4	5	•••••
Leghorn Do	Mar. 16 Mar. 23	104, 966 104, 966 461, 519	56 40	2		·····	·····			"i		1	ī	
Leipsic	do	461, 519	188						•••••		i		3	*****
Leith Licata	do	79,650 23,500	27						ï	"ï			1	8
Liege	Mar. 16	79,650 28,500 173,289	75							2 8	4		1	ï
Liverpool	Mar. 23	008,040	298 2, 133				····· ·	····· ·		8	2 6	21	22 51	2 84
London Lyons	Mar. 16	6,781,854 500,000	227							î		2		
Madras Mainz	Mar. 8	452, 518 84, 335	392 36	6		····· ·		11	••••		•••••		7	•••••
AULD-1412	Mar. 23	84,335	30			••••• •			•••••	••••••	•••••	- 4	••••••	*****

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# Weekly mortality table, foreign and insular cities—Continued.

		ģ	B					Dea	ths f	rom	_			
Cities.	Week ended.	Estimated popu-	Total deaths from	Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Messies.	Whooping cough.
Matamoras	Mar. 23 Mar. 24 Feb. 16 Feb. 23	18, 266 107, 000 344, 377 215, 061 215, 061	5 31 505 56 59 53	5 43								1 1 1	9 1	4
Do	Mar. 6 Mar. 16 Mar. 23 do Mar. 16	215, 061 1,000,000 500, 000 246, 258 250, 000 261, 202	519 266 84 74 126	45 16				8		1	13 1	7 1 2 1 1	1	18 2 1 4 3
Odessa	Mar. 16 Mar. 23 Apr. 1 Mar. 23	442,000 214,119 830,000 16,000 2,511,629 106,000	169 77 112 1,091 34 59	5				6	2		1	1 17 1	16	8 1 1
Port Limon Prague Quebec Rotterdam	do Mar. 23 Apr. 3 Apr. 6 Mar. 30	106,000 4,500 197,358 2,000 78,000 334,115	7 187 0	24						2	1 2	2	4	
St. Georges, Bermuda St. John, New Bruns- wick. St. Stephen, New Bruns- wick. Santa Cruz, Teneriffe	Apr. 6 do Mar. 16	2,150 45,000 3,000 33,500	15	5										
Do	Mar. 28 Feb. 9 Feb. 28 Mar. 17 Mar. 16 Mar. 28	83,500 97,111 97,111 300,000 44,985 107,718	12 157 158 67 16 83	25 30 23 23	1	1				8				1
Do	Mar. 20 Mar. 28 Mar. 16 Mar. 31 Mar. 28	107, 713 107, 155 210, 000 176, 818 149, 205 18, 000	29 28 92 81 54 19		•••••				1	1	3	1 6 1	1 1 7	2
Trapani	Mar. 28 Mar. 16 Mar. 30 Mar. 28 Mar. 16	61, 437 176, 456 32, 000 1, 662, 269 686, 010	15 91 39 748 251	14	•••••						14	3 7 3	1 18 2	6 2
Winnipeg Yokohama	do	3, 000 25, 642 189, 455 161, 782	61							1	1	1		

By authority of the Secretary of the Treasury:

WALTER WYMAN, Surgeon-General U. S. Marine-Hospital Service.