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

THE EPIDEMIC DYSENTERY OF THE PAST TWENTY YEARS IN JAPAN.

SIR: In accordance with your instructions, I have the honor to submit the following report on the epidemic dysentery now prevalent and, for twenty years past, annually recurring in this country:

The records of epidemic dysentery in Japan begin in 1878, about which time the Government first attempted to collect statistics of disease; and I am unable to find an account of any serious epidemic, which may reasonably be supposed to have been of dysentery, at any earlier period.

Up to 1880 the disease prevailed only in the southern island of Kiushiu, in the kens of Nagasaki, Oita, Kumamoto, and Fukuoka (see map No. 1). In 1881 it invaded the whole island of Shikoku, with its four prefectures of Yehime, Kochi, Kagawa, and Tokushima. In 1882, crossing the western strait, it attacked somewhat severely the southern ken of the island of Nippon, that of Yamaguchi, whence it gradually advanced to the northeast, and later northward, rather irregularly and occasionally by leaps, though generally moving in the lines of most active intercommunication, until, in 1897, every province of the three large islands of Nippon, Shikoku, and Kiushiu was included in the area of the epidemic.

The territorial expansion of the field of the disease was, however, checked for a brief time, beginning with 1886, at a mountain chain trending from east to west, and lying just south of the ancient capital, Kioto.

In 1890–91 the advance of the disease began again, continuing until, in 1896–97, it was temporarily arrested by the Strait of Tsugar, between Nippon and the northern island of Yezo, or the Hokkaido. This barrier has been passed during the present season of 1899, and there is every prospect of a more or less permanent invasion of the Hokkaido.

For convenience sake, I give herewith a sketch map of Japan (map No. 1), showing the present division of the Empire into fu or municipal jurisdictions, but 3 in number and surrounding and including the great cities of Kioto, Osaka, and Tokyo; and ken, which correspond closely to the prefectures of France. These do not appear on any map of Japan yet printed for the use of foreigners. The date of serious invasion by dysentery is given on the map for each of these geographical divisions, and the, on the whole, steady and persistent progress of the epidemic is thus shown at a glance.

The statistics of the disease from 1878 to November 10, 1899, are as follows (see also chart).

Year.	Cases.	Deaths.	Year.	Cases.	Deaths	Year.	Cases.	Deaths.
1878	1,118	206	1886	24,326	6,839	1894	155,140	38,094
1879	8,322	1,487	1887	16,149	4,257	1895	52,711	12,959
1880	5,047	1,305	1888	26,815	6,576	1896	85,876	22,356
1881	7,001	1,837	1889	22,873	5,970	1897	91,077	23,189
1882	4,330	1,313	1890	42,633	8,706	1898	90,933	22,379
1883	21,172	5,066	1891	46,358	11,208	1899	125,989	26,709
1884	22,702	6,036	1892	70,842	16,844			
1885	47,377	10,690	1893	167,305	41,282			

A total of 1,136,096 cases and of 275,308 deaths, the percentage of mortality for the whole period being 24.23.

It is probable that, up to 1883, the epidemic in the districts then affected was somewhat more severe than as shown in the foregoing table, for the system of reports was not yet fully protected; even now it is certain that the statistics of the Government include but the larger proportion of the cases. In rural districts, which are specially affected by the disease, not only do many cases pass unreported, but deaths by it are likely, through ignorance or desire for concealment, to be ascribed to other causes, and, everywhere, many of the slighter cases escape official notice.

Even without making allowance for understatement, the statistics are sufficiently appalling. An epidemic of annual recurrence, which has since 1890 averaged a morbidity of 92,854 and a mortality of 22,345, or 24.06 per cent, is certainly serious enough to demand every effort on the part of state medicine for its control.

The rate of mortality throughout the whole of the prolonged epidemic has been remarkably constant, ranging between 24 and 27 per cent. The latter higher figure marked the earlier period of the outbreak, 1878–1882, but the real proportional mortality of these years was probably somewhat less, as at that time it was the graver cases only which were officially returned. A study of the statistics of more recent years, not only of the country at large, but those of the provinces one by one, has convinced me that the regular and, so to speak, normal, mortality of the disease as manifested here is close to 25 per cent.

An idea of the proportion in which it has affected the population during the past few years can be gathered from the accompanying map (No. 2), showing the number attacked in 10,000 of the people, in each fu and ken, during the epidemic of 1898, when the central provinces suffered most severely, the small ken of Yamanashi alone having over 10,000.

In the earlier years of the prevalence of the epidemic, neither the Government nor the people realized its present and growing importance, and although a very good code of regulations for the prevention of infectious disease was promulgated in 1880, it was not until 1885 that

the authorities seemed to take up the question of the controlling of dysentery, for the first time, with any energy.

At this time, and for some years later, sanitary administration was entrusted to the hands of the local governments, a policy which proved disastrous, not only as regards the management of dysentery, but repeatedly appeared to be responsible for the admission of cholera from abroad. In 1895 the central government assumed control of all matters connected with state medicine, but difficulties as to appropriations and awkward division of responsibility between the officers of the general government and local authorities, greatly interfered with the work of the sanitary bureau of the home department. A somewhat similar state of affairs is not unknown in the United States.

In 1897 the Regulations for the Prevention of Infectious Disease were revised, and the central government has now direct and complete authority, hampered only by deficiency of funds. Want of money, in many instances, compels the employment of incompetent men in positions requiring trained and experienced sanitarians. Nevertheless, remarkably plucky and skillful work is accomplished even by the ordinary police force, a body which, in Japan, fills many functions.

So far but little success has attended the efforts of the officials to control the disease or to limit its extension; however, as the people themselves are beginning to understand that the enforcement of the necessarily rather annoying rules and restrictions is for their good, and the Government is thoroughly alive to the importance of the matter, we may, I hope, look for better results in the near future.

Etiology and distribution.

The disease has prevailed almost exclusively during the summer and early autumn, although for several recent years it has persisted more or less through October into November, as is emphatically true of the present season.

Low and damp localities are most severely attacked, and rural districts suffer, in proportion to the population, more than do urban.

All ages and both sexes are apparently equally liable to the malady, many cases occurring in young infants.

There is, I think, a period of immunity for those who have experienced an attack, but its length can not yet be determined. A study of the annual statistics of the various provinces throws a little light upon this question of immunity. In 18 of the 23 districts, more or less invaded prior to 1893, I find manifest evidence of a tendency in the disease to recur with severity after a tolerably constant term. Thus, in 12 provinces of the 18, the interval between the dates of greatest prevalence was, distinctly, six years. In 3 this period was seven and in 3 five years. The returns of 3 of these 18 districts showed, in each, 2 instances of a regular interval between the worst outbreaks; in 2 cases of six years each, in the third of seven years each. So far as these data go, they would indicate a period of immunity after attack, varying from five to seven years, the average being six years.

Dysentery does not spread with the rapidity and violence of cholera, but, the germs having reached a given locality, the disease does not cease until the larger proportion of the people there have suffered an attack. As a rule the infection continues very active in the same spot, but from two to four years, a period of comparative immunity following. This latter statement as to a term of exemption is derived from the opinions of the native profession and not from statistical returns.

Susceptibility of the population may be exhausted in the first year's attack, and that locality escape the next season, and, in a province suffering for successive years, the regions of maximum infection vary each year. When the disease returns a second year, in the same place, it appears earlier in the spring than at a primary outbreak, and continues later into the autumn.

The malady is prone to appear first on the slopes of hills or mountains, extending thence to the lower grounds, and from there, perhaps, invading the towns, which are generally situated at a low level.

The epidemic coinciding in its seasonal appearance with the period when certain industries, such as the cultivation of rice and the production of silk, are carried on, the pecuniary loss to the people is, in the case of a severe outbreak, immense. In the small ken of Yamanashi, which suffered very greatly both in 1897 and 1898, the loss to its people in the former year, on silk alone, is estimated at over a million yen, or five hundred thousand dollars, no little sum to a small and poor agricultural population.

The infection of dysentery seems, in some respects, to resemble that of cholera, from which, however, it differs widely in others. Thus it is, unquestionably, often propagated from man to man through the medium either of the evacuations themselves, contaminating food or drink; or, it seems probable, by emanations from the morbid fœces when accumulated in closets or elsewhere; the germs of the malady being, perhaps, capable of transmission through the air to a limited distance.

There are cases in which the infection seems to enter first at the anus, which will be more fully referred to under the symptomatology of the disease. The structure of the Japanese privies, in which the opening for the evacuations is much larger than can be covered by the body, as a result of which there is often a strong upward current of air during the occupation of the closets, would especially favor such a method of infection, particularly if paper is used which has been for a long time in the privy.

Water is, almost certainly, the chief agent in the distribution of the dysenteric poison. This occurs, locally, by the contamination of wells, the principal source of drinking water in Japan, and which are often within a few feet of the closets; or, on a larger scale, by the infection of streams. Japan is an exceedingly well-watered country, thousands of small water courses coming down from the everywhere near mountains toward the sea; and most villages, which generally consist of one long street, have a rivulet running through their length, used, to a greater or less extent, as a domestic supply. Now, night soil being almost the only fertilizer used upon the time-worn lands of the country, and rice, the leading crop, requiring for its culture a constant irrigation of the plots, which often extend in terraces far up the hillsides, each little field receiving in turn the washings of its higher neighbor; the wide distribution of any germs existing in fœces is inevitable. The foregoing, I think, goes far to explain the disproportionate affection of the rural population by dysentery, to which I have already alluded.

It is a curious fact that in the dozen or more epidemics of cholera through which Japan has passed since 1877, although cholera is a water-borne disease, and all the local conditions described apply to it equally with dysentery, the rural population suffered from it in small proportion as compared with the denizens of cities. We have in Japan accounted for this by the assumption that the acid fermentation, to

which the night soil is invariably submitted before being placed upon the fields, promptly kills the coma bacillus.

It may be that further investigation will show that the bacillus of dysentery, be it specific or be it a depraved variety of bacterium coli, is more resistent under these circumstances, as well as more capable of enduring winter temperatures, than is that of cholera. This would agree with the observed peculiarities as to the distribution and persistence of the epidemic now under consideration.

As is the case with cholera, plentiful rains increase the violence of the epidemic where it is present, while floods cause its abatement. In the former case the germs from the closets and surrounding soil are washed into the wells or streams, in the latter are swept clean away.

The spreading of infection is favored by conditions, many of which exist, under similar circumstances, everywhere, but are, perhaps, somewhat specially operative in Japan. The people generally are entirely ignorant of the most ordinary hygienic precautions, and rarely, in the rural districts, have any skilled advice available. They use water, which, in the presence of dysenteric disease, is sure to be contaminated, and entertain and receive visits rather more when disease is in the house than at ordinary times. They keenly dread the enforcement of the regulations for the control of the disease, which are necessarily somewhat onerous, not only imposing restrictions on the patient and his family, but seriously interfering with the employment of the latter, upon the daily continuance of which subsistence may depend. Add to this the effect of religious feeling, antagonized by the prohibition of the usual ante and post-mortem ceremonies and funeral feast, and inducing, in case of sudden outbreak of disease, the organization of a local religious festival with the idea of placating the supreme powers, which gathers the people from the entire neighborhood, often from localities not yet infected, and is accompanied by feasting, intoxication, and miscellaneous intercourse of sick and well. It is evident that contagion is likely to be widely distributed, and that concealment of the presence of the malady must be very frequent.

Symptoms and course of the disease.

In many instances the distinct manifestation of the malady is preceded by general malaise and anorexia, sometimes accompanied by vomiting, chills, or cramp in the limbs. In other cases the attack begins as a catarrhal diarrhea, which speedily becomes mucous and more or less bloody, the stools at the same time being less copious and more frequent. Even during the catarrhal stage the sigmoid flexture may sometimes be felt to be thickened and hardened. Very many cases are frankly dysenteric from the first, the earlier evacuations mucous and hemorrhagic, and occasionally motions of this kind will, at the very onset of the illness, immediately precede a perfectly normal and healthy stool, suggesting that in these cases the infection has entered by the anus. (See note.)

NOTE.—An epidemic and highly infectious gangrenous disease of the rectum, which may or may not be closely allied to dysentery, has been described by Sigaud (Du Climat et des Malad. du Brezil, Paris, 1844), and Brett (Indian Tribes of Guiana, London, 1868), as occurring in South America; and by Corney, (Trans. Epidemiological Soc. 1887-88), as a serious cause of death in Fiji and other South Sea islands. (See Davidson, Hygiene and Diseases of Warm Climates, Edinburgh, 1893.) This malady, as a rule, begins at the anus itself, which becomes immediately dilated, and progresses rapidly upward until death occurs. I have met with other, and more recent, allusions to this interesting form of rectal disease but am, at present, unable to refer to them. It is of interest in connection with the form of dysentery, and the presumed method of infection, which I have metioned above.

In all cases, as the malady progresses, the stools increase in number though, individually, very small in quantity, until they may pass as often as fifty, sixty, or more times in the twenty-four hours. Hemorrhage is often very profuse even in the first days of sickness, so that the patient becomes very anæmic.

Should the disease continue in severe form, so-called croupous or diphtheritic infiltration of the mucous membrane may occur, followed by ulceration and sloughing, this being rendered externally manifest by the dark color and gangrenous odor of the discharges, which often contain fragments of necrosed mucosa.

Ulcers once established, the stool becomes more or less purulent, a condition that, in chronic cases, may be maintained for many weeks or months.

Pain, in varying degree, is felt in the lower abdomen from the first, in the milder cases temporarily relieved by an evacuation, in the severer forms of the disease almost incessant and excruciating.

Tenesmus is universal and often unbearably severe and constant, continuing, sometimes, after practical recovery.

Tenderness on pressure over the region of the colon exists in all cases, in some limited to the sigmoid tract, in others including the greater part or the whole of the intestine.

As a rule, the earlier manifestation of the malady occurs in the descending colon or upper rectum, and its progress upward can be traced, as the bowel is further involved, until, perhaps, the whole of the large intestine and a portion of the ileum is attacked. Exceptional cases are met with in which the symptoms point distinctly to a descending enteritis, beginning at the coecum and advancing toward the rectum.

The temperature is almost always more or less elevated during the first four or five days of the attack, ranging from 38° C. to 39.5° C., and irregularly fluctuating, with a tendency to an evening rise. In very acute cases the fever may reach 40° C., or even more. After the first five days, however, the temperature often becomes subnormal, from 36° C. to 36.5° C., and continues thus till death, recovery, or the occurrence of some accident in the progress of the case, such as septic irritation which induces a rise in the bodily heat.

The pulse at first varies with the temperature, and later in frequency, volume, and action corresponds to the severity of the special case.

In some instances not very rare the nervous system seems overwhelmed by the direct action of a toxine very early in the attack, and the patients die in collapse, having had comparatively few stools, little or no hemorrhage, and long before their prostrate condition could be brought about by the relatively slow process of exhaustion. I have seen cases at the third to the fifth day of their illness the appearance and general condition of which would immediately suggest cholera to an experienced observer, an impression which would be confirmed by the temperature, generally far below normal, as well as by the small, weak, and frequent pulse, though the specific symptoms and post-mortem appearances clearly proved the disease to be dysenteric. This early intoxication I believe to be rarely or never met with in amœbic dysentery.

Another class of cases which, even more than those just mentioned, deserve the epithet malignant, combine the deep depression of direct intoxication with frequent and exhaustive discharges, active and extensive hemorrhage and early gangrene of the mucous membrane, and speedily prove fatal, delirium coming on before death.

In the greater number of fatal cases death takes place in from seven

to ten days. When recovery occurs, the duration of the attack is, usually, from three to four weeks, but should the malady become chronic its continuance is indefinite.

Chronicity is, however, not a very common event of the acute epidemic dysentery of Japan, neither are complications of any kind so frequent that it can be said that the disease specially tends to any such other than those due, perhaps, to contiguity or to accident, such as gastritis or peritonitis.

Abscess of the liver especially, so prone to occur as a sequel of tropical or amœbic dysentery, is so rare, if it ever occurs, after the form of enteritis now under consideration, that I have, after diligent inquiry, been unable to learn of a single undoubted case, and certainly I have never seen one.

From the foregoing it will be seen that the course and symptoms of epidemic dysentery, as existing here, do not essentially differ from those of the same malady elsewhere.

Pathological anatomy.

Necropsis are, in Japan, obtained with great difficulty, and the number of dysenteric cases which have been examined post-mortem is not large. Still, such investigations as have been made, have been conducted by able and qualified men, and the cases indiscriminately selected. The results, probably, afford a fair idea of the average appearances, which, perhaps with the exceptions noted below, are those of acute epidemic dysentery the world over, and which, in a report of this nature, it is scarcely necessary to recapitulate.

The extensively undermined ulcer, so graphically described by Councilman and Lafleur, resulting from extensive destruction of the submucosa is, however, seldom met with, the destruction of the tissues appearing to progress from the surface downward, or to be the effect of general interstitial necrosis from croupous infiltration. As elsewhere, it is the summits of the folds of the large intestine, or those of the valvulæ conniventes of the smaller gut, when this is involved, that are generally earliest attacked. The follicular, pustule-like ulcer is very uncommon. Perforation is unusual, the muscular coat offering a strong resistance to the diseased process.

With regard to the healing of the ulcers, Dr. Shiga, as a result of his observations, is inclined to think that the marked degree of puckering and general contraction of the tissues in cicatrization, perhaps resulting in stricture of the intestines, which is so often met with as a result of dysentery elsewhere, perhaps of that due to amœbæ in particular, is the exception in the disease as at present met with here, even when it has become chronic. Several specimens, which Dr. Shiga was good enough to show me, go far to confirm this conclusion.

The mesenteric glands, corresponding to the affected portion of intestine, are frequently enlarged and hardened and may suppurate; or, if life is sufficiently prolonged, even become caseous. I am under the impression that, in amœbic dysentery, these glands more often escape attack.

Dr. Shiga has found in the mucous membrane about the ulcers the baccillus to which he ascribes the disease.

Bacteriology.

In attempting an intelligent résumé of the more important bacteriological work that has recently been done in connection with epidemic

dysentery, I find myself heavily handicapped by the want of any even approximately complete library of reference, being compelled to rely almost entirely upon my own small resources. It is thus very probable that investigations of importance may have escaped my notice. For this, if so, I beg that due allowance may be made.

Disregarding the earlier attempts to detect the material infection of dysentery, the more as in few of these was there any distinct differentiation of the amœbic from other forms, we find that, in 1891, Prof. M. Ogata, of the University of Tokyo, isolated a bacillus from the stools of dysenteric patients which, in culture, produced dysenteriform symptoms and lesions in animals. This bacillus he does not seem to have specifically identified. (Centralblatt für Bacteriologie und Parasitenkunde, 1891.)

Celli and Fioca, and Celli and Scala (Hygien. Institut. Rom. Univ. 1895, and Annal. Exper. Hygiene, n. s., Vol. VI. fasc. 2.), published researches, in their opinion, tending to show that the bacterium coli, perhaps pathogenically modified, is, as indicated by the earlier investigations of Chantemesse and Widal, corrected by Baumgarten and Kartulis among others, the specific cause of dysentery in man. The results of this work of Celli and his colleagues were, later, confirmed by Del Pino and Alessandro. Celli and Fioca have continued their labors, and, in 1897 (Centralblatt für Bacteriologie, 1899), describe the separation of a toxine from cultures of their so-called bacterium coli, var. dysenteriæ, with which they endeavored to immunize dogs and donkeys, succeeding best with the latter, and, after, used also a toxine derived from the same bacillus by their colleague, Valentiti, and which, in carnivora, produced characteristically dysenteric symptoms, again using donkeys as the subjects for immunization. With serum obtained from these animals they treated 7 cases of dysentery, of acute and epidemic nature, with recovery of 6 and death of the 7th, which was complicated by mitral disease and nephritis. Of 4 cases of corresponding severity, treated at the same time by ordinary methods, 3 died.

They tested the agglutinative reaction, upon cultures of their bacillus, of the serum of immunized animals, and of that of a patient just recovered from dysentery, with positive results in both cases. Control experiments with the serum of the healthy were negative. Celli has examined the bacillus dysentericus of Shiga, and compared it with his bacterium coli, var. dysenteriæ, and, apparently, believes the two to be identical, though differing in some reactions. It is for this reason that I have given the foregoing résumé of his work.

Dr. Kiyoshi Shiga, assistant to Professor Kitasato, and in charge of the laboratory of the Tokyo Institute for the Study of Infectious Diseases, has published (in Saikin Gakku Zasshi, Tokyo, December, 1897, and in Centralblatt für Bacteriologie, Band XXIV, Nos. 22, 23, and 24, 1898) the results of his studies of dysentery during the preceding summer and autumn, results which he believes his later investigations, to the present time, have fully confirmed.

Dr. Shiga concludes that he has found the specific cause of dysentery, at least of that now ravaging Japan, in a short rod of about the same size as bacterium coli communis, and, morphologically, very similar to the bacillus of typhoid, having, like the latter, a tendency to produce forms of involution. It is usually solitary but, sometimes, united in pairs, and, with methylene blue, both ends stain thoroughly. After cultivation for some time, however, the staining may be rather irregular. It is easily decolorized by the method of Gram, and does not form spores. It is killed by exposure to a temperature of 68° C. for

twenty minutes. The bacilli show no active movements, and no flagella have yet been demonstrated. It does not liquefy gelatin, and grows, at ordinary temperatures, but slowly, but very rapidly at the temperature of the blood. The culture media should be slightly alkaline.

In gelatin plate cultures small, dewdrop-like colonies develop at the end of twenty-four hours, which, under the microscope, are seen to be of regular outline and spherical form, and show, by transmitted light, a granular appearance and a yellowish color. Although these colonies develop day by day, they do not form superficial thin pellicles, like the bacterium coli commune, and surface and deep colonies show no special differences.

In stick culture in gelatin, a greyish white growth of crowded colonies forms along the line of puncture, and no liquefaction occurs.

On nutrient agar-agar, in an incubating oven, large solitary colonies are evident at the end of twenty-four hours, which are bluish white by transmitted light, rounded and moist. If, with a needle, a little material is scraped from their surface, and a stained preparation is made, regularly formed bacilli will be seen. After two days each colony becomes surrounded by a transparent border, which gradually increases in width, and the forms of the bacilli become irregular. Under these conditions they do not stain clearly or uniformly, showing a dotted appearance at their ends.

On glycerin agar-agar the growth is not so favorable as on simple agar-agar. Serum also is not a suitable medium.

Stick culture in grape sugar agar-agar produces a greyish-white growth in line of puncture without development of gas.

On potato, in the incubator, growth is not very evident at the end of twenty-four hours, but, on careful examination, the surface is seen to be dry, white, and lustrous, becoming yellowish-brown in twenty-four hours more, and at the end of a week showing a thick brownish-pink film.

In bouillon the bacillus grows well and the liquid becomes turbid, but no membrane is formed on its surface.

In peptone solution there is no indol reaction.

In litmus lactose the color becomes reddish at the end of twenty-four hours, and remains so permanently. In litmus lactose peptone the red color appears only after the lapse of forty-eight hours.

The bacillus does not coagulate milk or ferment glucose.

With the blood serum of patients suffering from dysentery, or that of those who have recently passed through that disease, agglutinative reaction is well marked; but fails to occur with the serum of the well, those suffering from other maladies, or with the several curative serums, always excepting that of animals immunized to the dysenteric poison, recently produced by the investigator.

Dr. Shiga calls the bacillus above described "Bacillus Dysentericus."

Celli has recently sent to Shiga a culture of his "Bacterum Coli, var. Dysenteriæ," and the latter has examined it and compared it with his own bacillus. He informs me that the culture of Celli differs in its reactions from his, and that the former appears to him to be of bacterium coli commune only, a conclusion in which he is supported by Professor Kitasato.

An important result of the studies of Dr. Shiga, in this direction, is his production of an antitoxic serum for the treatment of dysentery. Using agar-agar cultures twenty-four hours old, dried in vacuo, as the basis of his immunizing fluid, he has experimented, for more than two

years, on various herbivora, chiefly the horse and sheep. He finds the latter to become most quickly immune, requiring but one year's treatment, while the horse demands injections for two years' time before ceasing entirely to react to the poison. Once immunized, however, the horse yields a more powerful antitoxin than does the smaller animal. The process of immunization does not, in the herbivora, produce dysenteric or other intestinal symptoms or lesions. The effect of the injections is shown by malaise, loss of appetite, and rise of temperature, at first to 40° C., consequences which, little by little, fail to appear as the treatment is continued.

The serum is prepared, with the usual precautions, from the blood of an immunized animal, and is used by Dr. Shiga, on the human subject, by subcutaneous injection to the amount of from twenty to forty cubic centimeters in twenty-four hours, in divided doses, the quantity given being proportioned to the gravity of the case. As a rule, no injections are required after the second or, occasionally, the third day of treatment, although, in rare cases, the treatment must be longer continued. No manifest reaction takes place at the time of, or soon after the injection, but, in a considerable proportion of cases, transitory urticaria, chiefly in the neighborhood of the punctures, but, sometimes, spreading quite extensively, appears a week later. This is the only unpleasant consequence of the treatment that has been met with, and is, after all, a trifle.

The effect of the serum treatment, more especially upon the number of the stools, is well shown in the accompanying charts taken at random from the records of Dr. Shiga.

Up to November 1, 1899, Dr. Shiga has treated with serum, cases as follows: 1898, in Laboratory Hospital, 65 cases, death rate, 9 per cent; 1899, in Laboratory Hospital, 91 cases, death rate, 8 per cent; 1899, in Hirowo Hospital, 110 cases, death rate, 12 per cent.

During the same period of 1899, there were under ordinary treatment in Tokyo: At Honjo Hospital, 166 cases, death rate, 37.9 per cent; at Hirowo Hospital, 53 cases, death rate, 37.7 per cent; at Komagome Hospital, 398 cases, death rate, 34.7 per cent; in private houses, 1,119 cases, death rate, 28.5 per cent.

The reports of a comparatively limited number of trials of the serum, made elsewhere than in Tokyo, are also most favorable to its efficiency.

It appears, therefore, that Dr. Shiga's therapeutic work strongly confirms his microscopic and bacteriologic identification of the cause of the existing epidemic.

Whether the serum treatment of dysentery can be rendered sufficiently easy and inexpensive to allow of its very extensive use under existing conditions in Japan, remains to be seen. At present the first cost of the necessary animals and the expense of keeping them during the long term demanded for their immunization, and the comparatively large doses of the serum required, render it impossible that this method of treatment can be largely adopted save by direct and munificent governmental assistance, an attempt to secure which will, undoubtedly, be made before long.

In conclusion, referring to your query as to whether, in my opinion, any of the cases returned as dysentery may be of plague or cholera, I would answer as to plague, emphatically, no. As concerns cholera, it may have been that during seasons when epidemic cholera was present as well as dysentery, which has not been the case since 1894, some slight confusion may have arisen, but only in rare and single cases

where, perhaps, the cholera was hemorrhagic in character, or the dysentery of the fulminating and collapsing type to which I have already alluded. Even the rank and file of the Japanese medical profession are thoroughly familiar with the symptoms of the two diseases, by prolonged and repeated experience.

I wish to express my acknowledgments to Dr. Hasegowa Tai, director of the sanitary bureau of the Imperial Government; to Professors Baelz, Ogata, and Kitasato; and to Drs. K. Shiga and K. Rokkaku, for substantial assistance in the preparation of this report.

Respectfully,

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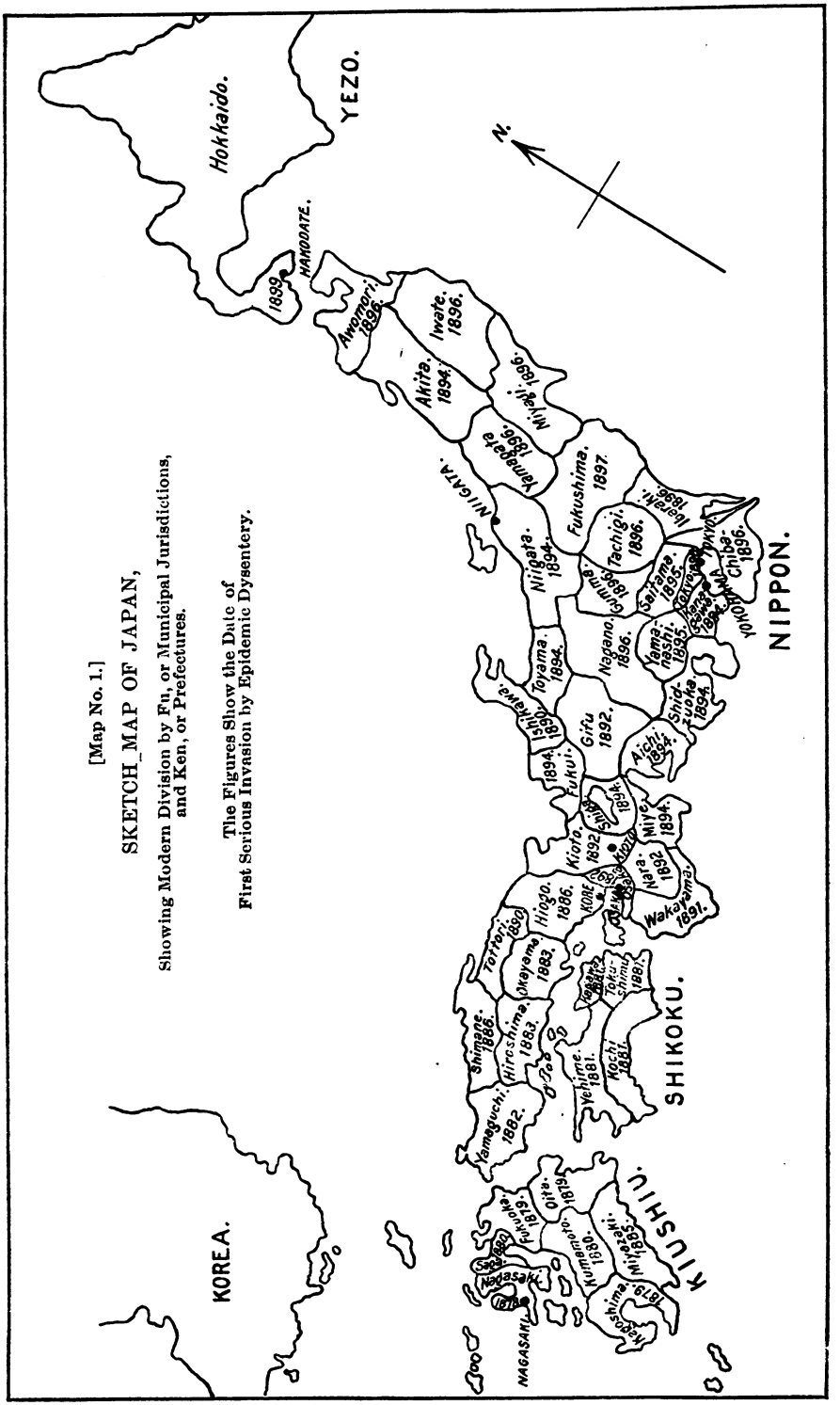
[Map No. 1.]

SKETCH MAP OF JAPAN,

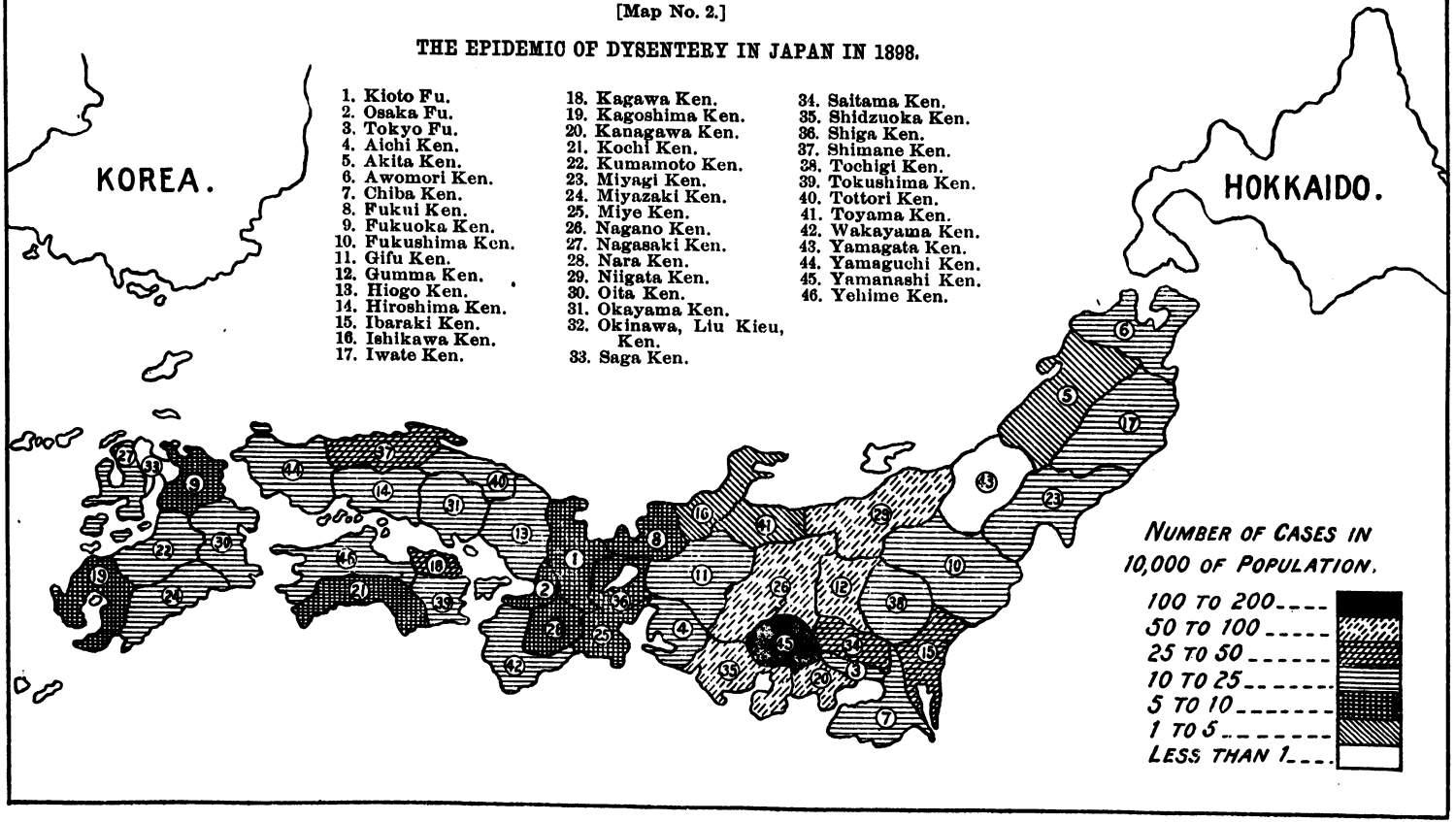
Showing Modern Division by Fu, or Municipal Jurisdictions, and Ken, or Prefectures.

The Figures Show the Date of First Serious Invasion by Epidemic Dysentery.

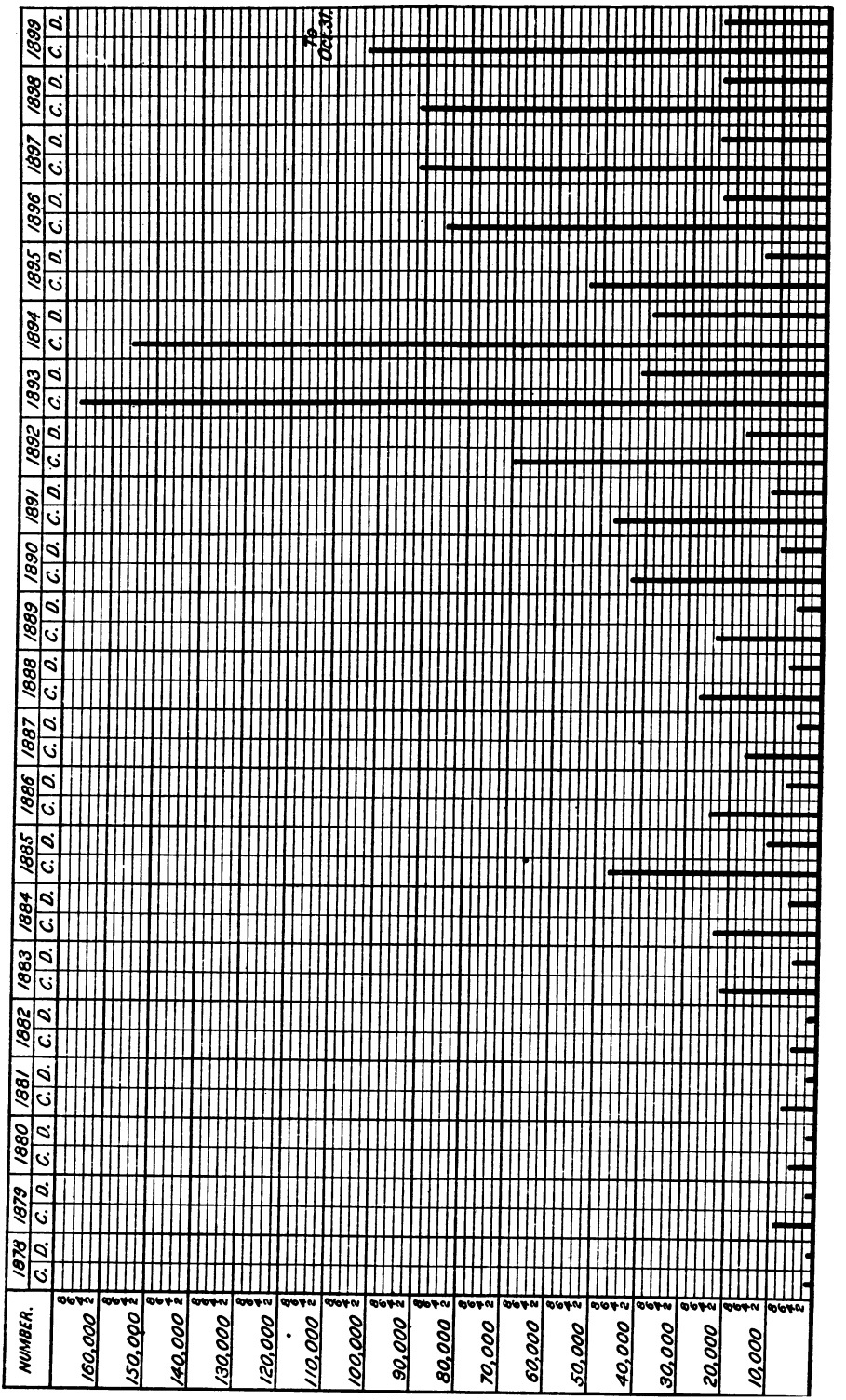


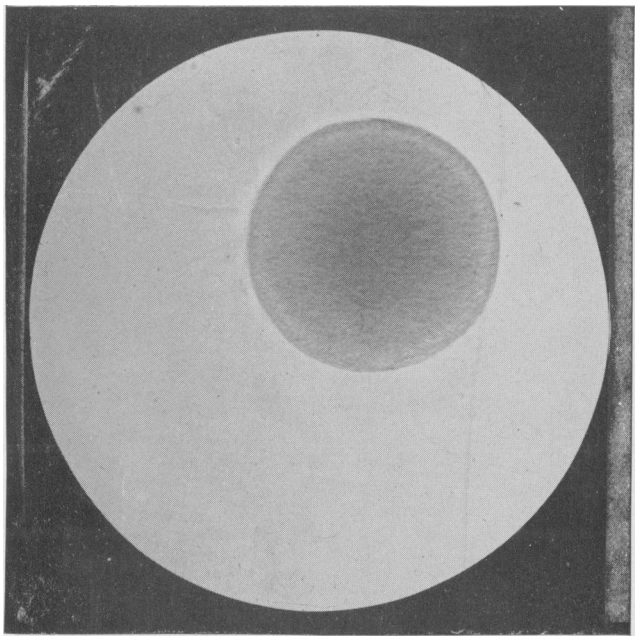
[Map No. 2.]

THE EPIDEMIC OF DYSENTERY IN JAPAN IN 1898.

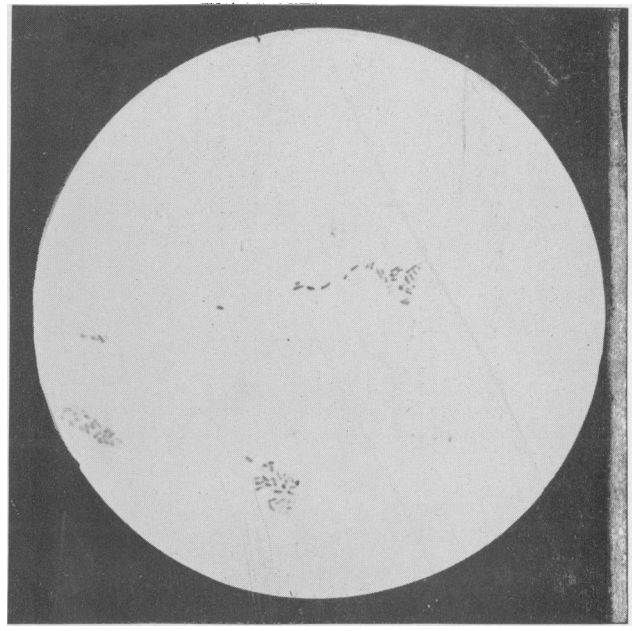


CASES OF AND DEATHS FROM DYSENTERY IN JAPAN, 1878 TO 1899.

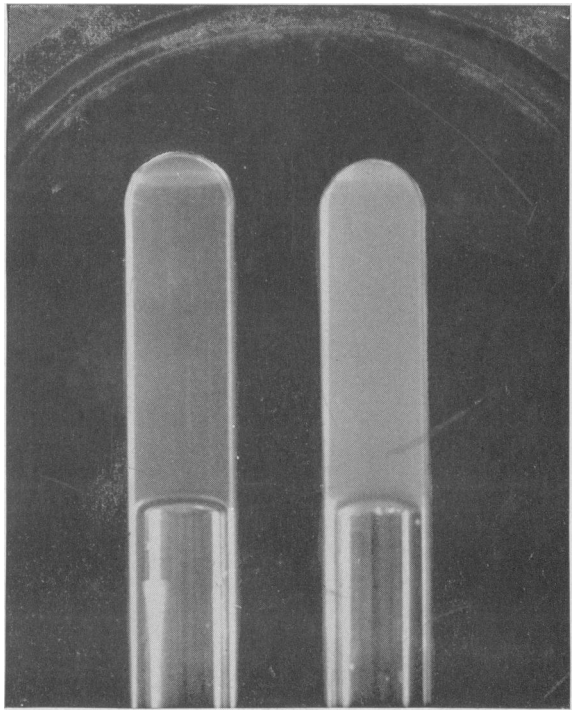




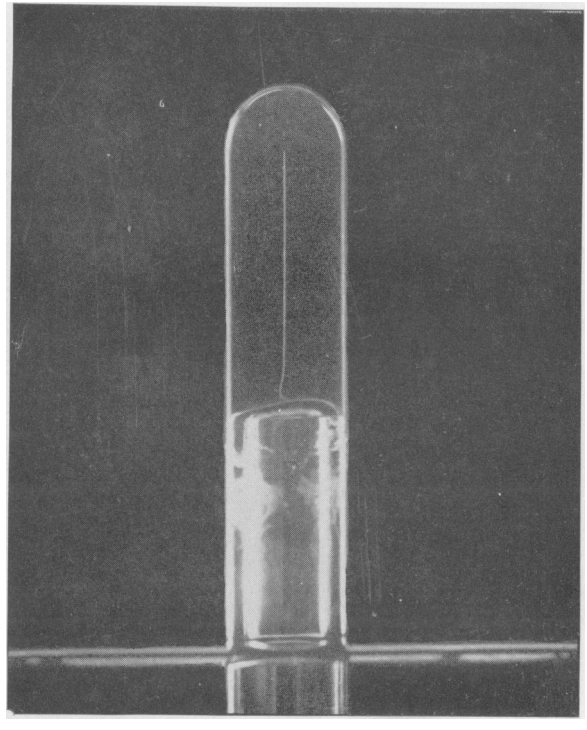
Gelatine Plate Culture, third day.



Bacillus Dysentericus.



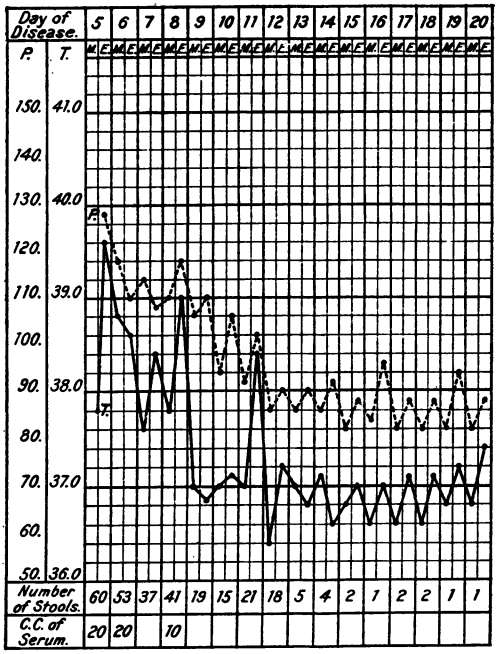
1. Agglutinative Reaction of Serum of Patient with Dysentery, on Culture in Bouillon.
2. Control Experiment with Serum of Health.

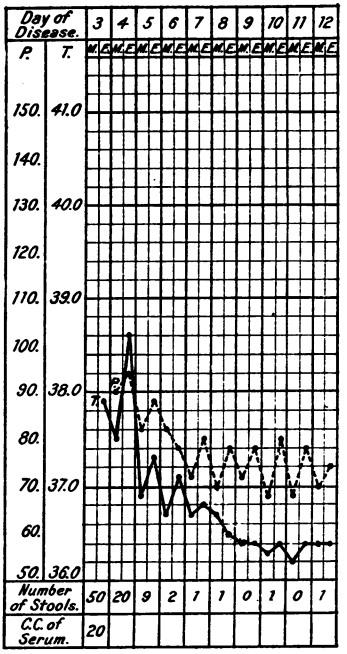


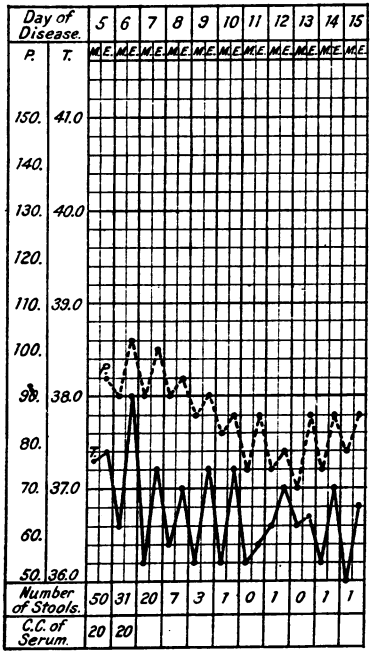
Stick Culture in Gelatine.

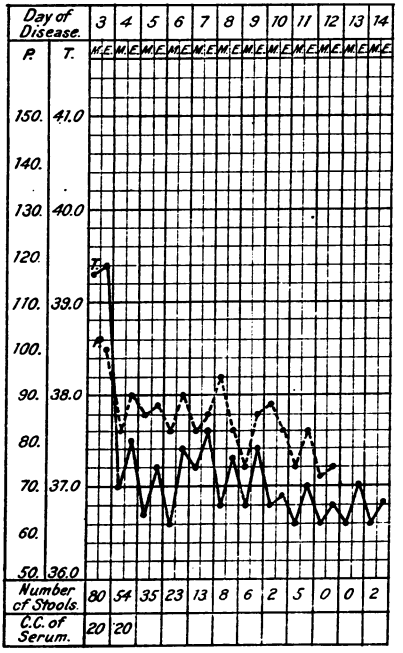
TREATMENT OF DYSENTERY BY DR. SHIGA'S SERUM.

Serum treatment of dysentery.—Recovery.









Sewerage system of Brunswick, Ga.

BRUNSWICK, GA., *December 23, 1899.*

SIR: I have this morning received a request from your office—under initial McE.—that I should forward to your office copies of any plans and specifications I may have of the new system of sewerage introduced into the city of Brunswick. The plans of the system are all drawn at a scale of 30 feet to the inch, and are very elaborate and bulky, as the aggregate length of the system is over 14 miles. I have two copies bound in a heavy book. Should you desire it I could copy, on a reduced scale this work, but it would take some time. If the object of the department is only to ascertain the sanitary theory of the system, I take pleasure in giving an accurate account of the system and the manner of its working.

First. The system is one in which the sewage is first led by one or more mains placed generally 12 feet below the ground into a reservoir or well; thence it is pumped and discharged into the river, which river is a salt (or nonpotable) one. The width of the river is 700 feet, and its general depth 20 to 25 feet. This pumping system was necessary on account of the low elevation of the city, which, had the gravity system been adopted, would have had to encounter the tide-locking at high water or twice in twenty-four hours. These mains, 3 in number, are of iron (cast) 24 by 16 inches, and 13 inches in diameter. At the intersections of all streets with these mains is constructed a manhole 4 feet in diameter, and rising to the surface with close fitting iron covers. From these manholes diverge the laterals or sewage collectors, which by "Y's" connect to houses on each side of the street. These laterals are 8-inch terra cotta with Stanford joints, and are 5 to 6 feet under the soil, and so from the house the sewage passes to the laterals, and from the laterals to the mains, and from the mains to the pumping well, from the well into the iron discharge pipe, and into the river 75 feet beyond low watermark, and into the 30 feet of water.

Parallel to all mains and laterals and at equal depths are laid 3 by 5 inch draining tiles, which empty the subsoil water into the same manhole as its twin lateral. At the head of each lateral is constructed a flush tank of 160-gallon capacity, fitted with a Rhodes-Williams automatic siphon. A water supply pipe is fitted into the tank which runs continually. As soon as the tank fills the siphon discharges at once the 160 gallons into the lateral, thus clearing and scouring out the pipe. I regulate the faucet to the water pipe so that it discharges 3 times in every twenty-four hours. The subsoil addition to the sewage pipe has, to my own knowledge, lowered the level of retained water more than 2½ feet since its inauguration. No storm water or discharges from roofs, machinery, or manufactories is permitted to enter the system—its duty is only to get rid of sewage, bath and kitchen sinks, and such wastes.

The pipes, both iron and terra cotta, are laid on piles, 2 to each joint; the "Y's" for house connection are placed 20 feet apart on each side of the pipe, so that there may be no necessity for future breaking into the sewage for making new connections. Only one house is allowed to each "Y." The grade of the city sewer depends upon its diameter; the fall is always 1 foot to half the diameter, multiplied by 100 feet. For instance, 8-inch sewer—8″ divided by $2 = 4 \times 100 = 400$. The fall is 1 foot to 400 feet.

If you desire, I can make the copies if so instructed.

Respectfully, CHARLES S. WYLLY,
City Engineer.

REPORTS FROM THE MEXICAN BORDER.

Laredo, Tex., December 26, 1899.—I have the honor to submit the following report for week ended December 23, 1899: Immigrants inspected and allowed entry, 26; immigrants and indigent passengers vaccinated, 8; total number railroad passengers inspected from Mexico for week reported, 471.

Respectfully,

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

Presidio, Tex., December 18, 1899.—I have just completed 250 miles of inspection along the Rio Grande, said trip being made on horseback, and requiring a week's time.

I find that smallpox still exists all along the river on the Mexican side, but that the American side is getting into pretty fair condition, there being 2 cases at Polvo, 2 at Rindoso, 18 at Pilares, and some 10 cases in the Capote Cañon. The cause of infection in the Capote Cañon can be traced to Pilares. Several Mexicans living in the Capote Cañon went to Pilares to see relatives who were suffering with smallpox at the time; they then returned to their homes in the Cañon and after the required period had elapsed were taken down with smallpox. The people living in the Cañon then visited their sick neighbors, with the natural result, namely, taken down themselves with the disease.

The vaccination done by the United States sanitary guards all along the American side of the river was very efficient, and I have no apprehension of the disease doing any damage among those vaccinated. The cause of the trouble is visiting. People from the other side consider it their highest duty to visit the Mexicans on this side. The length of a visit varies according to circumstances; that is, if the visitor doesn't develop smallpox he stays about a week; when he takes down with the disease, he stays until either death or recovery relieves him. The country is rather excited even yet over the death of United States Sanitary Guard Wallace, and all along the river, while making my tour of inspection, my men and I were closely watched, and, although we traveled very quietly and took obscure trails, our arrival was expected long before we reached the little towns along the river. Wherever we went a crowd was in waiting for us.

Respectfully,

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

CIRCULAR REGARDING VACCINATION.

SAN FRANCISCO QUARANTINE STATION,
Angel Island, Cal., December 16, 1899.

GENTLEMEN: I beg to invite your attention to Article II, paragraph 4, page 26, of the United States Quarantine Regulations of April 26, 1894, which is as follows:

"All passengers occupying apartments other than first or second cabin shall be vaccinated prior to entry, unless they can show that they have (had) smallpox or have been successfully vaccinated, or been detained in quarantine for fourteen days."

It has frequently been observed that quite a number of the steerage passengers show no evidence of a successful vaccination, particularly those coming from Japan.

In order to insure a successful vaccination of the steerage, and those of the cabin who have been exposed to the infection of smallpox, I

would suggest that you cause to be issued the following instructions to the surgeons of your vessels:

(1) All the steerage, and those of the cabin who have been exposed to the infection, should be vaccinated at the time of embarkation or as soon thereafter as is practicable.

(2) To revaccinate on the 6th day all those who show no evidence of a successful vaccination.

(3) In order to insure the best results, only glycerinated vaccine virus should be used.

(4) That the crews of the vessels be vaccinated.

Trusting that the above scheme will meet with your approval and it may be practicable to carry it out, I am,

Respectfully,

J. J. KINYOUN,
Surgeon, U. S. M. H. S., Quarantine Officer.
STEAMSHIP COMPANIES AND TRANSPORT SERVICE, *San Francisco, Cal.*

Smallpox in Washington, D. C.

WASHINGTON, D. C., *December 28, 1899.*

SIR: I have the honor to report that 1 patient was discharged from the smallpox hospital to-day, cured. No new cases having been dis covered, there are, therefore, 5 cases of smallpox, all confined to the hospital.

Respectfully,

H. C. MCLEAN,
Acting Health Officer.

Smallpox in Indian Territory.

DEPARTMENT OF THE INTERIOR,
Washington, D. C., December 27, 1899.

SIR: The Department is in receipt of your communication of the 18th instant, inviting its attention to a copy of a letter inclosed therewith which has been received by the Surgeon-General of the Marine-Hospital Service from the State health officer of Texas, and you request "information as to what steps, if any, are taken by your Department in the Indian Territory to prevent the spread of smallpox."

In reply, you are advised that on the 18th instant the Commissioner of Indian Affairs transmitted to the Department copies of letters from the United States Indian inspector for the Indian Territory, with copies of letters from the Indian agent at Union Agency, Ind. T., to the inspector, and letter of instructions to the medical board of the Choctaw Nation by the principal chief thereof, and recommending that Congress be requested to appropriate the sum of $50,000 to be disbursed under the direction and personal supervision of the United States Indian inspector for the Indian Territory for the purpose of stamping out smallpox among the white people in the Indian Territory. Said recommendation was approved by the Department, and an item submitted through your Department to be embodied in the urgency deficiency bill making said appropriation.

The Choctaw Nation has appropriated the sum of $10,000 for the purpose of eradicating said disease from the Indian citizens of said nation.

A copy of said communication from the Commissioner of Indian Affairs, together with copies of the letters referred to therein, is inclosed herewith for your information.

Respectfully,

THOS. RYAN,
Acting Secretary.

Hon. SECRETARY OF THE TREASURY.

[Inclosure.]

DEPARTMENT OF THE INTERIOR,
OFFICE OF INDIAN AFFAIRS,
Washington, D. C., December 18, 1899.

SIR: I have the honor to submit herewith copies of letters from the United States Indian inspector for the Indian Territory, together with letter from the Indian agent at Union Agency, Ind. T., to the inspector, and letters of instruction to the medical board of the Choctaw Nation, by Hon. Green McCurtain, principal chief.

The inspector states that smallpox was found some time ago to exist among white men employed in the coal mines near South McAlester, in the Choctaw Nation; also in the town of Atoka. The authorities of said nation were at that time consulted, and as their tribal government still exists, they advised the inspector that they were desirous and able to take necessary precautions to prevent a further spread of the disease in their own country.

The Choctaw board of health have the matter in charge, in said nation, and the inspector states that he has cooperated with them in providing necessary police assistance, and otherwise assisted them in enforcing orders which they (the medical board) have issued from time to time.

At the suggestion of the inspector, the Choctaw council appropriated $10,000 for the purpose of vaccination *among their own citizens* and preventing a further spread of the disease among their own people.

The principal chief, in letter to the board of health dated November 7, states:

"You will understand that the purport and intention of the act of council appropriating a certain sum to be used by and at the instance of your board in smallpox cases, was for the protection of citizens of the Choctaw Nation, and not noncitizens. I would suggest that in all your ministrations and acts of precaution against the disease you make no contracts or promises for the payment of any of this money except for the use and benefit of Choctaw citizens. In the mining camps where the infection is greatest you will observe that there are very few Choctaws afflicted, and in nearly all of them it is white people that have the disease. It would be well for you to always ascertain whether or not there are any Choctaws afflicted before authorizing the payment of any money from the aforesaid appropriation.

"It is the charge of the United States Government to take care of its own citizens; this Nation to take care of the Choctaws."

Again, under date of November 10, in his letter to the medical board, he states:

"The intention of this appropriation is for the protection of the citizens of the Nation, and can not be properly applied for the protection of others than Choctaw citizens. As to the propriety of handling this fund for the benefit of the Choctaw citizens—that is a matter trusted to your skilled and better judgment. Primarily, the Choctaw people are not responsible for the prevalence of this epidemic now among us; but the question of responsibility is waived in the effort to check the ravages of the disease and prevent its further spread.

"However, since the infection is greater among the mining class and noncitizen element than among the Choctaw people, it would not be right and just to shift the expense of all quarantine measures and other precautionary incidentals on to the Choctaw government, except as in case of protection to the Choctaws. You should therefore, in providing quarantine, detention camp, and guard service, be careful to note whether or not any Choctaw citizens are beneficiaries of such precaution; and if not, no part of the fund appropriated by the act of council referred to should be obligated for such expenses. Where the infection is confined to mining camps at which no Choctaw citizens are present, you should, if your services are needed there, inform the companies that the funds on which you are operating are not available for any other purpose than that of protecting citizens of the Choctaw Nation against the smallpox disease, and that if your services are required by them they should make provision for the payment of all expenses attached. Should the companies refuse to bear such expenses, it would be well for you to call the attention of the United States Indian agent to the matter and state to him that you have no available funds for such cases and ask him to tender the aid of the Department."

The United States Indian agent, under date of November 23, states that he has visited South McAlester, and finds that smallpox exists in South McAlester, Alderson, Hartshorne, Mine No. 2 at Wilburton, Calvin, and Atoka, all in the Choctaw Nation; that one central camp has been established for the different mining towns about one and a half miles east of Alderson, Ind. T., in which cases from Hartshorne, Alderson,

Mine No. 2, Krebs, and South McAlester are detained; that the present number in detention camp is something over 200.

The total number of cases at the different camps in the Choctaw Nation is about 350, and the number of patients actually sick and down with the disease is 75 or 80, and the balance detained in camp were actually exposed.

The population of the country contiguous to the towns in which smallpox exists numbers something near 25,000 persons, and it would be impossible to determine the number exposed.

The agent states that the disease first made its appearance last June, and the physicians in charge at the different mining camps declared it was some other disease, and the town and coal companies endeavored to keep the matter from the public, and in this way the disease gained a firm hold. The agent also states that Captain Ellis, the head of the agency police force, has rendered signal service, working night and day in the endeavor to prevent the spread of the disease and to stamp it out; that the Choctaw medical board and Captain Ellis have worked harmoniously together, but that the disease is now spreading to such an alarming extent that he feels his inability to cope with it alone, and must have assistance at the earliest practicable date.

It is also seen from the inclosed correspondence that, with the exception of the cases at Atoka and South McAlester, all have been noncitizens of the Choctaw Nation.

The medical board, in their letter to the United States Indian agent, state that in their opinion it will cost not less than $50,000 to stamp out the disease among the noncitizens, and as a great deal of indebtedness has already been incurred, largely for the care of noncitizens, which the governor of the Choctaw Nation says will not be paid by the nation, and the towns and coal companies will not assist (having refused the medical board and Captain Ellis' assistance); that many of the noncitizens are too poor and depend entirely upon their labor for the support of their families, and as cold weather advances the spread of the disease is more rapid, and there being no funds at the disposal of the office to combat it, I most respectfully ask that the matter be referred to Congress with the request that an appropriation of $50,000 be made for the purpose of stamping out the disease among the white people in the Indian Territory, to be disbursed under the direction and personal supervision of the United States Indian inspector for Indian Territory.

It might be well to state that as all of the Choctaw funds (i. e., "Fulfilling treaty with Choctaws," "Interest on Choctaw general fund," "Interest on Choctaw orphan fund," "Interest on Choctaw school fund"), with the exception of "Indian moneys, proceeds of labor, Choctaw royalties," are disbursed by the Treasurer of the Choctaw Nation and said "Indian moneys" are designated for a specific purpose, it will be seen that no funds exist for stamping out the disease; hence the necessity of requesting an appropriation from Congress.

An item to carry out this recommendation will be incorporated in the urgency deficiency bill about to be presented to the Department which will be accompanied by a copy of this letter.

Respectfully,

W. A. JONES,
Commissioner.

HON. SECRETARY OF THE TREASURY.

Smallpox in the United States as reported to the Surgeon-General United States Marine Hospital Service, December 29, 1899, to January 5, 1900.

[For reports received from June 30, to December 29, 1899, see PUBLIC HEALTH REPORTS for December 29.]

Places.	Date.	Cases.	Deaths.	Remarks.
Colorado:				
Huerfano County	Dec. 29	2		
Sagnache County	Dec. 28	1		
Illinois:				
Cairo	Dec. 24-Dec. 30	12		
Indian Territory:				
Choctow Nation	Dec 18	75		
Indiana:				
Evansville	Dec. 28-Jan. 1	2		
Louisiana:				
New Orleans	Dec. 17-Jan. 1	18		
Shreveport	Dec. 24-Dec. 30	6		
St. James	do	1		
Massachusetts:				
Boston	Dec. 30	2		
Chelsea	Dec. 25-Dec. 31		1	
Lowell	Dec. 24-Dec. 30		1	
Missouri:				
Paris	Sept. 3-Dec. 29	37	4	
St. Louis	Dec. 19-Dec. 25	2		
Nebraska:				
Omaha	Dec. 17-Dec. 23	1		
New York:				
Amsterdam	Dec. 25-Dec. 31	1		
North Carolina:				
Beaufort	Dec. 27	1		
Ohio:				
Cincinnati	Dec. 23-Dec. 29	1		
Cleveland	Dec. 24-Dec. 30	3		
Oklahoma Territory:				
El Reno	Dec. 27	7	0	
Enid	do	4	0	
Kay County	do			Smallpox epidemic.
Logan County	do	10	0	
Oklahoma City	do	14	0	No cases at present.
Shawnee	do	12	0	Do.
Watonga	do	1	0	
Yukon	do	6	0	Do.
Pennsylvania:				
Allegheny County	Dec. 17-Dec. 30	3		
Philadelphia	Dec. 24-Dec. 30	2		
South Carolina:				
Greenville	do	2		
Tennessee:				
Memphis	Nov. 4-Dec. 23	29		
Nashville	Dec. 24-Dec. 30	2		
Virginia:				
Portsmouth	do	10	2	

Report of immigration at Boston for the week ended December 23, 1899.

OFFICE OF U. S. COMMISSIONER OF IMMIGRATION,
Port of Boston, December 24, 1899.

Number of alien immigrants who arrived at this port during the week ended December 23, 1899; also names of vessels and ports from which they came.

Date.	Vessel.	Where from.	No. of immigrants.
Dec. 17	Steamship Prince George	Yarmouth, Nova Scotia	43
Do	Steamship Boston	do	40
Dec. 18	Steamship Michigan	Liverpool, England	3
Dec. 19	Steamship Admiral Dewey	Port Morant, Jamaica	2
Dec. 21	Steamship Halifax	Halifax, Nova Scotia	44
Do	Steamship Prince George	Yarmouth, Nova Scotia	107
Do	Steamship Boston	do	69
Do	Steamship Ultonia	Liverpool, England	168
Dec. 23	Steamship Wimfredian	do	24
Do	Steamship Kansas	do	8
Do	Steamship Irishman	do	14
	Total		522

GEORGE B. BILLINGS, *Commissioner.*

Report of immigration at New York for the week ended December 23, 1899.

OFFICE OF U. S. COMMISSIONER OF IMMIGRATION,
Port of New York, December 26, 1899.

Number of alien immigrants who arrived at this port during the week ended December 23, 1899; also names of vessels and ports from which they came.

Date.	Vessel.	Where from.	No. of immigrants.
Dec. 17	Steamship Island	Copenhagen, etc	99
Do	Steamship Etruria	Liverpool and Queenstown	147
Do	Steamship Karamania	Naples	410
Dec. 18	Steamship Patricia	Hamburg	866
Do	Steamship L'Aquitaine	Havre	360
Dec. 19	Steamship Spartan Prince	Genoa and Naples	720
Do	Steamship Fürst Bismarck	do	472
Do	Steamship Statendam	Rotterdam	389
Do	Steamship Peninsular	Lisbon and the Azores	81
Dec. 20	Steamship Kaiser Wilhelm der Grosse.	Bremen	584
Dec. 21	Steamship Teutonic	Liverpool and Queenstown	185
Do	Steamship Westernland	Antwerp	420
Do	Steamship Neustria	Marseilles and Naples	448
Dec. 22	Steamship Columbia	Hamburg	297
Do	Steamship Ethiopia	Glasgow	110
Dec. 23	Steamship Rhein	Bremen	526
Do	Steamship Campania	Liverpool and Queenstown	132
Do	Steamship St. Paul	Southampton	154
	Total		6,400

THOMAS FITCHIE, *Commissioner.*

Report of immigration at Philadelphia for the week ended December 23, 1899.

OFFICE OF U. S. COMMISSIONER OF IMMIGRATION,
Port of Philadelphia, December 23, 1899.

Number of alien immigrants who arrived at this port during the week ended December 23, 1899; also names of vessels and ports from which they came.

Date.	Vessel.	Where from.	No. of immigrants.
Dec. 19	Steamship Pennland	Liverpool and Queenstown	145
Dec. 22	Steamship Switzerland	Antwerp	266
Do	Steamship Maryland	London	2
	Total		413

JNO. J. S. ROGERS, *Commissioner.*

Arrival of alien steerage passengers at Cienfuegos during the week ended December 16, 1899.

CIENFUEGOS, CUBA, *December 18, 1899.*

SIR: I herewith submit report of alien steerage passengers at this port during the week ended December 16, 1899. December 12, steamship *Miguel Jover*, from Liverpool to Spanish ports, with 28 Spanish immigrants.

Respectfully,

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

Arrival of alien steerage passengers at Guantanamo during the week ended December 16, 1899.

GUANTANAMO, CUBA, *December 16, 1899.*

SIR: I herewith submit report of alien steerage passengers at this port during the week ended December 16, 1899. December 10, Span-

ish steamship *Miguel Gallart*, from Barcelona, Spain, with 7 immigrants. Respectfully,

HERMAN B. PARKER,
Assistant Surgeon, U. S. M. H. S.

Arrival of alien steerage passengers at Havana during the week ended December 23, 1899.

HAVANA, CUBA, *December 23, 1899.*

SIR: I herewith submit report of alien steerage passengers at this port during the week ended December 23, 1899.

Date.	Vessel.	Where from.	No. of immigrants.
Dec. 17	Steamship Reina Maria Cristina	Vera Cruz	19
Do.	Steamship City of Washington	New York	15
Dec. 19	Steamship Catalina	Barcelona, Mallorca, Valencia, Malaga, Cadiz, Las Palmas, Fenerif, La Palma, Mayagüez, Ponce, Puerto Rico.	386
Dec. 20	Brig Prudente	Rosario-Argentina	1
Dec. 21	Steamship Madrileña	Santander, Coruña, and Vigo	170
	Total		591

Respectfully,

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

Arrival of alien steerage passengers at Manzanillo during the week ended December 16, 1899.

MANZANILLO, CUBA, *December 16, 1899.*

SIR: I herewith submit report of alien steerage passengers at this port during the week ended December 16, 1899. December 11, British schooner *Flora Dillaway*, from Montego Bay, Jamaica, with 1 immigrant.

Respectfully,

R. DE SOCARRA,
Acting Assistant Surgeon, U. S. M. H. S.

Arrival of alien steerage passengers at Nuevitas during the week ended December 16, 1899.

NUEVITAS, CUBA, *December 16, 1899.*

SIR: I herewith submit report of alien steerage passengers at this port during the week ended December 16, 1899. December 14, steamship *Lauenburg*, from Germany and Denmark, with 3 immigrants, 2 Germans and 1 Dane.

Respectfully,

OWEN W. STONE,
Acting Assistant Surgeon, U. S. M. H. S.

Arrival of alien steerage passengers at Santiago during the week ended December 16, 1899.

SANTIAGO DE CUBA, *December 16, 1899.*

SIR: I herewith submit report of alien steerage passengers at this port during the week ended December 16, 1899.

Date.	Vessel.	Where from.	No. of immigrants.
Dec. 10	Spanish steamship Miguel Jover	Barcelona, Spain	37
Do.	German steamship Polynesia	Hamburg, Germany	1
Dec. 14	British schooner Golden Rule	Kingston, Jamaica	29
	Total		67

Respectfully,

HERMAN B. PARKER,
Assistant Surgeon, U. S. M. H. S.

REPORTS FROM NATIONAL QUARANTINE

Number.	Name of station.	Week ended.	Name of vessel.	Date of arrival.	Port of departure
	UNITED STATES:				
1	Alexandria, Va.	Dec. 30			
2	Beaufort, S. C.	do			
3	Brunswick, Ga.	Dec. 16	Rus. bk. Murtaja	Dec. 11	Pará
		Dec. 23	do	do	do
		Dec. 30			
4	Cape Charles, Va	do			
5	Cape Fear, N. C.	Dec. 23			
		Dec. 30			
6	Columbia River, Oreg.	Dec. 23			
7	Delaware Breakwater Quarantine, Lewes, Del.	do			
		Dec. 30			
8	Eureka, Cal.	Dec. 23			
9	Grays Harbor, Wash.	do			
10	Gulf Quarantine, Ship Island, Miss.	do	Br. bktn. C. W. Janes (a)	Dec. 16	Santos
			Br. bk. Conductor	Dec. 18	do
11	Newbern, N. C.	Dec. 30			
12	Pascagoula, Miss.	do			
13	Port Townsend, Wash.	Dec. 23	Br. bk. Ravenscourt (a)	Dec. 6	Panama
14	Reedy Island Quarantine, Del.	Dec. 30			
15	San Diego, Cal.	Dec. 23			
16	San Francisco, Cal.	do	U. S. A. transport Rio de Janeiro.	Dec. 18	Manila
17	San Pedro, Cal.	do			
18	Savannah, Ga.	do			
19	South Atlantic Quarantine, Blackbeard Island, Ga.	do	Sp. bk. Concepcion	Dec. 18	Santos
20	Tortugas Quarantine, Key West, Fla.	Dec. 30			
21	Washington, N. C.	do			
	CUBA:				
22	Caibarien	Dec. 23			
23	Cardenas	do			
24	Cienfuegos	do			
25	Daiquiri	Dec. 16			
26	Gibara	Nov. 25			
27	Guantanamo	Dec. 16			
28	Havana	Dec. 23	U. S. A. transport Kilpatrick.	Dec. 20	Matanzas
			Sp. ss. Catalina	Dec. 21	Barcelona
29	Isabela de Sagua	do			
30	Manzanillo	Dec. 16			
31	Matanzas	Dec. 23			
32	Nuevitas	do			
33	Santiago de Cuba	Dec. 16	U. S. A. transport Burnside.	Dec. 12	San Juan.
			U. S. A. transport Ingalls	Dec. 13	Havana
	PORTO RICO:				
34	Ponce	Dec. 23			
35	San Juan	Dec. 16			
	Subports—				
36	Aguadilla	do			
37	Arecibo	do			
38	Arroyo	do			
39	Humacao	do			
40	Jobos	do			
41	Mayaguez	do			

a Previously reported.

AND INSPECTION STATIONS.

Number.	Destination.	Treatment of vessel, passengers, and cargo.	Date of departure.	Remarks.	Vessels inspected and passed.
1				No transactions	
2				No report	
3	Brunswick	Held for discharge of ballast.			4
	do	Ballast discharged	Dec. 23		5
					1
4					7
5					1
				No transactions	
6					5
7					7
					2
8					1
9				No transactions	
10	Ship Island	Disinfected and held			3
	Mobile	do			
11				No transactions	
12					4
13	Tacoma	Disinfected, and detained for diagnosis of suspicious sickness.	Dec. 23	3 cases, 1 death, yellow fever, en route.	6
14				No report	
15					1
16	San Francisco	Disinfected	Dec. 18		14
17				No report	
18					11
19	Brunswick	Ballast discharged and dipped, undergoing disinfection.			2
20				No report	
21				do	
22				do	
23				do	
24					8
25					1
26				No report	
27					4
28	Galveston	Disinfected infected quarters.		Remanded to Mariel for 5 days' detention; 1 case of yellow fever.	
	Havana	do	Dec. 21	6 cases measles	13
29				No report	
30				1 suspicious case of fever on transport Wright, from Santiago, isolated on board.	12
31					2
32				7 passengers on ss. San Juan from Havana held to complete period.	4
33	New York	Boarded and passed	Dec. 12		16
	San Juan	do	Dec. 13		
34				No report	
35					9
36				No report	
37				do	
38				do	
39				do	
40				do	
41				do	

Number.	Name of station.	Week ended.	Name of vessel.	Date of arrival.	Port of departure.
1	Anclote, Fla	Dec. 30			
2	Baltimore, Md	do			
3	Bangor, Me	do			
4	Boston, Mass	do			
5	Carrabelle, Fla	do			
6	Cedar Keys, Fla	do			
7	Charleston, S. C	Dec. 23			
8	Charlotte Harbor, Fla				
9	Elizabeth River, Va	Dec. 30			
10	Galveston, Tex	Dec. 23	Br. ss. Rydal Hall	Dec. 14	Calcutta
11	Gardiner, Oreg	do			
12	Key West, Fla	Dec. 30			
13	Los Angeles, Cal	Dec. 23			
14	Mayport, Fla	Dec. 30			
15	Mobile Bay, Ala	Dec. 23			
16	New Bedford, Mass	Dec. 30			
17	New Orleans, La	do			
18	Newport News, Va	do			
19	Newport, R. I	do			
20	New York, N. Y	do			
21	Pass Cavallo, Tex	do			
22	Pensacola, Fla	do			
23	Providence, R. I	Dec. 23			
		Dec. 30			
24	Quintana, Tex	do			
25	St. Helena Entrance, S. C	do			
26	Tampa Bay, Fla	do			

MUNICIPAL QUARANTINE STATIONS.

Number.	Destination.	Treatment of vessel, passengers, and cargo.	Date of departure.	Remarks.	Vessels inspected and passed.
1				No report.	
2				do	
3				do	
4				do	
5				do	
6				do	
7				No transactions	
8					
9					4
10	Galveston	Fumigated and held			15
11				No report.	
12					8
13				No report.	
14				do	
15					21
16				No report.	
17				do	
18				do	
19				do	
20				do	
21				do	
22				do	
23				No transactions	
				do	
24				No report.	
25					1
26				No report.	

Reports of States and yearly and monthly reports of cities of the United States.

CALIFORNIA—*San Francisco.*—Month of November, 1899. Estimated population, 360,000. Total number of deaths, 557, including diphtheria, 4; enteric fever, 18; scarlet fever, 2, and 75 from phthisis pulmonalis.

IOWA—*Burlington.*—Month of November, 1899. Estimated population, 30,000. Total number of deaths, 22, including enteric fever, 1; scarlet fever, 1, and 1 from phthisis pulmonalis.

Carroll.—Estimated population, 3,000. One death. No death from contagious disease.

Cedar Falls.—Estimated population, 6,000. One death from phthisis pulmonalis.

Davenport.—Estimated population, 40,000. Total number of deaths, 26, including enteric fever, 1, and 1 from phthisis pulmonalis.

Denison.—Month of October, 1899. Census population, 1,782. Total number of deaths, 3. No death from contagious disease.

Des Moines.—Estimated population, 72,000. Total number of deaths, 44, including enteric fever, 1, and 3 from phthisis pulmonalis.

Eldon.—Estimated population, 2,200. One death. No death from contagious disease.

Oskaloosa.—Estimated population, 8,500. Total number of deaths, 8, including 3 from diphtheria.

Ottumwa.—Estimated population, 20,000. Total number of deaths, 15, including enteric fever, 2, and 3 from phthisis pulmonalis.

Sibley—Estimated population, 1,500. Total number of deaths, 2. No death from contagious disease.

Storm Lake.—Estimated population, 2,500. Total number of deaths, 3. No death from contagious disease.

The Iowa Health Bulletin says:

Outbreaks of the following infectious diseases have been reported as having occurred during the month of November at the several places named below:

Cerebro spinal meningitis.—Oskaloosa.

Diphtheria.—Cedar Township, Calhoun County; Moulton; Linn Grove Township, Jasper County; Clearfield; New Buda Township, Decatur County; Persia; Nora Springs; Gilman Township, Osceola County; Wheatland Township, Carroll County; Monroe Township, Butler County; Kneist Township, Carroll County; Newell; Cincinnati; Elk River Township, Clinton County; Oskaloosa; Des Moines; Runnells; Green Township, Fremont County.

Scarlet fever.—Cedar Township, Calhoun County; Jefferson Township, Allamakee County; Grand Junction; Colfax Township, Grundy County; Alton; Winterset; Illyria Township, Fayette County; East Orange Township, Sioux County; Clay Township, Marion County; Fallow; Cambria; Rock Rapids; Calhoun Township, Calhoun County; Massillon Township, Cedar County; Green Township, Fremont County; Randalia; Shenandoah; Estherville; Fredonia Township, Plymouth County; Union Township, Warren County; Lost Island Township, Palo Alto County; Burlington; Des Moines.

Smallpox.—Storm Lake; Sioux Rapids; Marathon; Providence Township, Buena Vista County; Corning; Northwood; Alvord; Silver Lake Township, Lyon County, and Coalfield.

Typhoid fever.—Liberty Township, Warren County; Nevada; Franklin; Burlington; Davenport; Des Moines; Ottumwa; Persia; Clare; Lizard Township, Pocahontas County.

Measles.—Franklin.

MICHIGAN.—Reports to the State board of health, Lansing, for the week ended December 23, 1899, from 52 observers, indicate that there was no disease which marked increase or decrease when compared with the preceding week. Phthisis pulmonalis was reported present at 212, scarlet fever at 74, enteric fever at 53, measles at 41, diphtheria at 30, whooping cough at 21, smallpox at 3 places, and cerebro-spinal meningitis at 1 place.

NEW JERSEY—*Hudson County.*—Month of November, 1899. Estimated population, 384,784. Total number of deaths, 541, including diphtheria, 23; enteric fever, 8; measles, 1; scarlet fever, 2; whooping cough, 4, and 58 from phthisis pulmonalis.

Paterson.—Month of November, 1899. Estimated population, 118,368. Total number of deaths, 161, including diphtheria, 16; enteric fever, 3; scarlet fever, 1, and 13 from phthisis pulmonalis.

OHIO—*Columbus.*—Month of November, 1899. Estimated population, 140,000. Total number of deaths, 94, including diphtheria, 5; enteric fever, 2, and 19 from phthisis pulmonalis.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Population, U. S. Census of 1890.	Total deaths from all causes.	Deaths from—									
				Tuberculosis.	Yellow fever.	Smallpox.	Varioloid.	Cholera.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Allegheny, Pa	Dec. 23	105,287	53	4	.....	.....	.....	.....	.....	6	1	1	.....	.....
Do	Dec. 30	105,287	29	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Allentown, Pa	Dec. 9	25,228	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Dec. 16	25,228	8	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Do	Dec. 23	25,228	5	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Ashtabula, Ohio	Dec. 29	8,338	3	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Baltimore, Md	Dec. 30	434,439	173	12	.....	.....	.....	.....	.....	4	.....	11	.....	2
Battle Creek, Mich	....do....	13,197	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y	....do....	35,005	14	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Boston, Mass	....do....	448,477	232	19	.....	.....	.....	.....	.....	3	6	11	1	1
Bristol, R. I	Dec. 23	5,478	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brockton, Mass	.... do....	27,294	7	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cairo, Ill	Dec. 30	10,334	4	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Cambridge, Mass	Dec. 23	70,028	31	3	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Camden, N. J	Dec. 30	58,313	22	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Charleston, S. C	Dec. 23	a 54,955	b 37	2	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Chelsea, Mass	....do....	27,909	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Chicopee, Mass	....do....	14,050	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Dec. 30	14,050	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chillicothe, Ohio	Dec. 23	11,288	5	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Cincinnati, Ohio	....do....	296,908	.....	20	.....	.....	.....	.....	.....	1	1	2	.....	.....
Cleveland, Ohio	....do....	261,353	125	.....	.....	.....	.....	.....	.....	1	.....	4	.....	.....
Do	Dec. 30	261,353	79	3	.....	.....	.....	.....	.....	2	1	3	.....	.....
Dayton, Ohio	....do....	61,220	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dubois, Pa	Dec. 23	6,149	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

a Estimated population, 65,165—white, 28,870; colored, 36,295. *b* White, 10; colored, 27.

MORTALITY TABLE, CITIES OF THE UNITED STATES—Continued.

Cities.	Week ended.	Population U. S. census of 1890.	Total deaths from all causes.	Deaths from—										
				Tuberculosis.	Yellow fever.	Smallpox.	Varioloid.	Cholera.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Dunkirk, N. Y.	Dec. 23	9,416	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elmira, N. Y	....do....	29,708	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Everett, Mass	....do....	11,068	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass	Dec. 30	74,398	34	8	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Fitchburg, Mass	Dec. 23	22,037	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand Rapids, Mich	Dec. 30	60,278	28	2	.....	.....	.....	.....	.....	.....	.....	1	1	.....
Green Bay, Wis	Dec. 24	9,069	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Greenville, S. C	Dec. 16	8,607	4	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Dec. 23	8,607	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Dec. 30	8,607	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Holyoke, Mass	....do....	35,637	12	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Jacksonville, Fla	Dec. 23	17,201	11	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jersey City, N. J	Dec. 24	163,003	77	11	.....	.....	.....	.....	.....	1	.....	2	.....	2
Lawrence, Mass	Dec. 23	44,654	23	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Los Angeles, Cal	....do....	50,395	31	6	.....	.....	.....	.....	.....	3	.....	2	.....	.....
Louisville, Ky	Dec. 28	161,129	56	6	.....	.....	.....	.....	.....	2	.....	.....	.....	1
Lowell, Mass	Dec. 30	77,696	39	3	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Lynchburg, Va	Dec. 23	19,709	9	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Do	Dec. 30	19,709	7	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
McKeesport, Pa	Dec. 23	20,741	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malden, Mass	Dec. 30	23,031	10	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Manchester, N. H	Dec. 23	44,126	35	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Massillon, Ohio	....do....	10,092	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medford, Mass	Dec. 30	11,079	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Melrose, Mass	Dec. 23	8,519	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Michigan City, Ind	Dec. 30	10,776	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Milwaukee, Wis	Dec. 23	204,468	84	7	.....	.....	.....	.....	.....	2	.....	3	1	2
Minneapolis, Minn	....do....	164,738	34	4	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Nashville, Tenn	Dec. 30	76,168	32	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Bedford, Mass	....do....	40,733	18	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Newburyport, Mass	Dec. 23	13,947	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Orleans, La	....do....	242,039	140	18	.....	.....	.....	.....	.....	4	.....	.....	2	.....
Newton, Mass	Dec. 30	24,379	9	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
New York, N. Y	Dec. 23	a 3,550,053	1,256	157	.....	.....	.....	.....	.....	14	10	42	15	8
Norristown, Pa	Dec. 29	19,791	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
North Adams, Mass	Dec. 23	16,074	10	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Do	Dec. 30	16,074	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Omaha, Nebr	Dec. 23	140,452	30	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Oneonta, N. Y	Dec. 30	6,272	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Philadelphia, Pa	..... do.....	1,046,964	462	54	.....	.....	.....	.....	.....	4	3	27	.....	1
Pittsburg, Pa	Dec. 23	238,617	103	6	.....	.....	.....	.....	.....	10	1	2	2	.....
Pittston, Pa	Dec. 30	10,302	5	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Plainfield, N. J	Dec. 23	11,267	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me	....do....	36,425	14	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portsmouth, Va	Dec. 30	13,268	8	.....	.....	2	.....	.....	.....	.....	.....	1	.....	.....
Providence, R. I	Dec. 23	132,146	60	9	.....	.....	.....	.....	.....	2	1	3	3	1
Do	Dec. 30	132,146	81	10	.....	.....	.....	.....	.....	.....	.....	1	7	2
Reading, Pa	Dec. 25	58,661	22	2	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Salt Lake City, Utah	Dec. 23	44,843	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
San Jose, Cal	Dec. 18	18,060	9	2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Do	Dec. 23	18,060	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shreveport, La	....do....	11,979	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Somerville, Mass	Dec. 29	40,152	16	1	.....	.....	.....	.....	.....	1	3	.....	.....	.....
Steelton, Pa	Dec. 30	9,250	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tacoma, Wash	Dec. 23	36,006	3	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Waltham, Mass	....do....	18,707	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Warren, Ohio	....do....	5,973	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Dec. 30	5,973	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wheeling, W. Va	Dec. 23	35,013	15	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wilmington, Del	Dec. 30	61,431	24	2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Worcester, Mass	Dec. 22	84,655	35	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Youngstown, Ohio	Dec. 23	33,220	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Dec. 30	33,220	11	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....

a Estimated.

FOREIGN.

[Reports received from United States consuls through the Department of State and from other sources.]

Cholera, yellow fever, plague, and smallpox as reported to the Surgeon-General United States Marine-Hospital Service, December 29, 1899, to January 5, 1900.

[For reports received from June 30 to December 29, 1899, see PUBLIC HEALTH REPORTS for December 29.]

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
India:				
Bombay	Nov. 22-Nov. 28		4	
Calcutta	Nov. 5-Nov. 18		25	

YELLOW FEVER.

Brazil:				
Rio de Janeiro	Nov. 4-Nov. 17		6	
Cuba:				
Havana	Dec. 17-Dec. 23	8	5	
Matanzas	Dec. 29		1	
Santiago	Dec. 10-Dec. 16		1	

PLAGUE.

Brazil:				
Santos	Oct. 13-Nov. 25	30	11	
China:				
Hongkong	Nov. 12-Nov. 28	1	1	
Formosa:				
Tamsui	Nov. 15-Nov. 28	21	14	
Hawaiian Islands:				
Honolulu	Dec. 11-Dec. 13	5	5	
India:				
Bombay Presidency and Sind:				
Ahmedabad District	Nov. 19-Nov. 25		3	
Ahmednagar District	do		21	
Akalkot State	do		2	
Aundh State	do		5	
Baroda State	do		2	
Belgaum District	do		297	
Bhor State	do		18	
Bijapur District	do		123	
Bombay City	do		136	
Broach District	do		0	
Cutch State	do		1	
Dharwar District	do		286	
Hyderabad (Sind) District	do		20	
Janjira State	do		1	
Kaira District	do		0	
Kanara District	do		2	
Kurrachee City	do		2	
Kurrachee District	do		5	
Kathiawar State	do		0	
Khandesh District	do		0	
Kolaba District	do		7	
Kolhapur State	do		380	
Mahi Kantha State	do		0	
Nasik District	do		10	
Palanpur State	do			
Panch Mahals District	do		0	
Poona City	do		4	
Poona District	do		156	
Ratnagiri District	do		22	
Rewakantha State	do		0	
Satara District	do		157	
Savantvadi State	do		0	
Savanur State	do		4	
Shikarpur District	do		0	
Sholapur District	do		141	
Surat District	do		20	
Thana District	do		25	
Upper Sind Frontier	do			

Cholera, yellow fever, plague, and smallpox, etc.—Continued.

PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
India—*Continued.*				
Outside Bombay Presidency and Sind:				
Madras Presidency—				
Anantapur District	Nov. 19-Nov. 25			
Bellary District	do		5	
Chingleput District	do			
Kurnool District	do			
Madras City District	do			
North Arcot District	do			
Salem District	do		7	
Nellore District	do			
Trichinopoly District	do			
Coimbatore District	do		5	
Mysore State—				
Bangalore City	do		15	
Bangalore Civil and Military Station	do		12	
Bangalore District	do		46	
Kolar District	do		2	
Kolar Gold Fields	do		5	
Mysore City	do		18	
Mysore District	do		29	
Tumkur District	do		7	
Chitaldrug District	do		15	
Hyderabad State—				
Gulburga District	do			
Lingsugur District	do			
Naldrug District	do			
Bidar District	do			
Arangabad District	do			
Central Provinces—				
Wardha District	do		1	
Nagpur City	do		5	
Nagpur District	do			
Nimar District	do			
Punjab—				
Jullundur District	do		1	
Hoshiarpur District	do			
Rawal Pindi District	do			
Bengal—				
Calcutta	do		48	
Howrah District	do		1	
Hooghly District	do			
24-Parganas District	do			
Nadia District	do			
Khulana District	do			
Dacca District	do			
Darbhanga District	do			
Saran District	do		6	
Shahabad District	do			
Tipperah District	do			
Singbhoom District	do			
Balasore District	do		1	Imported and suspected.
Rajputana	do		1	Do.
Japan—				
Osaka and Hiogo	Nov. 22-Dec. 2	3	1	
Portugal—				
Villa Nova de Gaya	Nov. 15	1		

SMALLPOX.

Argentina:			
Buenos Ayres	Oct. 1-Oct. 31		3
Belgium:			
Antwerp	Dec. 3-Dec. 9	5	3
Bohemia:			
Prague	Dec. 3-Dec. 9	19	
Brazil:			
Rio de Janeiro	Nov. 4-Nov. 17		111
England:			
London	Dec. 10-Dec. 16		1
France:			
Marseilles	Nov. 1-Nov. 30		17
Gibraltar	Dec. 4-Dec. 17	3	1
Greece:			
Athens	Dec. 3-Dec. 9	5	1

Cholera, yellow fever, plague, and smallpox, etc.—Continued.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
India:				
Bombay	Nov. 15-Nov. 28	.....	21	
Russia:				
Moscow	Nov. 26-Dec. 9	9	.....	
Odessa	Dec. 3-Dec. 9	3	1	
St. Petersburg	Dec. 3-Dec. 9	18	3	
Warsaw	Nov. 26-Dec. 6	.....	10	
Spain:				
Corunna	Dec. 10-Dec. 16	1	1	
Madrid	Dec. 3-Dec. 9	.....	7	
Straits Settlements:				
Singapore	Nov. 5-Nov. 18	.....	4	
Turkey:				
Smyrna	Dec. 4-Dec. 10	.....	1	

EPIDEMIC NOTES.

[Translated in this Bureau from the Veröffentlichungen des Kaiserlichen Gesundheitsamtes, Berlin, November 6 and December 9, 1899.]

PLAGUE.

AUSTRIA.—The Austrian Lloyd steamer *Berenice*, with 50,000 bags of coffee from Santos, on board of which a plague death occurred, was reported November 13 by telegram as still at Sao Thiago Island, Cape Verde Islands.

PORTUGAL—*Oporto.*—From November 10–16 plague deaths were officially reported as follows: 3, 1; 1, 1; 1, 1; 2, 1; 5, 1; 2, 1; 2, 2; in all 16 cases and 8 deaths. On November 15 a plague case was reported at Villa Nova de Gaya on the left bank of the Douro.

At the Bomfin plague hospital, on November 16, 31 men and 24 women were under treatment, 13 of the cases being very severe.

From November 17–23 cases and deaths were officially reported as follows: 0, 1; 2, 0; 0, 0; 6, 0; 2, 0; 0, 3; 1, 1; in all, 11 cases and 5 deaths. On November 24, 27 men and 20 women and children were under treatment at the Bomfin plague hospital, 11 of these cases being very severe.

At Lisbon no new plague case later than that of Dr. Pestana has been reported since November 25. Rigid isolation of all persons who came in close or distant contact with the deceased has been discontinued since that date.

EGYPT—*Alexandria.*—No cases were reported from November 11–17. Official sanitary inspection of vessels leaving the port of Alexandria were suspended November 13. Certification in regard to plague was also directed to be omitted from ships' passes on that date.

Algiers.—The governor-general, on November 22, addressed a circular to consuls resident in Algiers, in which he denied the report which has become widespread in France and other countries that plague exists in Algiers, and requested the consuls to inform their government that no plague case exists in the country, and that the condition of public health in the colony and city of Algiers is as satisfactory as could be desired.

BRITISH EAST INDIES.—During the week ended October 28, 1899, 3,672 plague deaths were reported for all India, being a considerably lower number than that reported for the preceding week. In the city

of Bombay there were 76 plague deaths; preceding week, 101; in the presidency of Bombay, 3,359; preceding week, 4,430. The plague epidemic has declined in the districts of Belgaum, Satara, Dharwar, Poona, Nasik, and Ahmednuggar. It has increased in the South Mahratta States and in the Sholapur District. In Calcutta 62 plague deaths were brought to the notice of the authorities; preceding week, 47. From the Saran District of the province of Bengal no new cases were reported. In the city and district of Nagpur, according to latest advices, there were 30 plague deaths; preceding week, 50. In the State of Mysore improved conditions are reported.

CHINA.—According to advices of October 17, the plague epidemic of 1899, in the colony of Hongkong, is officially declared extinct, no new case having come to the knowledge of the authorities within eleven days.

JAPAN.—According to advices of October 25, cases of plague are again reported from Formosa. At Taipeh and Twatutia 4 cases and 2 deaths are reported among Japanese. Numerous suspect cases are reported.

MADAGASCAR—*Tamatave*—From October 30 to November 11, 27 cases and 18 deaths were reported.

MOZAMBIQUE—*Magude.*—According to advices of October 19, 1899, only a few cases of plague are reported, but the disease is spreading into the interior. In the town of Lorenzo Marques only 1 plague suspect case was reported, but the Government had issued an order for the burning of the infected house.

RÉUNION.—From November 1–10 2 fatal cases were reported.

PARAGUAY.—The certainty of the existence of plague at Asuncion is discredited by the doubt expressed by some physicians as to the nature of the suspicious disease. The Argentine physicians report 65 or 70 cases of plague as having come under their observation. In 10 necropsies made since September 14, plague has been verified, and 6 new cases since October 2 have been clinically verified as plague. Many dead rats which have recently been found in various sections of the city have, on bacteriological examination, been found to contain great quantities of plague bacilli. The character of the epidemic has lately become more severe, having spread from the 3 original foci to different parts of the city, thus making the struggle with the disease more difficult.

According to advices from the national council of hygiene at Asuncion for the period from October 12–25, 6 plague cases, 5 suspect cases, and 8 plague deaths have occurred. At Patiño-Cue 1 death, and at Stangna 1 suspect case are reported.

CHOLERA.

BRITISH INDIA—*Calcutta.*—From October 15–28, 18 cholera deaths were reported.

TURKEY.—According to advices of November 14, the cholera which appeared among the Bedouin tribes in the vicinity of Bassora and Bagdad is spreading widely, being very prevalent at Chatra. At Djevadir, on the Persian Gulf, 380 deaths are reported up to November 1.

ALGERIA.

Health of Algiers—Report of plague in Philippeville and Bougie.

ALGIERS, AFRICA, *November 28, 1899.*

SIR: I have the honor to inclose herewith copies and translations of two dispatches received at this office from the governor-general of Algeria.

The first, dated November 15, is in answer to a letter I wrote on November 7, owing to rumors in circulation that an epidemic of bubonic plague had broken out at Philippeville and Bougie, and requesting positive information as to the sanitary condition of those two ports and of the rest of the colony as well.

The second is a request from that official that the United States Government be made acquainted with the condition of the public health in Algeria.

It would seem, according to the statements contained in these communications, that the sanitary situation throughout this consular district is as satisfactory as possible.

With regard to the city of Algiers and its vicinity, in spite of the fact that no medical statistics are published, I am satisfied that the public health is good, and I therefore continue to issue clean bills of health to vessels clearing from this port for the United States.

You may feel assured that should any change occur in the present sanitary condition of the country I will at once notify the Department.

Respectfully, CHAS. T. GRELLET,
United States Consul.

Hon. ASSISTANT SECRETARY OF STATE.

[Inclosure No. 1.]

OFFICE OF THE GOVERNOR-GENERAL OF ALGERIA,
Algiers, November 15, 1899.

Mr. CONSUL: You kindly ask me what credit should be attached to the rumor that an epidemic of bubonic plague has broken out at Philippeville and Bougie.

I have the honor to inform you that said rumor is without foundation.

It is true, that from September 15 to October 15, the attention of the public authorities was drawn to several suspicious cases, and the enforcement of a system of energetic measures and the sending of an eminent specialist to those two localities were determined upon; but said cases, but few in number, have remained absolutely isolated.

The patients are now well, and for over a month, in spite of the most stringent watchfulness, not a single new case has been detected.

The sanitary condition of the two above mentioned ports is excellent. It is needless to add that that of the other Algerian ports, and more particularly that of the city of Algiers, has never given rise to the least uneasiness.

Moreover, the measures enforced from the very beginning at Philippeville and Bougie (absolute isolation of suspicious patients, strict disinfection by steam, close supervision over departures by either land or sea, prohibition of the shipping of any articles susceptible to spread pestilential diseases) would have sufficed to discard any danger of propagation, had we to deal with a real epidemic.

Respectfully, ED. LAFERRIERE,
Governor-General.

[Inclosure No. 2.]

OFFICE OF THE GOVERNOR-GENERAL OF ALGERIA,
Algiers, November 22, 1899.

Mr. CONSUL: Rumors have been circulated in France and foreign countries that an epidemic of plague has broken out in Algeria, and people have gone so far as to say that several cases have occurred in Algiers.

In spite of unofficial denials, these allegations have been persisted in, thus seriously injuring the commercial and maritime interests of Algeria; and several foreign Govern-

ments, therefore, believed themselves justified in enforcing special quarantine measures on arrivals from Algeria. Some companies also have ordered their ships to discontinue their usual calls at the port of Algiers.

I consider it my duty to ask your kind assistance in order to put an end to a state of affairs which, should it continue, would not less seriously impair the interests of foreign charterers than those of colonial freighters.

I have the honor to again assure you that any rumor tending to create the belief of the existence of an epidemic of plague in Algeria is utterly without foundation.

Though it is true that the attention of the sanitary authorities has been called to several cases in east Algerian ports, these cases were merely suspicious, rare, and isolated; occurred more than a month ago, and have not been followed by a single new case in the least suspicious. Furthermore, they attracted attention only because of the notification of epidemic centers on the coast of a European state.

You would greatly oblige me by informing your Government, and, on occasion, the companies having relations with Algerian ports, that there does not exist any case of plague in Algeria, and that the sanitary condition of the colony, and more particularly that of the city of Algiers, is as satisfactory as possible.

Respectfully,

ED. LAFERRIERE,
Governor-General.

BRAZIL.

Reports from Rio de Janeiro.

Plague at Santos.

RIO DE JANEIRO, *November 22, 1899.*

SIR: Since my last report there have occurred 3 recognized cases and 1 suspected case of plague. Among the new patients is the pharmacist of the isolation hospital. It may be again mentioned that the directing physician of the isolation hospital was also attacked, but has already recovered from plague. Among other patients there has occurred 1 more death.

I make the following addition to the list of the isolation hospital which I had sent with my report dated November 10:

Date.	Number of patients.	Entered.	Discharged.	Died.	Sick from—		Total.
					Plague.	Other diseases.	
November 10	14				11	3	14
November 11	14		3		10	a 1	11
November 12	11				10	1	11
November 13	11		4		6	1	7
November 14	7				6	1	7
November 15	7		1		6		6
November 16	6	b 2			7	1	8
November 17	8	c 1		1	7	1	8
November 18	8				7	1	8
November 19 and 20, inclusive	8				7	1	8
November 21	8	1			8	1	9
November 22	9				8	1	9

a Typhoid fever. b One plague; 1 suspected. c Pharmacist.

Therefore, the total result has been as follows:

Without regard to the cases that occurred at the beginning and were not recognized, there have been up to the present time 25 cases, of which 11 were fatal, 6 were cured and discharged, and there remained under treatment 8 cases and 1 suspected case.

During sixteen days, since the 7th instant, there have occurred only 2 cases of plague in the population at Santos; the infection of the pharmacist was probably from the hospital itself.

Antiplague serum.

I have already reported in regard to the steps taken for obtaining an abundant supply of antiplague serum. The Brazilian representative in Italy has sent 5,000 bottles of serum and 5,000 tubes of Haffkine's vaccine that will shortly arrive. Moreover, the government of the State of Sao Paulo has given orders to two commercial houses for serum to the value of 10,000 francs and 20,000 francs. Beside that, Professor Ferni of Messina is expected to arrive, and he will prepare antiplague serum or vaccine here. Finally, the first steps have been taken as I have already reported, for the foundation of institutes at Rio de Janeiro and Sao Paulo for preparing antiplague serum.

Quarantine against Trieste.

In consequence of a communication received by the Brazilian consul at Trieste the minister of the interior has declared infected the port of Trieste, suspected the ports of Istria, Fiume, and those of the Caraldella Morlacca; further those of the islands of the vicinity, from Veglio to Incoronata, at the south, and also those at the east coast of Italy, in the Gulf of Venice, at the north.

However, trustworthy private telegraphic information from Vienna states that at Trieste there is no plague. There was only 1 isolated case fifteen days ago. In my last report I mentioned the occurrences on board of the steamship *Berenice.*

Quarantine station at Tamandaré.

The board of trade at Liverpool has addressed a petition to Lord Salisbury, prime minister of Great Britain, on the necessity of establishing a quarantine station at Tamandaré, on the Brazilian coast.

The board of trade points out that Ilha Grande is situated 70 miles southwest of Rio de Janeiro and that for vessels bound for northern and central ports of Brazil, this is an unreasonable quarantine station, for it is necessary to make a voyage of from 1,500 to 4,800 miles on the Brazilian coast in order to obtain free pratique for passengers and cargo in Brazil during epidemic periods. The board of trade further says, that the predecessor of Lord Salisbury, Earl Rosebery, sought in 1892 to remedy this evil by urging the Brazilian Government by telegraphic dispatches and verbally through the English minister in Rio de Janeiro, to establish other quarantine stations, especially at Pernambuco, halfway between Pará and Rio de Janeiro. The minister of France and that of the United States supported this demand, and the Brazilian Government then for the first time announced its intention of establishing quarantine stations in 3 of the northern states of Brazil.

The board of trade goes on to say that in the summer of 1895 the Brazilian minister of interior called a sanitary conference at which representatives of other powers were present. In consequence of this conference the Brazilian Government published instructions, among which were the following: (*a*) For the establishment of a provisional station at Tamandaré, a port of the State of Pernambuco, on October 1, 1895; (*b*) for the estimate of the cost of a quarantine station in the State of Pará; (*c*) estimates for a quarantine station at the island of Timbaré, in the State of Bahia; (*d*) for the transformation of the isolation hospital at Rio Grande do Sul into a small quarantine station.

In March, 1896, Lord Salisbury stated that the conference of 1895 had, up to that time, been almost fruitless in regard to the sanitary improvements promised from Brazil, there not having been established,

for instance, any isolation hospital for the treatment of infectious diseases at Rio de Janeiro, nor even a commencement of quarantine stations at Timbaré in Bahia, and at Pará. He added that the Tamandaré station, which was to be opened in October, was not yet finished.

Tamandaré, says the board of trade, is the only place that offers sheltered anchorage between Pernambuco and Bahia; also it is not an island; it can be readily isolated and its port is all that is to be desired and can be improved, if necessary. Fifteen tuns of drinking water can be daily supplied at this port.

In the beginning of 1897 it was supposed that the quarantine station at Tamandaré was ready. After that date, however, the sanitary conditions of countries having commercial intercourse with Brazil was so favorable that it was not necessary to establish quarantines. About six weeks ago, says the board of trade in its petition, the steamer *Scolar*, on its arrival at Pernambuco from Oporto, was obliged to go to Ilha Grande as formerly, in spite of the objection made by Her Majesty's Government for many years.

There has since been received news that a quarantine station is to be established in Pará, in the north of Brazil. The board of trade says, however, that this station will not correspond to the necessities of steamer companies, whose vessels go to Pernambuco and to the central ports of Brazil.

The petition is dated October 17.

Sanitary reports from Rio de Janeiro.

I have the honor to transmit to you the official sanitary reports for the week ended November 10.

There were 306 deaths from all causes, a decrease of 10, as compared with the preceding week; 12 deaths from accesso penicioso, an increase of 4; 6 deaths from yellow fever, an increase of 5; 61 deaths from smallpox, a decrease of 9; 4 deaths from typhoid fever, an increase of 2; no death from beriberi, a decrease of 1, and 45 deaths from tuberculosis, a decrease of 22.

In regard to the state of health at Rio de Janeiro, smallpox still continues to exercise a very unfavorable influence. As for the rest, in view of the sanitary state, the last period of this year would be approximately the same as that of the past year. Since the beginning of October there have been notified per week 2, 12, 11, 5, 8, 12, total, 50, deaths from accesso pernicioso against 7, 6, 6, 8, 12, 11, total, 50, of the last year. There were in the same period of this year per week deaths from yellow fever 4, 6, 3, 2, 1, 6, total, 22, against 5, 4, 3, 3, 2, 3, total, 20, of the last year. However, in this year there were notified deaths from smallpox 58, 48, 67, 53, 70, 61, total, 357, against 7, 6, 3, 5, 3, 3, total, 27, of last year.

The state of health among the shipping is very satisfactory; it may be especially stated that there does not exist any infectious disease.

Sanitary report from the State of Sao Paulo.

From the State of Sao Paulo I can give you some official data concerning the sanitary conditions during the month of August. The total number of deaths was 2,886, an increase of 360 as compared with the month of July. From tuberculosis there died 127 persons, a decrease of 9, and from malaria 78, an increase of 11. From typhoid fever there died 38 persons (8 at the city of Sao Paulo), an increase of 6; from yellow fever, 1 person (at the city of Sao Paulo), a decrease of 1; from

smallpox, 2 persons (at Piraju), an increase of 1; from measles, 6 persons, the same as before; from scarlet fever, 1 person, none before.

In regard to other infectious diseases, there were 7 deaths from diphtheria, 41 deaths from whooping cough, 3 deaths from erysipelas, 9 deaths from dysentery, 21 deaths from influenza, 11 deaths from leprosy, 1 death from cholerine, 1 death from diarrhea infectioso, and 1 death from scorbutus.

Bills of health.

Since last report the following-named ships have been inspected and received bills of health of this office: November 11, steamship *Asti*, German, for New York; November 17, bark *Antioch*, American, for Philadelphia; November 18, steamship *Wordsworth*, Belgian, for New York; November 22, steamship *Livorno*, German, for New York.

Respectfully, W. HAVELBURG, M. D.,
Acting Assistant Surgeon, U. S. M. H. S.

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

Plague question at Santos, etc.

RIO DE JANEIRO, *December 1, 1899.*

SIR: In conformity with my last report, there were on November 22, in the isolation hospital at Santos, 9 patients, of whom 8 suffered from plague, 1 was suspicious. Since that time there entered on the 24th 1 new plague patient, and on the 27th, 5 patients. Therefore, the total number of patients was, on November 30, 15, of whom 14 were ill of plague and 1 suspected case. No death has occurred since my last report.

At Sao Paulo, beside the 2 reported cases, no other has been observed. The appearance of those cases was stated nineteen days ago, so that if in the next few days there is nothing to the contrary, intercourse with Sao Paulo will be declared free.

The quarantine against Trieste and neighboring districts that I mentioned in my last report has been annulled.

Sanitary report from Rio de Janeiro.

I have the honor to transmit to you the official sanitary report from Rio de Janeiro for the week ended November 17.

There were 282 deaths from all causes, a decrease of 24 as compared with the preceding week; 8 deaths from accesso pernicioso, a decrease of 4; no death from yellow fever, a decrease of 6; 50 deaths from smallpox, a decrease of 11; 2 deaths from typhoid fever, a decrease of 2; 1 death from beriberi, an increase of 1, and 70 deaths from tuberculosis, an increase of 25.

Bills of health.

Since last report the following-named ships have been inspected and received bills of health from this office: November 25, steamship *Miramare*, British, for New York. November 28, bark *Amy*, American, for Baltimore. November 29, bark *Emilie Galline*, French, for San Francisco. November 30, steamship *Cuvier*, British, for New Orleans.

Respectfully, W. HAVELBURG, M. D.,
Acting Assistant Surgeon, U. S. M. H. S.

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

COLOMBIA.

End of yellow fever at Panama.

PANAMA, *December 12, 1899.*

SIR: With reference to my dispatch No. 101, dated the 5th instant [reporting 4 or 5 cases of yellow fever], I beg to state that the circumstances mentioned therein are now exterminated. The troops mentioned have left the Isthmus, and there is now only 1 case of sickness from those left here.

Respectfully,

H. A. GUDGER,
United States Consul-General.

Hon. ASSISTANT SECRETARY OF STATE.

CUBA.

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

CIENFUEGOS, CUBA, *December 25, 1899.*

SIR: I have the honor to report that during the week ended December 23, 22 deaths have occurred in this city, 6 of which were in the Civil Hospital. The principal causes of death during the week were: Malaria, 1; intestinal diseases, 3; tuberculosis, 4. No contagious diseases reported. Death rate for the week is 28.67.

No alien steerage passengers landed at this port during the week. Eight foreign vessels have been inspected upon arrival at this port and 6 have received bills of health during the week.

Santa Cruz del Sur.—Dr. Juan R. Xiques reports 1 death during the week and no contagious diseases. No foreign vessels at this port during the week.

Casilda.—Dr. Alejandro Cantero reports 7 deaths in the city of Trinidad during the week: Malaria, 1; intestinal diseases, 2; no contagious diseases. No foreign vessels at this port during the week.

Respectfully,

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

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

Report from Havana.

HAVANA, CUBA, *December 26, 1899.*

SIR: I have the honor to submit the following sanitary report for the week ended December 23, 1899:

Eight new cases of yellow fever were reported during the week, and 5 deaths occurred during the same period. This shows a slight decrease in the death rate from the week previous. There were remaining under treatment on December 23, 15 cases of yellow fever, which is a slight increase over the week previous.

The number of deaths recorded from all causes was 101, which shows a death rate of 23.87 per thousand, this being a decided decrease from the last report. The general sanitary condition of the city, judging from the above data, would seem to be excellent, even though there is no diminution so far as yellow fever is concerned, but this is evidently due to the large number of Spanish immigrants who have arrived at this port within the last few weeks, as those who remain in Havana resort mostly to the infected localities.

Acting Assistant Surgeon Frick reported at this station for duty on the 19th instant, and was detailed to clear outgoing vessels.

A case suspected of being yellow fever was removed from the U. S. transport *Kilpatrick* on the 18th instant, whereupon the vessel was immediately disinfected, and on the 20th instant the vessel was sent to Mariel to serve out her quarantine detention. Acting Assistant Surgeon Frick was detailed to accompany the vessel and take charge of the Mariel Quarantine Station for the time being.

The Spanish trans-Atlantic steamer *Catalina* arrived at this port on the 19th instant, with 8 cases of measles on board. The sick were removed to the hospital, and the infected quarters of the vessel were thoroughly disinfected by the barge *Protector*.

Information having been received at this office of the expected arrival of a number of immigrants from Spain at the port of Nuevitas, Acting Assistant Surgeon Stone was immediately notified of the fact, and requested to exercise particular care in the inspection of these immigrants, on account of the prevalence of bubonic plague in Portugal, and possibly in Spain.

A report of the baggage disinfected by the barge *Protector* during the week, is appended herewith; also the usual mortality table for the period covered by this report.

Respectfully,

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

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

[Inclosure No. 1.]

Report of baggage disinfected by the barge Protector at Havana for the week ended December 23, 1899.

HAVANA, CUBA, *December 26, 1899.*

Date.	Name of steamer.	Destination.	Baggage.			Total.
			Trunks.	Valises.	Parcels.	
Dec. 18...	Olivette	Tampa	12	11	11	34
Dec. 19...	Miami	Miami	0	1	1	2
Dec. 20...	Mascotte	Tampa	23	25	11	59
Dec. 22...	Maralsdad	Gibara	2	9	2	4
Dec. 23...	Olivette	Tampa	35	43	6	84
	Total		72	80	31	183

Inclosure No. 2.]

Mortality table at Havana for the week ended December 23, 1899.

HAVANA, CUBA, *December 23, 1899.*

Diseases—	Deaths.
Tuberculosis	10
Enteritis	12
Pernicious	2
Pneumonia	9
Yellow fever	5
Malarial	1
Enteric	1
Diphtheria	1
Total deaths, all causes	101

Quarantine of the U. S. transport Kilpatrick at Havana.

HAVANA, CUBA, *December 25, 1899.*

SIR: I have the honor to submit the following report on the detention of the U. S. transport *Kilpatrick* at Mariel Quarantine Station:

On the 19th instant I was informed by Major Davis, chief sanitary inspector of the city of Havana, that a case of yellow fever had been removed from the *Kilpatrick* on the day previous and taken to the hospital. Act. Asst. Surg. D. E. Dudley was immediately sent on board the vessel to investigate, and learned that the patient, a discharged soldier, took passage at Matanzas for New York via Havana. The vessel remained in this port five days, and on the night of the fifth day, the 17th instant, was taken sick with a chill, headache, and high fever. The following morning the doctor of the transport, considering the case suspicious, had the patient removed to the hospital. The vessel was immediately disinfected and held in quarantine. On the afternoon of the 20th instant I learned on inquiry that the United States Army board of experts had not been able to arrive at a diagnosis of this case, but the attending physician at the hospital stated that the case was one of yellow fever. Some hours afterwards I was informed by Major Davis that the case was considered one of yellow fever by the physician in charge of the hospital. I then asked that the steamship *Kilpatrick* be sent to Mariel Quarantine Station, to be held under observation during the period of incubation. The board of experts reserved its decision for five days, and yesterday announced that the case was not one of yellow fever, but of typhoid.

My action in this matter has been commended, both by Major Davis and by members of the board of experts, as being on the side of safety.

The fact that a large vessel like the *Kilpatrick* can be sent to Mariel for detention, proves the natural advantages which that place offers as a quarantine station. The *Kilpatrick* is a vessel of 3,730 tons, and is probably the largest vessel which has ever entered Mariel Harbor, and this instance proves that the statements made that vessels of large draft can not enter Mariel are unfounded.

Respectfully,

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

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

Reports from Matanzas and Isabela de Sagua.

MATANZAS, CUBA, *December 27, 1899.*

SIR: I have the honor to submit the following sanitary report of the quarantine district under my command for the week ended December 23, 1899:

Matanzas.—Twenty-three deaths occurred in the city of Matanzas during the period covered by this report, showing a mortality of 30.02 per thousand. The principal causes of death were as follows: Tuberculosis, 5; malarial fever, 4; heart disease, 2; enteritis, 2; senility, 1; cerebral congestion, 2; other causes, 7. The following cases of an infectious character were reported: Typhoid fever, 1; infectious fever, 1. Two vessels were inspected on arrival. Two bills of health were issued to foreign vessels and 2 certificates of inspection to coasting vessels.

Isabela de Sagua.—Acting Asst. Surg. Pedro Garcia Riera reports that

3 bills of health were issued to foreign vessels during the week. No sanitary report has been received.

Cardenas and Caibarien reports were not received in time.

Respectfully, FELIX GARCIA,
Acting Assistant Surgeon, U. S. M. H. S.

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

Death from yellow fever at Matanzas.

MATANZAS, CUBA, *December 29, 1899.*

SIR: I have the honor to report that I have been informed to-day by Maj. William B. Winn, surgeon in charge of the United States military hospital at this place, that Private John Butz, Troop G, Second United States Cavalry, died at the said hospital on December 27, 1899, of yellow fever. No other official report has been received previously to this about the case.

Respectfully, FELIX GARCIA,
Acting Assistant Surgeon, U. S. M. H. S.

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

Reports from Nuevitas, Gibara, and Puerto Padre.

NUEVITAS, CUBA, *December 18, 1899.*

SIR: I have the honor to submit the following weekly report: Seven vessels have arrived and 6 bills of health have been issued. Three alien steerage passengers arrived from New York. One soldier from Havana was held in quarantine to complete five days from that place; 10 pieces of baggage were disinfected by steam and 27 by formalin; 1 death during the week from injury.

Gibara reports 5 arrivals, 2 bills of health issued, and no death. Delayed report for the week ended December 9 gives 8 arrivals, 9 bills of health issued, and 4 deaths. Delayed report from Puerto Padre for the week ended December 9 gives 8 arrivals and 4 bills of health issued. Sanitary condition good.

I have had no news of the *Half Moon* since her arrival at Southport, N. C. Stormy weather prevails here. * * *

Respectfully, OWEN W. STONE,
Acting Assistant Surgeon, U. S. M. H. S.

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

Reports from Santiago, Manzanillo, Daiquiri, and Guantanamo.

SANTIAGO DE CUBA, *December 20, 1899.*

SIR: I have the honor to make the following report of the sanitary condition of the fourth district of the island of Cuba for the week ended December 16, 1899:

Santiago.—During this period the following were the principal causes of death: Tuberculosis, 3; tetanus, 2; malaria, 2; intestinal diseases, 3; pneumonia, 1; heart disease, 2; other causes, 6; total, 19. Population, 43,000; mortality, 22.97.

No yellow fever or smallpox reported, the last case of yellow fever dying on the 10th.

The census has been completed; it gives the city a population of 43,000, 9,000 more than the civil census of last spring.

Manzanillo.—Four deaths were reported as follows: Tuberculosis, 1; senility, 1; hydrocephalus, 1; stillborn, 1. No yellow fever or smallpox reported.

Daiquiri and Guantanamo.—Nothing of interest reported.

Respectfully,

HERMAN B. PARKER,
Assistant Surgeon, U. S. M. H. S.

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

HAWAIIAN ISLANDS.

Plague at Honolulu.

HONOLULU, H. I., *December 26, 1899,*
Via San Francisco, Cal., January 2, 1900.

One death from plague December 23; 2 December 25. No other suspects.

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

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

HONOLULU, H. I., *December 18, 1899.*

SIR: Confirmatory of my telegram of this date I have the honor to inform you that 5 cases and 5 deaths from what is pronounced to be bubonic plague have occurred in Honolulu, 2 on the 11th and 3 on the 12th instant.

The presence of the disease was not suspected until the morning of the 12th, when a death occurred in a Chinese patient of a Chinese physician, who called Dr. George Herbert of this city to see it with him. He regarded the case with such suspicion that the Hawaiian health authorities were notified and a necropsy was ordered. The necropsy was held by Dr. Hoffman, bacteriologist of the Hawaiian board of health, and Drs. Day, Herbert, and myself were present. The examination pointed strongly to the fact that death was caused by bubonic plague. Another case, also a Chinaman that had died on the evening of the 11th instant, was also examined with the same result.

The symptoms previous to death were high fever, 104° to 105° F., rapid pulse, 140 to 150, headache, delirium, vomiting, and pain and swelling in the inguinal regions. The duration of the illness in 2 of the cases was three days and from three to four days in the other cases. Specimens for bacteriological examination were taken from the enlarged glands, blood, pericardial fluid and viscera. Stained preparations from juice expressed from the enlarged glands showed the presence in large numbers of a short bacillus rounded at both ends and closely resembling that of bubonic plague. Cultures from the first case show the bacillus of bubonic plague.

A guinea pig was inoculated on the 12th instant, a rabbit on the 13th, and a rat on December 15. The guinea pig and rat died December 17.

The first case was in the person of Yon Chong, Chinese, male, aged 22 years, employed as a bookkeeper by Wing Wo Tai, a general merchant on Nuuana street, near the northeast corner of King street. He had resided in Honolulu for more than one year; died December 12. The other case examined on the morning of the 12th was Taen Kwock Yee, male, Chinese, age, 44 years; residence Maunakea street, two blocks west of first case; died December 11. The third case, Yuk Hoy, Chinese, male, age, 40 years; residence 413 Nuuana street; died Decem-

ber 11. The fourth case was in the rear of Ahe's Chinese furniture shop on Nuuana street and Pauhi street, Ching Wy How, male, Chinese, age, 45 years; died December 11. The fifth case, a South Sea Islander, named Nakaualia, age, 27 years; residence, Owen street, in rear of opera house; died December 12.

A sixth case was reported on December 14 on Pauahi street, near Nuuana, Maria Hils, Hawaiian, age 28 years. This case is considered doubtful, as the bacillus has not been isolated. In fact, what is considered the plague bacillus has been isolated in but 2 of the cases—Yon Chong, the first case examined, and the fifth case, Nakaualia, although the clinical symptoms were much alike in the first 5 cases reported. The bodies of the deceased have been cremated. All of the places where deaths occurred have been quarantined and disinfected. The Hawaiian board of health surrounded Chinatown by a sanitary cordon, and the district was divided into sections and a house-to-house inspection at once begun. These measures were decided upon by a special meeting of the board of health held on the 12th instant, at which I was asked to be present. No communication is allowed between Chinatown and the rest of the city save by the officials on duty.

The council of state for Hawaii has appropriated the sum of $25,000 to begin the necessary sanitary work required in Chinatown and elsewhere.

A receiving hospital will be erected at an early date and a crematory is now almost ready for use.

Communication with the other islands except under quarantine restriction has been prohibited, and all vessels plying between island ports must undergo a detention period of at least seven days before proceeding to their destination.

Vessels from the other islands are not allowed to dock at the wharves, but must anchor in the stream. All of these measures are praiseworthy, and show that the Hawaiian board of health has the matter well in hand.

The origin of the plague here is obscure, but it is supposed to be in some article of food, clothing, merchandise, or *by rats from Oriental steamers.*

Oriental food stuffs and freight have been landed and distributed here within the past six weeks without disinfection.

No cases have occurred among the immigrants landed here at the quarantine station so far as known at the present date of writing.

All of those attacked here resided in the city for a year or more.

The United States military authorities were promptly notified, and troops on shore leave returned to the only United States transport in port, the *Warren*, with 800 colored soldiers for Manila. She arrived here December 9, and as no disease was suspected in the city the soldiers were given leave on shore during the time the vessel was taking on supplies and coal. She promptly left the harbor and anchored outside the reef, where she will remain until the 18th instant, when if nothing develops she will proceed to Manila. All on board have been bathed and their clothing disinfected on the vessel.

The United States transport *Sherman* arrived off port on the 13th instant, but did not stop, and proceeded to Manila without delay.

No new cases have been reported up to this date, December 18.

I shall adopt all measures within my power to insure the safety of vessels leaving for United States ports, but the absence of a plant for disinfection here is severely felt at the present time, and in view of

this fact additional precautions should be adopted at all Pacific coast ports, and such measures should insure the destruction of all vermin on board of vessels. I transmit herewith a map showing location of the cases reported.

Respectfully,

D. A. CARMICHAEL,
Surgeon, U. S. M. H. S.

ITALY.

Sanitary precautions observed in connection with vessels from Egypt.

WASHINGTON, D. C., *December 29, 1899.*

SIR: I have the honor to inclose for your information copy of a note from the Italian ambassador at this capital reporting as to the sanitary precautions observed in Italy in respect to vessels coming from Egypt.

Respectfully,

JOHN HAY,
Secretary of State.

Hon. SECRETARY OF THE TREASURY.

[Inclosure.]

WASHINGTON, D. C., *December 23, 1899.*

SIR: In connection with my note of the 8th instant, I have the honor to transmit a copy of the following telegraphic communication received from the royal ministry of the interior relative to the modifications made in the sanitary measures to be applied to vessels coming from Egypt:

"By Order No. 16 of the 'Maritime health' (commission or bureau) dated to-day, December 23, it is decided that the prophylactic measures to be applied to vessels coming from Egypt are limited to the medical inspection of persons on board, and to the disinfection of personal or domestic effects not perfectly clean, after which, if the result of the inspection is favorable, free pratique shall be given the vessel.

"Such proceedings shall be performed at the first port of arrival, which must exclusively be one of these: Genoa, Leghorn, Naples, Palermo, Brindisi, Messina, Venice.

"In the successive stations (ports of call) even though nothing abnormal 'may have occurred during the passage, the general medical inspection of persons on board and the disinfection of effects to be landed shall be insisted on.'

"The obligation of a ten days' sanitary supervision of all individuals landed is maintained in conformity with the preceding orders.

"The prefects having jurisdiction in the port of destination of the goods contemplated by article 4 of the order of maritime sanitation of May 8, 1897, No. 2, coming from Egypt, may allow them to enter on a favorable permit of the local physician stating that, according to the conditions of the goods and to the sanitary state of the vessel on which they arrive, every injury to the public health is excluded by such a measure."

Respectfully,

FAVA,
Ambassador.

Hon. SECRETARY OF STATE.

Report from Naples.

NAPLES, ITALY, *December 13, 1899.*

SIR: I have the honor to report that for the week ended December 13, 1899, bills of health were issued to the following ships:

December 8, to the steamship *Fürst Bismarck* of the Hamburg-American Line, bound with passengers and cargo for New York. There were inspected and passed 14 cabin and 407 steerage passengers, and 177 pieces of large and 372 pieces of small baggage.

December 11, to the steamship *Victoria* of the Anchor Line, bound with passengers and cargo for New York. There were inspected and passed 213 steerage passengers, and 47 pieces of large and 200 pieces of small baggage.

The plague.

Since December 8, the Italian Government has ceased to quarantine against Egypt on account of the plague.

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

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

MALTA.

Changes in quarantine regulations.

MALTA, VALLETTA, *December 7, 1899.*

SIR: I send the Department to-day, herewith inclosed, two clippings from the Malta Government Gazette, appertaining to a recent change in quarantine regulations.

Reference to paragraph (*c*) of article 2 shows that Malta does not now quarantine against Egyptian ports but only Portugal.

Respectfully, JOHN H. GROUT,
United States Consul.

Hon. ASSISTANT SECRETARY OF STATE.

[Inclosure.]

Malta quarantine regulations.

GOVERNMENT NOTICE.

His excellency the governor having heard the opinion of the board of health, has been pleased to modify Government notice No. 310, of November 21, 1899, and to direct that the following regulations be observed, viz:

(1) VESSELS WHICH ARE NOT ALLOWED TO ENTER THE HARBOR, BUT ARE ALLOWED TO COMMUNICATE IN QUARANTINE WITH THE ISLANDS OF COMINO AND COMINOTTO UNDER SUCH RESTRICTIONS AS THE COLLECTOR OF CUSTOMS MAY DIRECT.

(*a*) Vessels that have on board, or have had during the voyage cases of cholera, yellow fever, or plague, or cases of a disease with symptoms resembling those of cholera, yellow fever, or plague.

(*b*) Vessels with pilgrims from the East.

(*c*) Vessels arriving from Arabian ports in the Red Sea and the Persian Gulf which have not been admitted to free pratique at Suez and Port Said.

(2) VESSELS WHICH ARE ALLOWED TO ENTER THE QUARANTINE HARBOR TO COAL AND TAKE IN PROVISIONS UNDER QUARANTINE RESTRICTIONS.

(*a*) Vessels arriving from Indian ports without a doctor; but those that carry a doctor and have passed through the Suez Canal in free pratique shall be admitted to free pratique.

(*b*) Vessels arriving from any port without a clean bill of health, which do not fall under any of the preceding regulations.

(*c*) Vessels arriving from Portugal.

(3) MEDICAL INSPECTION.

All vessels arriving at Malta shall undergo strict medical inspection.

(4) PASSENGERS.

(*a*) Passengers arriving from Bombay, Kurrachee, and passengers from Calcutta, on board vessels that do not carry a doctor, shall be landed in one of the quarantine establishments, where they will be subjected to strict medical inspection until their clothing and all other articles of personal use, likely to retain infection, shall have been thoroughly disinfected.

(*b*) Passengers arriving from Indian ports on board vessels that carry a doctor shall be permitted to land, but no luggage shall be landed before it is disinfected in one of the quarantine establishments.

(c) Every passenger or other person arriving at Malta shall, before being allowed to land, declare on oath before an inspector of marine police or other superior officer that he has not been in Portugal within twenty-one days; whenever such person does not make this declaration on oath, he shall undergo a period of quarantine on the ship of twenty-one days; provided, however, that any passenger arriving on a vessel carrying a doctor, shall not be required to make the said declaration if he produces to the inspector of marine police, or other superior officer, a solemn declaration in terms of act 5 and 6, William IV, C. 62, to the above effect, signed by himself in the presence of the master on the high sea.

(5) GOODS.

The importation of coffee, beans or ground, colored with substances injurious to health is prohibited.

The importation of cotton seed from any port subject to quarantine is forbidden.

The importation of rags is prohibited.

The importation is forbidden before disinfection, of the following articles, viz, wearing apparel, soiled linen and clothing, bedding materials, feathers, bones, and jute goods.

The importation of hides from any port subject to quarantine or from any place where cattle disease exists, is prohibited before disinfection.

The importation of vines, vine shoots, and fruit packed in vine leaves, is prohibited. The importation of plants or roots from any port of the Mediterranean is prohibited unless the same are accompanied by a satisfactory certificate from the British consular authority that Phylloxera is not known to exist at the place of origin.

By command, G. STRICKLAND,
PALACE, VALLETTA, *December 2, 1899.* *Chief Secretary to Government.*

SPAIN.

Report from Barcelona.

BARCELONA, SPAIN, *December 16, 1899.*

SIR: Pursuant to Bureau order of November 14, 1899, I have the honor to submit the following report of my visit to this city, made with reference to the emigrant traffic from Eastern Spain to the United States, Cuba, and Puerto Rico, and for a conference with the United States consul-general, Mr. Lay, relative to the plague situation and the danger of its introduction, owing to the close commercial relations and direct railroad communications maintained between Portugal and Spain, and to discuss to some extent the measures and restrictions to be enforced to combat this danger.

Barcelona, as well as being the chief commercial city, is also the largest city in Spain, and carries on an extensive maritime trade with the United States, the West Indies, Mexico, Central and South America, and the Philippines. Four steamship lines, carrying both passengers and freight, sail directly to ports in Puerto Rico, Cuba, and the United States, averaging 1 sailing weekly. In addition to these, there are a number of freight lines sailing regularly to ports in those countries.

The passenger and emigrant travel from Barcelona to Cuba and Puerto Rico, with a limited number going direct to the United States by way of New Orleans, is considerable. From September 23 to the present date there were 711 cabin passengers and 655 emigrants booked for these places.

From the date of resumption of commercial relations with Spain up to September 23, the travel in this direction was light and no records of it were kept.

Barcelona has no direct trade with the East save in the Philippines, and no coastwise trade (?) on the coast north of Cadiz at the present time. But from Santander and Corunna on the north and Vigo Bay on the northwest coast there is at present, it is understood, a large

emigrant travel to the West Indies and principally to Cuba and Puerto Rico.

The facilities for reaching Barcelona by rail from the northern and western ports of Spain are limited, and the expense of travel thereby is so great as to make travel by rail beyond a limited distance impracticable for the emigrant class. With the exception, then, of those who come from the Balearic Islands, and a small number of Cyprians who come by way of Marseilles, preferably by boat, the emigrant travel to the West Indies is confined to Barcelona and from the near-by provinces. Naturally, then, Barcelona is less liable to infection from Portugal than are the ports on the north, west, and southern coasts, which are less distant and have direct railroad and highway communication with it. However, it is most important that a Service office be stationed here to enforce the quarantine regulations as regards immigration to our ports, and if practicable to also inspect vessels arriving from plague infected or suspected ports.

The "cedula," a personal tax certificate which the Spanish Government requires all subjects, and foreigners as well, who have resided in the domain a certain length of time, to hold, furnishes fairly positive evidence as to where an emigrant comes from, and establishes at the same time data as to the identity of the holder. No one (subject) can leave the country without this certificate, and to use that of another person is punishable with a heavy fine, if detected.

The precautions instituted by the consul-general, who manifests more than a passing interest in the elimination of danger in connection with emigration to the United States and the islands mentioned, and augmented by Assistant Surgeon Anderson since his arrival, appear to be ample and all that are required for the present.

Two of the steamship lines are equipping their steamers with steam-disinfecting chambers, and it is believed the other lines will sooner or later follow this example. It would be more advantageous and more effective to have one steam chamber of sufficient size centrally located on the docks and known as the disinfecting station or room where all work of this nature could be performed, thus obviating the supervision of it at several points and the handling of possibly infected baggage and dunnage on board the several vessels.

The steamship lines here, as far as I have heard, are pleased with the idea of having the inspection and disinfection performed at this end of the line, and are willing to extend any aid toward assisting in the carrying out of the regulations.

The feeling in general as regards the introduction of plague is remote, but, nevertheless, the health authorities appear to be on the alert to prevent any possible source of danger in this direction, as was instanced recently by their declining to allow two towboats from Portugal to come within several miles of the city.

Smallpox exists here, but it is believed not to any great extent. The last report of vital statistics, issued for November, stated 5 cases occurred during that month.

I depart for Madrid to-morrow.

Respectfully,

J. A. NYDEGGER,
Passed Assistant Surgeon, U. S. M. H. S.

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

URUGUAY.

Quarantine regulations on account of plague.

MONTEVIDEO, URUGUAY, *November 22, 1899.*

SIR: The National Council of Hygiene of Uruguay has just issued a new quarantine ordinance of which the following is the substance:

[Copy and translation.]

The previous ordinances Nos. 25, 28, and 31, of August 26, September 27, and October 23, are abrogated. In future, vessels from ports contaminated by bubonic plague shall be submitted to ten days' observation, and those from suspected ports to five days. Vessels having had cases on board during the voyage, or on their arrival, shall be subject to rigorous disinfection followed by fifteen days' observation. Observation shall count from conclusion of the disinfection. The observation of passengers and disinfection of their luggage shall take place in Flores Island Lazaretto. No vessel shall be admitted to free pratique until conveniently disinfected. The importation of the following articles is forbidden: Fresh hides, fresh remains of animals, wool, hair, feathers, personal or domestic effects, rags in any condition, and worn clothing when their disinfection is not practicable. For the effects of this ordinance, the ports of Oporto, Asuncion, and Santos, are declared infected; and those of Portugal, Paraguay, and Brazil, south of Rio de Janeiro, included, are declared suspected.

It is explained, with relation to the above, that all merchandise from countries afflicted with the plague will be admitted without any restriction, and the articles specified above will be admitted when their disinfection is possible.

In addition to the above, Trieste will be declared infected and all the ports on the east coast of Italy from the Gulf of Venice to the north suspected, this being applicable to all vessels sailing since October 27.

Respectfully, WILLIAM R. FINCH.

Hon. SECRETARY OF STATE.

FOREIGN STATISTICAL REPORTS.

ARGENTINA—*Buenos Ayres.*—Month of October, 1899. Estimated population, 800,000. Total number of deaths, 703, including diphtheria, 3; enteric fever, 5; measles, 2; whooping cough, 2, and 3 from smallpox.

AUSTRALIA—*Queensland—Brisbane.*—Month of September, 1899. Estimated population, 107,840. Total number of deaths, 79, including 10 from phthisis pulmonalis.

BRAZIL—*Santos.*—Five weeks ended November 25, 1899. Estimated population, 40,000. Total number of deaths not reported. Eleven deaths from plague.

FRANCE—*Marseilles.*—Month of November, 1899. Estimated population, 447,344. Total number of deaths, 950, including diphtheria, 5; enteric fever, 40; measles, 1; whooping cough, 1, and 17 from smallpox.

Nantes.—Month of November, 1899. Estimated population, 130,000. Total number of deaths, 207, including diphtheria, 1; enteric fever, 6; scarlet fever, 1, and 58 from phthisis pulmonalis.

Nice.—Ten days ended December 10, 1899. Estimated population, 114,000. Total number of deaths, 60, including 1 from enteric fever.

Rouen.—Month of November, 1899. Estimated population, 112,657. Total number of deaths, 227, including diphtheria, 2; enteric fever, 1; whooping cough, 1, and 48 from phthisis pulmonalis.

St. Etienne.—Two weeks ended November 30, 1899. Estimated population, 135,784. Total number of deaths, 115, including diphtheria, 1; enteric fever, 4, and 16 from phthisis pulmonalis.

GERMANY—*Dresden.*—Month of October, 1899. Estimated population, 399,400. Total number of deaths, 575, including diphtheria, 5; measles, 12; whooping cough, 10, and 39 from phthisis pulmonalis.

GREAT BRITAIN—*England and Wales.*—The deaths registered in 33 great towns in England and Wales during the week ended December 9, 1899, correspond to an annual rate of 20.8 a thousand of the aggregate population, which is estimated at 11,404,408. The highest rate was recorded in Plymouth, viz, 26.4, and the lowest in Croydon, viz, 13.1.

London.—One thousand nine hundred and fifty-seven deaths were registered during the week, including measles, 59; scarlet fever, 15; diphtheria, 43; whooping cough, 20; enteric fever, 29, and diarrhea and dysentery, 14. The deaths from all causes correspond to an annual rate of 22.4 a thousand. In Greater London 2,505 deaths were registered, corresponding to an annual rate of 20.0 a thousand of the population. In the "outer ring" the deaths included 18 from diphtheria, 16 from measles, 6 from scarlet fever, and 2 from whooping cough.

Ireland.—The average annual death rate represented by the deaths registered during the week ended December 9, 1899, in the 22 principal town districts of Ireland was 26.1 a thousand of the population, which is estimated at 1,053,188. The lowest rate was recorded in Sligo, viz, 5.0, and the highest in Tralee, viz, 67.2 a thousand. In Dublin and suburbs 258 deaths were registered, including diphtheria 3; enteric fever, 2; measles, 29; 1 from scarlet fever, and 1 from whooping cough.

Scotland.—The deaths registered in 8 principal towns during the week ended December 9, 1899, correspond to an annual rate of 20.0 a thousand of the population, which is estimated at 1,587,414. The lowest mortality was recorded in Leith, viz, 14.1, and the highest in Greenock, viz, 37.6 a thousand. The aggregate number of deaths registered from all causes was 611, including diphtheria, 5; measles, 28, and whooping cough, 8.

JAMAICA.—*Kingston.*—Three weeks ended December 16, 1899. Estimated population, 34,314. Number of deaths, not reported. No contagious diseases reported.

Port Antonio.—Three weeks ended December 16, 1899. Estimated population not reported. Number of deaths not reported. No contagious diseases.

MALTA.—Two weeks ended November 15, 1899. Estimated popula-

tion, 180,328. Total number of deaths, 220, including 1 from enteric fever.

NICARAGUA—*San Juan.*—Month of November, 1899. Estimated population, 1,156. Total number of deaths, 3. No contagious diseases.

ST. HELENA.—Four weeks ended November 18, 1899. Estimated population, 4000. Total number of deaths, 3. No contagious diseases.

SPAIN—*Valencia.*—Six weeks ended December 9, 1899. Estimated population, 203,958. Total number of deaths not reported. No deaths from contagious diseases reported.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Acapulco	Dec. 16	6,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Antwerp	Dec. 9	287,462	101	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	2
Athens	....do....	200,000	—	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Barranquilla	....do....	40,000	30	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Belfast	....do....	350,000	113	.....	.....	.....	.....	.....	.....	1	1	.....	.....	1
Belize	Dec. 21	13.000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bluefields	Dec. 16	3,018	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bombay	Nov. 28	821,764	957	131	137	4	.....	14	.....	1	.....	.....	13	.....
Bremen	Dec. 9	145,000	31	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Brussels	....do....	551,811	175	.....	.....	.....	.....	.....	.....	2	1	3	.....	.....
Calcutta	Nov. 11	681,560	520	.....	27	13	.....	.....	.....	.....	.....	2	.....	.....
Do.	Nov. 18	681,560	591	.....	50	12	.....	.....	.....	.....	.....	1	.....	.....
Cartagena	Dec. 1	25,000	8	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.	Dec. 9	25,000	11	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Catania	Dec. 14	124,000	53	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Colon	Dec. 20	8,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Constantinople	Dec. 11	875,000	273	.....	.....	.....	.....	.....	.....	13	.....	3	.....	.....
Copenhagen	Dec. 9	351,000	111	11	.....	.....	.....	.....	.....	1	2	2	.....	2
Dublin	....do....	349,594	·258	.....	.....	.....	.....	.....	.....	2	4	3	30	1
Edinburgh	....do....	298,927	101	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Flushing	Dec. 16	18,371	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Funchal	Dec. 10	36,982	11	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Ghent	Dec. 9	162,652	59	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Gibraltar	Dec. 10	25,900	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.	Dec. 17	25,900	11	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Girgenti	Dec. 9	24,428	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Glasgow	....do....	733,903	278	.....	.....	.....	.....	.....	4	.....	.....	3	6	3
Gothenburg	....do....	122,205	39	.....	.....	.....	.....	.....	.....	.....	.....	1	5	2
Halifax	Dec. 28	45,000	12	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Hamilton, Bermuda	Dec. 12	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.	Dec. 19	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iquique	Oct. 21	33,106	31	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Do.	Oct. 28	33,106	38	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Do.	Nov. 11	33,106	26	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.	Nov. 14	33,106	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kurrachee	Nov. 25	98,105	69	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leeds	Dec. 16	423,889	167	.....	.....	.....	.....	.....	.....	5	1	15	2	5
Leghorn	Dec. 10	104,948	47	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
Leith	Dec. 9	77,385	21	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Licata	Dec. 8	20,000	16	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Liege	Dec. 2	170,429	55	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
Liverpool	Dec. 9	668,645	318	.....	.....	.....	.....	.....	1	2	1	6	8	12
London	....do....	6,528,434	2,505	....	.....	.....	.....	.....	.....	34	21	61	75	22
Madras	Nov. 17	452,518	355	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Do.	Nov. 24	452,518	376	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Madrid	Dec. 9	512,596	392	.....	.....	.....	.....	7	.....	5	.....	4	2	.....
Mannheim	Dec. 2	129,986	33	.....	.....	.....	.....	.....	.....	1	.....	2	1	.....
Mayence	Dec. 9	80,000	24	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Manchester	Dec. 2	546,000	190	.....	.....	.....	.....	.....	.....	2	3	5	3	3
Do	Dec. 9	546,000	211	.....	.....	.....	.....	.....	.....	2	3	4	5	1
Messina	....do....	107,000	33	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Do.	Dec. 16	107,000	42	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Monte Cristi	....do....	3,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Monterey	Dec. 14	25,000	38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.	Dec. 21	25,000	47	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Moscow	Dec. 2	1,000,000	510	.....	.....	.....	.....	.....	1	4	8	14	2	2
Nottingham	Dec. 9	250,000	66	.....	.....	.....	.....	.....	.....	6	1	.....	.....	.....
Nuevo Laredo	Dec. 16	6,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nuremberg	Dec. 2	236,910	100	.....	.....	.....	.....	.....	.....	.....	1	.....	12	.....
Odessa	Dec. 9	414,800	171	.....	.....	.....	.....	1	.....	3	1	4	5	1
Palermo	....do....	300,000	137	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....
Panama	Dec. 19	16,000	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Paris	Dec. 9	2,511,955	887	.....	.....	.....	.....	.....	.....	9	4	7	1	3
Prague	Dec. 2	190,260	111	.....	.....	.....	.....	.....	.....	4	4	1	1	2
Progreso	Dec. 8	4,800	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.	Dec. 15	4,800	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Puerto Cortes	Dec. 20	2,000	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Queenstown	Nov. 4	15,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Nov. 11	15,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Nov. 18	15,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Nov. 25	15,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Dec. 2	15,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rio de Janeiro	Nov. 10	768,000	306	45	.....	.....	6	61	.....	4	.....	.....	.....	.....
Do.	Nov. 17	768,000	282	70	.....	.....	.....	50	.....	2	.....	.....	.....	.....

MORTALITY TABLE, FOREIGN CITIES—Continued.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Rotterdam	Dec. 16	319,491	136	.....	.....	.....	.....	.....	.....	2	.....	2	.....	.....
St. Georges, Bermuda	Dec. 9	2,150	0	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....
Do	Dec. 16	2,150	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. John, West Indies	Nov. 25	15,000	16	.....	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
Do	Dec. 2	15,000	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Dec. 9	15,000	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Stephen, New Brunswick.	Dec. 23	3,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas, West Indies	Nov. 24	12,019	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Dec. 1	12,019	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smyrna	Dec. 10	300,000	69	.....	.....	.....	.....	1	.....	2	.....	..	.....	1
Southampton	Dec. 2	103,168	38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	Dec. 9	103,168	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trapani	....do....	45,095	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuxpam	Dec. 18	10,000	12	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Utilla	Dec. 16	800	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Venice	Nov. 26	171,779	82	.. ...	.....	.....	.....	.....	.....	.....	.....	4	.....	.....
Vera Cruz	Dec. 21	25,000	38	.....	.....	.....	2	1	.....	.....	.....	.....	.....	.....
Vienna	Dec. 9	1,639,811	554	.....	.....	.....	.....	.....	.....	2	1	8	15	3
Warsaw	Dec. 2	601,408	263	.....	.....	.....	.....	8	4	.....	2	6	13	3

By authority of the Secretary of the Treasury:

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